SAFETY DATA SHEET

Q8 Induco 12

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

Product name : Q8 Induco 12

Material uses : Process oil

Index number : 649-469-00-9

EC number : 265-159-2

REACH Registration number

Registration number	Legal entity
01-2119480132-48	-

CAS number : 64742-56-9

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Manufacture of substance
Distribution of substance
Formulation and (re)packing of substances and mixtures
Uses in Coatings
Uses in Coatings - Consumer
Use in cleaning agents
Use in cleaning agents - Consumer
Use as an intermediate
Uses in Coatings
Use as an intermediate
Use as an intermediate
Use in agrochemicals - Consumer
Rubber production and processing
Lubricants - Industrial
Lubricants - Professional: Low environmental release
Lubricants - Professional: High environmental release
Lubricants - Consumer: Low environmental release
Lubricants - Consumer: High environmental release
Lubricants - Professional
Water treatment chemicals - Industrial
Water treatment chemicals - Professional
Functional Fluids - Industrial
Functional Fluids - Professional
Functional Fluids - Consumer

1.3 Details of the supplier of the safety data sheet

Manufacturer / Distributor : Kuwait Petroleum Companies in the Benelux
Company Office: Brusselstraat 59, B-2018, Antwerp
Contactaddress: Petroleumkaai 7, B-2020, Antwerp
Tel. +32 3 247 38 11, Fax +32 3 216 03 42

e-mail address of person responsible for this SDS : SDSinfo@Q8.com, communication preferably in English only.

1.4 Emergency telephone number

Europe : +44 (0) 1235 239 670

Global (English only) : +44 (0) 1865 407 333

CARECHEM24

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : UVCB

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

Asp. Tox. 1, H304

Ingredients of unknown toxicity : None.

Ingredients of unknown ecotoxicity : None.

Classification according to Directive 67/548/EEC [DSD]

Not classified.

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H304 - May be fatal if swallowed and enters airways.

Precautionary statements

General : P103 - Read label before use.
P102 - Keep out of reach of children.
P101 - If medical advice is needed, have product container or label at hand.

Prevention : Not applicable.

Response : P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.

Storage : P405 - Store locked up.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : Distillates (petroleum), solvent-dewaxed light paraffinic

Supplemental label elements : Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Restricted to professional users.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Yes, applicable.

Tactile warning of danger : Yes, applicable.

2.3 Other hazards

SECTION 2: Hazards identification

Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII : No.

P: Not available. B: Not available. T: No.

Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : Not available.

Other hazards which do not result in classification : Defatting to the skin. Prolonged or repeated contact may dry skin and cause irritation.

SECTION 3: Composition/information on ingredients

3.1 Substances : UVCB

Product/ingredient name	Identifiers	%	Classification 67/548/EEC	Classification Regulation (EC) No. 1272/2008 [CLP]	Type
Distillates (petroleum), solvent-dewaxed light paraffinic	REACH #: 01-2119480132-48 EC: 265-159-2 CAS: 64742-56-9 Index: 649-469-00-9	100	Not classified.	Asp. Tox. 1, H304 **See Section 16 for the full text of the H statements declared above.**	[A]

The mineral oils in the product contain < 3% DMSO extract (IP 346).

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

[*] Substance
[A] Constituent
[B] Impurity
[C] Stabilizing additive

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

SECTION 4: First aid measures

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : Defatting to the skin. May cause skin dryness and irritation.

Ingestion : May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
dryness
cracking

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, alcohol-resistant foam or water spray (fog).

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

SECTION 5: Firefighting measures

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

SECTION 7: Handling and storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Distillates (petroleum), solvent-dewaxed light paraffinic	**Lijst Grenswaarden / Valeurs Limites (Belgium, 11/2011).** TWA: 5 mg/m³ 8 hours. Form: mist STEL: 10 mg/m³ 15 minutes. Form: mist

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available.

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

SECTION 8: Exposure controls/personal protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Wear suitable gloves tested to EN374. Recommended: Nitrile gloves.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Boiling point > 65 °C: A1; Boiling point < 65 °C: AX1; Hot material: A1P2.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid. [Oily liquid.]

Appearance : Clear.

Color : Yellow [Light]

Odor : Hydrocarbon. [Slight]

Odor threshold : Not applicable.

pH : 7

Melting point/freezing point : -12°C

Initial boiling point and boiling range : >280°C

Flash point : Closed cup: >170°C [ASTM D93.]
Open cup: >180°C [ASTM D92.]

Evaporation rate : Not applicable.

Flammability (solid, gas) : Not applicable.

Upper/lower flammability or explosive limits : Not available.

Vapor pressure : <0.01 kPa [room temperature]

Vapor density : Not available.

Relative density : 0.85

Solubility(ies) : Insoluble in the following materials: cold water and hot water.

Dispersibility properties : Not dispersible in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : >3

Auto-ignition temperature : >300°C

Decomposition temperature : >300°C

Viscosity (40°C) : 12 cSt

Viscosity (100°C) : 2.9 cSt

SECTION 9: Physical and chemical properties

Explosive properties : Not applicable.

Oxidizing properties : Not applicable.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : Reactive or incompatible with the following materials:
Strong oxidizing materials

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Distillates (petroleum), solvent-dewaxed light paraffinic	LC50 Inhalation Dusts and mists	Rat - Male, Female	5.53 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Distillates (petroleum), solvent-dewaxed light paraffinic	Skin - Erythema/Eschar	Rabbit	0.17	72 hours	7 days
	Skin - Edema	Rabbit	0	72 hours	7 days
	Eyes - Iris lesion	Rabbit	0	48 hours	72 hours
	Eyes - Redness of the conjunctivae	Rabbit	0.33	48 hours	72 hours

Conclusion/Summary : Not available.

Sensitization

Product/ingredient name	Route of exposure	Species	Result
Distillates (petroleum), solvent-dewaxed light paraffinic	skin	Guinea pig	Not sensitizing

Conclusion/Summary : Not available.

Mutagenicity

SECTION 11: Toxicological information

Product/ingredient name	Test	Experiment	Result
Distillates (petroleum), solvent-dewaxed light paraffinic	474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic	Negative

Conclusion/Summary : Not available.

Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Distillates (petroleum), solvent-dewaxed light paraffinic	Negative - Dermal - TC	Mouse - Female	-	78 weeks

Conclusion/Summary : Not available.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
Distillates (petroleum), solvent-dewaxed light paraffinic	Negative	Negative	Negative	Rat - Male, Female	Oral: 1000 mg/kg	-

Conclusion/Summary : Not available.

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Distillates (petroleum), solvent-dewaxed light paraffinic	Negative - Dermal	Rat	2000 mg/kg	7 days per week

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Product/ingredient name	Result
Distillates (petroleum), solvent-dewaxed light paraffinic	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : Defatting to the skin. May cause skin dryness and irritation.

Ingestion : May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

SECTION 11: Toxicological information

Skin contact : Adverse symptoms may include the following:
irritation
dryness
cracking

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
Distillates (petroleum), solvent-dewaxed light paraffinic	Sub-chronic NOAEL Oral	Rat - Male, Female	≥2000 mg/kg	13 weeks; 5 days per week
	Sub-acute LOAEL Oral	Rat - Male	125 mg/kg	13 weeks; 5 hours per day
	Sub-acute NOAEL Inhalation Dusts and mists	Rat - Male	>980 mg/m³	4 weeks; 5 days per week

Conclusion/Summary : Not available.

General : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Distillates (petroleum), solvent-dewaxed light paraffinic	-	-	Inherent

12.3 Bioaccumulative potential

SECTION 12: Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Distillates (petroleum), solvent-dewaxed light paraffinic	>3	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : No.

P: Not available. B: Not available. T: No.

vPvB : Not available.

vP: Not available. vB: Not available.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.

European waste catalogue (EWC)

Waste code	Waste designation
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Restricted to professional users.

Other EU regulations

Europe inventory : This material is listed or exempted.

Seveso II Directive

This product is not controlled under the Seveso II Directive.

Hazard class for water (WGK) : 1 Appendix No. 3

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

SECTION 15: Regulatory information

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Australia	:	This material is listed or exempted.
Canada	:	This material is listed or exempted.
China	:	This material is listed or exempted.
Japan	:	This material is listed or exempted.
Malaysia	:	Not determined.
New Zealand	:	This material is listed or exempted.
Philippines	:	This material is listed or exempted.
Republic of Korea	:	This material is listed or exempted.
Taiwan	:	This material is listed or exempted.
United States	:	This material is listed or exempted.

15.2 Chemical Safety Assessment : Complete.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Asp. Tox. 1, H304	Expert judgment

Full text of abbreviated H statements : H304 May be fatal if swallowed and enters airways.

Full text of classifications [CLP/GHS] : Asp. Tox. 1, H304 ASPIRATION HAZARD - Category 1

Full text of abbreviated R phrases : Not applicable.

Full text of classifications [DSD/DPD] : Not applicable.

Date of printing : 12-01-2015

Date of issue/ Date of revision : 12-01-2015

SECTION 16: Other information

Date of previous issue : 12-11-2013

Version : 1.02

Prepared by : Kuwait Petroleum Research & Technology B.V., The Netherlands

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Manufacture of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304)

List of use descriptors : **Identified use name:** Manufacture of substance
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC15
Substance supplied to that use in form of: As such
Sector of end use: SU03, SU08, SU09
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ESVOC SpERC 1.1.v1
Market sector by type of chemical product: PC24
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Manufacture of the substance or use as an intermediate or a process chemical or extraction agent. Includes recycling/recovery, material transfers, storage, maintenance and loading (including marine vessel/barge, road/rail car and bulk container), sampling and associated laboratory activities.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapour pressure < 0.5 kPa at STP

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other given operational conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

General exposures (closed systems): No other specific measures identified.

General exposures (open systems): No other specific measures identified.

Process sampling: No other specific measures identified.

Laboratory activities: No other specific measures identified.

Bulk transfers (Closed system): No other specific measures identified.

Bulk transfers Open systems: No other specific measures identified.

Equipment cleaning and maintenance: Drain down and flush system prior to equipment break-in or maintenance.

Bulk product storage: Store substance within a closed system.

Section 2 Operational conditions and risk management measures

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage 8.5E5 Fraction of regional tonnage used locally 1 Annual site tonnage 6.0E5 Maximum daily site tonnage 2.0E6
Frequency and duration of use	:	Continuous release Emission days (days/year) 300
Environment factors not influenced by risk management	:	Local freshwater dilution factor 10 Local marine water dilution factor 100
Other given operational conditions affecting environmental exposure	:	Release fraction to air from process (initial release prior to RMM) 1.0E-4 Release fraction to wastewater from process (initial release prior to RMM) 1.0E-5 Release fraction to soil from process (initial release prior to RMM) 0.0001
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. Prevent discharge of undissolved substance to or recover from onsite wastewater. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. Treat air emission to provide a typical removal efficiency of 90 Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 84.8 If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0.0
Organizational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 5.7E6 Assumed on-site sewage treatment plant flow 10000
Conditions and measures related to external treatment of waste for disposal	:	During manufacturing, no waste of the substance is generated.
Conditions and measures related to external recovery of waste	:	During manufacturing, no waste of the substance is generated.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human):	:	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
Exposure estimation	:	Not available.

Section 3.2: Environment

Exposure assessment (environment):	:	The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.
Exposure estimation	:	Not available.

Section 3 Exposure estimation and reference to its source

Section 4 Guidance to check compliance with the exposure scenario

Health	:	Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.
Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet. Scaled local assessments for EU refineries have been performed using site-specific data and are attached in PETRORISK file - "Site-Specific Production" worksheet.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Distribution of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304)

List of use descriptors :
Identified use name: Distribution of substance
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC15
Substance supplied to that use in form of: As such
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC05, ERC06a, ERC06b, ERC06c, ERC06d, ERC07, ESVOC SpERC 1.1b.v1
Market sector by type of chemical product: PC24
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Bulk loading (including marine vessel/barge, rail/road car and IBC loading) of substance within closed or contained systems, including incidental exposures during its sampling, storage, unloading, maintenance and associated laboratory activities. Excludes emissions during transport.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapour pressure < 0.5 kPa at STP

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other given operational conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

General exposures (closed systems): No other specific measures identified.

General exposures (open systems): No other specific measures identified.

Process sampling: No other specific measures identified.

Laboratory activities: No other specific measures identified.

Bulk transfers (Closed system): No other specific measures identified.

Bulk transfers Open systems: No other specific measures identified.

Drum and small package filling: No other specific measures identified.

Equipment cleaning and maintenance: Drain down and flush system prior to equipment break-in or maintenance.

Section 2 Operational conditions and risk management measures

Storage: Store substance within a closed system.

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage 8.5E5 Fraction of regional tonnage used locally 1 Annual site tonnage 1.7E3 Maximum daily site tonnage 1.7E4
Frequency and duration of use	:	Continuous release Emission days (days/year) 100
Environment factors not influenced by risk management	:	Local freshwater dilution factor 10 Local marine water dilution factor 100
Other given operational conditions affecting environmental exposure	:	Release fraction to air from process (initial release prior to RMM) 1.0E-4 Release fraction to wastewater from process (initial release prior to RMM) 1.0E-7 Release fraction to soil from process (initial release prior to RMM) 0.00001
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. Treat air emission to provide a typical removal efficiency of 90 Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 64.4 If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0.0
Organizational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 1.1E5 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human):	:	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
Exposure estimation	:	Not available.

Section 3.2: Environment

Exposure assessment (environment):	:	The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.
Exposure estimation	:	Not available.

Section 3 Exposure estimation and reference to its source

Section 4 Guidance to check compliance with the exposure scenario

Health	:	Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.
Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Formulation & (Re)packing of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304)

List of use descriptors :
Identified use name: Formulation and (re)packing of substances and mixtures
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC14, PROC15
Substance supplied to that use in form of: As such
Sector of end use: SU10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02, ESVOC SpERC 2.2.v1
Market sector by type of chemical product: PC24
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tabletting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapour pressure < 0.5 kPa at STP

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other given operational conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

General exposures (closed systems): No other specific measures identified.

General exposures (open systems): No other specific measures identified.

Batch processes at elevated temperatures. Use in contained batch processes: No other specific measures identified.

Process sampling: No other specific measures identified.

Laboratory activities: No other specific measures identified.

Bulk transfers - Dedicated facility: No other specific measures identified.

Mixing operations (open systems): No other specific measures identified.

Transfer from/pouring from containers - Manual - Non-dedicated facility: No other specific measures identified.

Drum/batch transfers - Dedicated facility: No other specific measures identified.

Section 2 Operational conditions and risk management measures

Production or preparation of articles by tabletting, compression, extrusion or pelletisation: No other specific measures identified.

Drum and small package filling: No other specific measures identified.

Equipment cleaning and maintenance: Drain down and flush system prior to equipment break-in or maintenance.

Storage: Store substance within a closed system.

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage 8.5E5 Fraction of regional tonnage used locally 1 Annual site tonnage 3.0E4 Maximum daily site tonnage 1.0E5
Frequency and duration of use	:	Continuous release Emission days (days/year) 300
Environment factors not influenced by risk management	:	Local freshwater dilution factor 10 Local marine water dilution factor 100
Other given operational conditions affecting environmental exposure	:	Release fraction to air from process (after typical onsite RMMs consistent with EU Solvent Emissions Directive requirements) 2.5E-3 Release fraction to wastewater from process (initial release prior to RMM) 5.0E-6 Release fraction to soil from process (initial release prior to RMM) 0.0001
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. Prevent discharge of undissolved substance to or recover from onsite wastewater. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. Treat air emission to provide a typical removal efficiency of 0 Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 69.5 If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0.0
Organizational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 5.7E5 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation : Not available.

Section 3.2: Environment

Exposure assessment (environment): : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation : Not available.

Section 4 Guidance to check compliance with the exposure scenario

Health : Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Uses of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) in Coatings - Professional

List of use descriptors : **Identified use name:** Uses in Coatings
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC10, PROC11, PROC13, PROC15, PROC19
Substance supplied to that use in form of: As such
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d, ESVOC SpERC 8.3b.v1
Market sector by type of chemical product: PC09a, PC09b, PC09c, PC24
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including materials receipt, storage, preparation and transfer from bulk and semi-bulk, application by spray, roller, brush, spreader by hand or similar methods, and film formation), and equipment cleaning, maintenance and associated laboratory activities.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapour pressure < 0.5 kPa at STP

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other given operational conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

Filling/preparation of equipment from drums or containers - Dedicated facility: No other specific measures identified.

General exposures (closed systems) - Preparation of material for application - Mixing operations (closed systems): No other specific measures identified.

Film formation - air drying - Indoor/Outdoor use: No other specific measures identified.

Preparation of material for application - Mixing operations (open systems) - Pouring from small containers - Indoor/Outdoor use: No other specific measures identified.

Material transfers - Drum/batch transfers - Non-dedicated facility: Use drum pumps.

Roller, spreader, flow application - Indoor/Outdoor use: No other specific measures identified.

Spraying/fogging by manual application - Indoor: Carry out in a vented booth or extracted enclosure.

Section 2 Operational conditions and risk management measures

Spraying/fogging by manual application - Outdoor: Wear a respirator conforming to EN140 with type A filter or better.

Dipping, immersion and pouring - Indoor/Outdoor use: No other specific measures identified.

Laboratory activities: No other specific measures identified.

Hand application - fingerpaints, pastels, adhesives - Indoor/Outdoor use: No other specific measures identified.

Equipment cleaning and maintenance: Drain down and flush system prior to equipment break-in or maintenance.

Storage: Store substance within a closed system.

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage 3.9E3 Fraction of regional tonnage used locally 1 Annual site tonnage 2.0E0 Maximum daily site tonnage 5.4E0
Frequency and duration of use	:	Continuous release Emission days (days/year) 365
Environment factors not influenced by risk management	:	Local freshwater dilution factor 10 Local marine water dilution factor 100
Other given operational conditions affecting environmental exposure	:	Release fraction to air from wide dispersive use (regional only) 0.98 Release fraction to wastewater from wide dispersive use 0.01 Release fraction to soil from wide dispersive use (regional only) 0.01
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. Treat air emission to provide a typical removal efficiency of N/A Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 65.0 If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0.0
Organizational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 3.5E1 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation : Not available.

Section 3.2: Environment

Exposure assessment (environment): : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation : Not available.

Section 4 Guidance to check compliance with the exposure scenario

Health : Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Uses of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) in Cleaning Agents - Professional

List of use descriptors :
Identified use name: Use in cleaning agents
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC10, PROC13, PROC05, PROC11, PROC15, PROC19
Substance supplied to that use in form of: As such
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d, ESVOC SpERC 8.4b.v1
Market sector by type of chemical product: PC24
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Covers the use as a component of cleaning products including pouring/unloading from drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping automated and by hand).

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapour pressure < 0.5 kPa at STP

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other given operational conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

Filling/preparation of equipment from drums or containers: Avoid carrying out activities involving exposure for more than 1 hour.

Automated process with (semi) closed systems - Use in contained systems: No other specific measures identified.

Semi-automated process. (e.g.: semi-automatic application of floor care and maintenance products): No other specific measures identified.

Filling/preparation of equipment from drums or containers - Non-dedicated facility - Outdoor: Use drum pumps.

Manual - Surfaces - Cleaning - Dipping, immersion and pouring: No other specific measures identified.

Cleaning with low-pressure washers - Rolling, Brushing: No other specific measures identified.

Cleaning with high-pressure washers - Spraying - Indoor/Outdoor use: No other specific measures identified.

Section 2 Operational conditions and risk management measures

Treatment by dipping and pouring - Surfaces - Cleaning - Wiping - Rolling, Brushing: No other specific measures identified.

Degreasing small objects in cleaning station: No other specific measures identified.

Ad hoc manual application via trigger sprays, dipping, etc.: No other specific measures identified.

Hand-mixing with intimate contact and only PPE available - Indoor: No other specific measures identified.

Cleaning of medical devices: No other specific measures identified.

Equipment cleaning and maintenance: Drain down and flush system prior to equipment break-in or maintenance.

Storage: Store substance within a closed system.

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage 3.9E3 Fraction of regional tonnage used locally 1 Annual site tonnage 2.0E0 Maximum daily site tonnage 5.3E0
Frequency and duration of use	:	Continuous release Emission days (days/year) 365
Environment factors not influenced by risk management	:	Local freshwater dilution factor 10 Local marine water dilution factor 100
Other given operational conditions affecting environmental exposure	:	Release fraction to air from wide dispersive use (regional only) 0.02 Release fraction to wastewater from wide dispersive use 0.000001 Release fraction to soil from wide dispersive use (regional only) 0
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. Treat air emission to provide a typical removal efficiency of N/A Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 64.4 If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0.0
Organizational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 3.6E1 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation : Not available.

Section 3.2: Environment

Exposure assessment (environment): : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation : Not available.

Section 4 Guidance to check compliance with the exposure scenario

Health : Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Use of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) in Metal working fluids / rolling oils - Industrial

List of use descriptors :
Identified use name: Use as an intermediate
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC07, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC17
Substance supplied to that use in form of: As such
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ESVOC SpERC 4.7a.v1
Market sector by type of chemical product: PC24, PC25
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Covers the use in formulated MWFs/rolling oils including transfer operations, rolling and annealing activities, cutting/machining activities, automated and manual application of corrosion protections (including brushing, dipping and spraying), equipment maintenance, draining and disposal of waste oils.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapour pressure < 0.5 kPa at STP

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other given operational conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

General exposures (closed systems): No other specific measures identified.

General exposures (open systems): No other specific measures identified.

Bulk transfers - Dedicated facility: No other specific measures identified.

Filling/preparation of equipment from drums or containers - Dedicated facility: No other specific measures identified.

Process sampling: No other specific measures identified.

Metal machining operations: Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings.

Treatment by dipping and pouring: No other specific measures identified.

Spraying: Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at

Section 2 Operational conditions and risk management measures

openings.

Manual - Rolling, Brushing: No other specific measures identified.

Automated metal rolling/forming - Use in contained systems - Elevated temperature: No other specific measures identified.

Semi-automated metal rolling/forming - Elevated temperature: Provide extract ventilation to points where emissions occur.

Semi-automated metal rolling/forming: No other specific measures identified.

Equipment cleaning and maintenance - Dedicated facility: Drain down system prior to equipment break-in or maintenance.

Equipment cleaning and maintenance - Non-dedicated facility:Drain down system prior to equipment break-in or maintenance.

Storage: Store substance within a closed system.

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage4.2E3 Fraction of regional tonnage used locally 1 Annual site tonnage 1.0E2 Maximum daily site tonnage 5.0E3
Frequency and duration of use	:	Continuous release Emission days (days/year)20
Environment factors not influenced by risk management	:	Local freshwater dilution factor 10 Local marine water dilution factor 100
Other given operational conditions affecting environmental exposure	:	Release fraction to air from process (initial release prior to RMM)0.02 Release fraction to wastewater from process (initial release prior to RMM) 1.0E-6 Release fraction to soil from process (initial release prior to RMM)0
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. Prevent discharge of undissolved substance to or recover from onsite wastewater. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. Treat air emission to provide a typical removal efficiency of 70 Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 64.5 If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0.0
Organizational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 3.3E4 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.

Section 2 Operational conditions and risk management measures

Conditions and measures related to external recovery of waste : External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation : Not available.

Section 3.2: Environment

Exposure assessment (environment): : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation : Not available.

Section 4 Guidance to check compliance with the exposure scenario

Health : Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Uses of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) in Metal working fluids / rolling oils - Professional

List of use descriptors :
Identified use name: Uses in Coatings
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC10, PROC11, PROC13, PROC17
Substance supplied to that use in form of: As such
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d, ESVOC SpERC 8.7c.v1
Market sector by type of chemical product: PC24, PC25
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Covers the use in formulated MWFs including transfer operations, open and contained cutting/machining activities, automated and manual application of corrosion protections, draining and working on contaminated/ reject articles, and disposal of waste oils.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapour pressure < 0.5 kPa at STP

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other given operational conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

General exposures (closed systems):No other specific measures identified.

Bulk transfers - Dedicated facility: No other specific measures identified.

Filling/preparation of equipment from drums or containers - Dedicated facility: No other specific measures identified.

Filling/preparation of equipment from drums or containers - Non-dedicated facility: Avoid carrying out activities involving exposure for more than 1 hour.

Process sampling: No other specific measures identified.

Metal machining operations: Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Avoid carrying out activities involving exposure for more than 4 hours. Limit the substance content in the product to 25%.

Manual - Rolling, Brushing: No other specific measures identified.

Section 2 Operational conditions and risk management measures

Spraying: Avoid carrying out activities involving exposure for more than 1 hour. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). or Wear a respirator conforming to EN140 with type A/P2 filter or better.

Treatment by dipping and pouring: No other specific measures identified.

Equipment cleaning and maintenance: Drain down and flush system prior to equipment break-in or maintenance.

Storage: Store substance within a closed system.

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage9.0E2 Fraction of regional tonnage used locally 1 Annual site tonnage 4.5E-1 Maximum daily site tonnage 1.2E0
Frequency and duration of use	:	Continuous release Emission days (days/year) 365
Environment factors not influenced by risk management	:	Local freshwater dilution factor 10 Local marine water dilution factor 100
Other given operational conditions affecting environmental exposure	:	Release fraction to air from wide dispersive use (regional only) 5.0E-3 Release fraction to wastewater from wide dispersive use 0.05 Release fraction to soil from wide dispersive use (regional only) 0.05
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. Treat air emission to provide a typical removal efficiency of N/A Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 65.1 If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0.0
Organizational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 8.1E0 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation : Not available.

Section 3.2: Environment

Exposure assessment (environment): : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation : Not available.

Section 4 Guidance to check compliance with the exposure scenario

Health : Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Use of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) in Release agents or binders - Industrial

List of use descriptors :
Identified use name: Use as an intermediate
Process Category: PROC01, PROC02, PROC03, PROC04, PROC07, PROC08b, PROC10, PROC13, PROC06, PROC14
Substance supplied to that use in form of: As such
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ESVOC SpERC 4.10a.v1
Market sector by type of chemical product: PC24
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Covers the use as binders and release agents including material transfers, mixing, application (including spraying and brushing), mould forming and casting, and handling of waste.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapour pressure < 0.5 kPa at STP

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other given operational conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

Material transfers Closed systems: No other specific measures identified.

Drum/batch transfers - Dedicated facility: No other specific measures identified.

Mixing operations (closed systems): No other specific measures identified.

Mixing operations (open systems): No other specific measures identified.

Dipping, immersion and pouring: No other specific measures identified.

Mould forming: No other specific measures identified.

Casting operations Open systems - Elevated temperature: Provide extract ventilation to points where emissions occur.

Spraying: Carry out in a vented booth or extracted enclosure. or Wear a full-face respirator conforming to EN136 with

Section 2 Operational conditions and risk management measures

type A filter or better.

Manual - Rolling, Brushing: No other specific measures identified.

Treatment by dipping and pouring: No other specific measures identified.

Equipment cleaning and maintenance: Drain down system prior to equipment break-in or maintenance.

Storage: Store substance within a closed system.

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage3.7E3 Fraction of regional tonnage used locally 1 Annual site tonnage 2.5E3 Maximum daily site tonnage 2.5E4
Frequency and duration of use	:	Continuous release Emission days (days/year)100
Environment factors not influenced by risk management	:	Local freshwater dilution factor 10 Local marine water dilution factor 100
Other given operational conditions affecting environmental exposure	:	Release fraction to air from process (initial release prior to RMM)1.0 Release fraction to wastewater from process (initial release prior to RMM) 1.0E-7 Release fraction to soil from process (initial release prior to RMM)0
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. Prevent discharge of undissolved substance to or recover from onsite wastewater. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. Treat air emission to provide a typical removal efficiency of 80 Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 64.4 If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0.0
Organizational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 1.4E5 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation : Not available.

Section 3.2: Environment

Exposure assessment (environment): : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation : Not available.

Section 4 Guidance to check compliance with the exposure scenario

Health : Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Use of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) in Release agents or binders - Professional

List of use descriptors :
Identified use name: Use as an intermediate
Process Category: PROC01, PROC02, PROC03, PROC04, PROC06, PROC07, PROC08b, PROC10, PROC14, PROC08a, PROC11
Substance supplied to that use in form of: As such
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08b, ESVOC SpERC 8.10b.v1
Market sector by type of chemical product: PC24
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Covers the use as binders and release agents including material transfers, mixing, application by spraying, brushing, and handling of waste.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapour pressure < 0.5 kPa at STP

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other given operational conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

Material transfers Closed systems: No other specific measures identified.

Drum/batch transfers - Dedicated facility: No other specific measures identified.

Drum/batch transfers - Non-dedicated facility: Avoid carrying out activities involving exposure for more than 1 hour.

Mixing operations (closed systems): No other specific measures identified.

Mixing operations (open systems): No other specific measures identified.

Mould forming: No other specific measures identified.

Casting operations Open systems - Elevated temperature: Provide extract ventilation to points where emissions occur.

Spraying - Machine: Carry out in a vented booth or extracted enclosure. Avoid carrying out activities involving

Section 2 Operational conditions and risk management measures

exposure for more than 4 hours.

Spraying - Manual: Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Avoid carrying out activities involving exposure for more than 1 hour. or Wear a respirator conforming to EN140 with type A filter or better.

Manual - Rolling, Brushing: No other specific measures identified.

Equipment cleaning and maintenance: Drain down system prior to equipment break-in or maintenance.

Storage: Store substance within a closed system.

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage 2.7E3 Fraction of regional tonnage used locally 1 Annual site tonnage 1.3E3 Maximum daily site tonnage 3.7E4
Frequency and duration of use	:	Continuous release Emission days (days/year) 365
Environment factors not influenced by risk management	:	Local freshwater dilution factor 10 Local marine water dilution factor 100
Other given operational conditions affecting environmental exposure	:	Release fraction to air from wide dispersive use (regional only) 0.95 Release fraction to wastewater from wide dispersive use 0.025 Release fraction to soil from wide dispersive use (regional only) 0.025
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. Treat air emission to provide a typical removal efficiency of N/A Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 65.5 If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0.0
Organizational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 2.4E1 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation : Not available.

Section 3.2: Environment

Exposure assessment (environment): : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation : Not available.

Section 4 Guidance to check compliance with the exposure scenario

Health : Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Uses of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) in Rubber Production and Processing - Industrial

List of use descriptors :
Identified use name: Rubber production and processing
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC06, PROC07, PROC08a, PROC08b, PROC10, PROC13, PROC14, PROC15, PROC21
Substance supplied to that use in form of: As such
Sector of end use: SU03, SU10, SU11
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC06d, ESVOC SpERC 4.19.v1
Market sector by type of chemical product: PC24
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Manufacture of tyres and general rubber articles, including processing of raw (uncured) rubber, handling and mixing of rubber additives, vulcanising, cooling and finishing.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapour pressure < 0.5 kPa at STP

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other given operational conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

Bulk transfers Closed systems: No other specific measures identified.

Bulk transfers - Dedicated facility: No other specific measures identified.

Bulk weighing Closed systems: No other specific measures identified.

Small scale weighing - Dedicated facility: No other specific measures identified.

Additive premixing Open systems: No other specific measures identified.

Material transfers - Dedicated facility: No other specific measures identified.

Calendering (including Banburys) - Operation is carried out at elevated temperature (> 20°C above ambient temperature): No other specific measures identified.

Pressing uncured rubber blanks: No other specific measures identified.

Section 2 Operational conditions and risk management measures

Tyre build-up - Spraying: Minimise exposure by extracted full enclosure for the operation or equipment.

Vulcanisation - Operation is carried out at elevated temperature (> 20°C above ambient temperature): Provide extract ventilation to material transfer points and other openings.

Cooling cured articles - Operation is carried out at elevated temperature (> 20°C above ambient temperature): Provide extract ventilation to points where emissions occur.

Production of articles by dipping and pouring: No other specific measures identified.

Finishing operations: No other specific measures identified.

Laboratory activities: No other specific measures identified.

Equipment cleaning and maintenance: Drain down system prior to equipment break-in or maintenance.

Storage:Store substance within a closed system.

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage 4.4E4 Fraction of regional tonnage used locally 1 Annual site tonnage 3.0E4 Maximum daily site tonnage 1.0E5
Frequency and duration of use	:	Continuous release Emission days (days/year) 300
Environment factors not influenced by risk management	:	Local freshwater dilution factor 10 Local marine water dilution factor 100
Other given operational conditions affecting environmental exposure	:	Release fraction to air from process (initial release prior to RMM) 0.01 Release fraction to wastewater from process (initial release prior to RMM) 1.0E-5 Release fraction to soil from process (initial release prior to RMM) 0.0001
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. Prevent discharge of undissolved substance to or recover from onsite wastewater. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. Treat air emission to provide a typical removal efficiency of 0 Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 73.4 If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0.0
Organizational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 5.0E5 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.

Section 2 Operational conditions and risk management measures

Conditions and measures related to external recovery of waste : External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation : Not available.

Section 3.2: Environment

Exposure assessment (environment): : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation : Not available.

Section 4 Guidance to check compliance with the exposure scenario

Health : Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Uses of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) as a Lubricant - Industrial

List of use descriptors :
Identified use name: Lubricants - Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC07, PROC08a, PROC08b, PROC09, PROC10, PROC13, PROC17, PROC18
Substance supplied to that use in form of: As such
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC07, ESVOC SpERC 4.6a.v1
Market sector by type of chemical product: PC24
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Covers the use of formulated lubricants in closed and open systems including transfer operations, operation of machinery/engines and similar articles, reworking on reject articles, equipment maintenance and disposal of wastes.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapour pressure < 0.5 kPa at STP

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other given operational conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

General exposures (closed systems): No other specific measures identified.

General exposures (open systems): No other specific measures identified.

Bulk transfers - Dedicated facility: No other specific measures identified.

Filling/preparation of equipment from drums or containers - Non-dedicated facility: No other specific measures identified.

Initial factory fill of equipment: No other specific measures identified.

Operation and lubrication of high energy open equipment: Provide extract ventilation to points where emissions occur.

Manual - Rolling, Brushing: No other specific measures identified.

Treatment by dipping and pouring: No other specific measures identified.

Section 2 Operational conditions and risk management measures

Spraying: Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings.

Maintenance (of larger plant items) and machine set-up. - Dedicated facility - Elevated temperature: No other specific measures identified.

Maintenance of small items - Non-dedicated facility: No other specific measures identified.

Remanufacture of reject articles: No other specific measures identified.

Storage: Store substance within a closed system.

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage 3.1E5 Fraction of regional tonnage used locally 1 Annual site tonnage 1.0E2 Maximum daily site tonnage 5.0E3
Frequency and duration of use	:	Continuous release Emission days (days/year) 20
Environment factors not influenced by risk management	:	Local freshwater dilution factor 10 Local marine water dilution factor 100
Other given operational conditions affecting environmental exposure	:	Release fraction to air from process (initial release prior to RMM) 5.0E-4 Release fraction to wastewater from process (initial release prior to RMM) 1.0E-6 Release fraction to soil from process (initial release prior to RMM) 0.001
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. Prevent discharge of undissolved substance to or recover from onsite wastewater. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. Treat air emission to provide a typical removal efficiency of 70 Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 64.5 If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0.0
Organizational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 3.3E4 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation : Not available.

Section 3.2: Environment

Exposure assessment (environment): : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation : Not available.

Section 4 Guidance to check compliance with the exposure scenario

Health : Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Uses of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) as a Lubricant - Professional (low environmental release)

List of use descriptors :
Identified use name: Lubricants - Professional: Low environmental release
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09, PROC13, PROC17, PROC20
Substance supplied to that use in form of: As such
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b, ESVOC SpERC 9.6b.v1
Market sector by type of chemical product: PC24
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Covers the use of formulated lubricants within closed or contained systems including incidental exposures during material transfers, operation of engines and similar articles, equipment maintenance and disposal of waste oil.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapour pressure < 0.5 kPa at STP

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other given operational conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

General exposures (closed systems): No other specific measures identified.

Operation of equipment containing engine oils and similar Closed systems: No other specific measures identified.

General exposures (open systems): No other specific measures identified.

Bulk transfers - Dedicated facility: No other specific measures identified.

Filling/preparation of equipment from drums or containers - Dedicated facility: No other specific measures identified.

Filling/preparation of equipment from drums or containers - Non-dedicated facility: Avoid carrying out activities involving exposure for more than 1 hour.

Operation and lubrication of high energy open equipment - Indoor: Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings.

Section 2 Operational conditions and risk management measures

Operation and lubrication of high energy open equipment - Outdoor: Ensure operation is undertaken outdoors. Avoid carrying out activities involving exposure for more than 4 hours. Limit the substance content in the product to 25%.

Maintenance (of larger plant items) and machine set-up. - Dedicated facility - Elevated temperature: Drain down system prior to equipment break-in or maintenance. Provide extract ventilation to emission points when contact with warm (>50°C) lubricant is likely.

Maintenance of small items - Non-dedicated facility - Elevated temperature: Drain or remove substance from equipment prior to break-in or maintenance. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Engine lubricant service: No other specific measures identified.

Manual - Rolling, Brushing: No other specific measures identified.

Spraying: Carry out in a vented booth or extracted enclosure. or Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. Avoid carrying out activities involving exposure for more than 1 hour. or Wear a respirator conforming to EN140 with type A filter or better.

Treatment by dipping and pouring: No other specific measures identified.

Storage: Store substance within a closed system.

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage 1.1E5 Fraction of regional tonnage used locally 1 Annual site tonnage 5.3E1 Maximum daily site tonnage 365
Frequency and duration of use	:	Continuous release Emission days (days/year) 365
Environment factors not influenced by risk management	:	Local freshwater dilution factor 10 Local marine water dilution factor 100
Other given operational conditions affecting environmental exposure	:	Release fraction to air from wide dispersive use (regional only) 0.01 Release fraction to wastewater from wide dispersive use 0.01 Release fraction to soil from wide dispersive use (regional only) 0.01
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. Treat air emission to provide a typical removal efficiency of N/A Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 76.1 If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0.0
Organizational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 6.5E2 Assumed on-site sewage treatment plant flow 2000

Section 2 Operational conditions and risk management measures

Conditions and measures related to external treatment of waste for disposal : External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste : External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation : Not available.

Section 3.2: Environment

Exposure assessment (environment): : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation : Not available.

Section 4 Guidance to check compliance with the exposure scenario

Health : Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Uses of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) as a Lubricant - Professional (high environmental release)

List of use descriptors :

Identified use name: Lubricants - Professional: High environmental release
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09, PROC13, PROC17, PROC20
Substance supplied to that use in form of: As such
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08b, ESVOC SpERC 8.6c.v1
Market sector by type of chemical product: PC24
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Covers the use of formulated lubricants within closed or contained systems including incidental exposures during material transfers, operation of engines and similar articles, equipment maintenance and disposal of waste oil.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapour pressure < 0.5 kPa at STP

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other given operational conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

General exposures (closed systems): No other specific measures identified.

Operation of equipment containing engine oils and similar Closed systems: No other specific measures identified.

General exposures (open systems): No other specific measures identified.

Bulk transfers - Dedicated facility: No other specific measures identified.

Filling/preparation of equipment from drums or containers - Dedicated facility: No other specific measures identified.

Filling/preparation of equipment from drums or containers - Non-dedicated facility: Avoid carrying out activities involving exposure for more than 1 hour.

Operation and lubrication of high energy open equipment - Indoor: Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings.

Section 2 Operational conditions and risk management measures

Operation and lubrication of high energy open equipment - Outdoor: Ensure operation is undertaken outdoors. Avoid carrying out activities involving exposure for more than 4 hours. Limit the substance content in the product to 25%.

Maintenance (of larger plant items) and machine set-up. - Dedicated facility - Elevated temperature: Drain down system prior to equipment break-in or maintenance. Provide extract ventilation to emission points when contact with warm (>50°C) lubricant is likely.

Maintenance of small items - Non-dedicated facility - Elevated temperature: Drain or remove substance from equipment prior to break-in or maintenance. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Engine lubricant service: No other specific measures identified.

Manual - Rolling, Brushing: No other specific measures identified.

Spraying: Carry out in a vented booth or extracted enclosure. or Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. Avoid carrying out activities involving exposure for more than 1 hour. or Wear a respirator conforming to EN140 with type A filter or better.

Treatment by dipping and pouring: No other specific measures identified.

Storage: Store substance within a closed system.

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage 8.1E4 Fraction of regional tonnage used locally 1 Annual site tonnage 4.0E1 Maximum daily site tonnage 1.1E2
Frequency and duration of use	:	Continuous release Emission days (days/year) 365
Environment factors not influenced by risk management	:	Local freshwater dilution factor 10 Local marine water dilution factor 100
Other given operational conditions affecting environmental exposure	:	Release fraction to air from wide dispersive use (regional only) 5.0E-3 Release fraction to wastewater from wide dispersive use 0.05 Release fraction to soil from wide dispersive use (regional only) 0.05
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. Treat air emission to provide a typical removal efficiency of N/A Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 87.6 If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0.0
Organizational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 2.6E2 Assumed on-site sewage treatment plant flow 2000

Section 2 Operational conditions and risk management measures

Conditions and measures related to external treatment of waste for disposal : External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste : External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human): : The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

Exposure estimation : Not available.

Section 3.2: Environment

Exposure assessment (environment): : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Exposure estimation : Not available.

Section 4 Guidance to check compliance with the exposure scenario

Health : Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.

Environment : Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Uses of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) in Laboratories - Professional

List of use descriptors :
Identified use name: Lubricants - Professional
Process Category: PROC10, PROC15
Substance supplied to that use in form of: As such
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ESVOC SpERC 8.17.v1
Market sector by type of chemical product: PC24
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Use of the substance within laboratory settings, including material transfers and equipment cleaning.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapour pressure < 0.5 kPa at STP

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other given operational conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

Laboratory activities: No other specific measures identified.

Section 2.2 Control of environmental exposure

Product characteristics : Substance is complex UVCB.. Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region 0.1
Regional use tonnage 1.2E3
Fraction of regional tonnage used locally 1
Annual site tonnage 6.0E-1
Maximum daily site tonnage 1.6E0

Frequency and duration of use : Continuous release
Emission days (days/year) 365

Environment factors not influenced by risk management : Local freshwater dilution factor 10
Local marine water dilution factor 100

Section 2 Operational conditions and risk management measures

Other given operational conditions affecting environmental exposure	:	Release fraction to air from wide dispersive use (regional only) 0.5 Release fraction to wastewater from wide dispersive use 0.5 Release fraction to soil from wide dispersive use (regional only) 0
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. Treat air emission to provide a typical removal efficiency of 0 Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 72.1 If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0.0
Organizational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 8.6E0 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human):	:	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
Exposure estimation	:	Not available.

Section 3.2: Environment

Exposure assessment (environment):	:	The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.
Exposure estimation	:	Not available.

Section 4 Guidance to check compliance with the exposure scenario

Health	:	Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.

Section 4 Guidance to check compliance with the exposure scenario

Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Uses of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) in Water treatment chemicals - Industrial

List of use descriptors :
Identified use name: Water treatment chemicals - Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC13
Substance supplied to that use in form of: As such
Sector of end use: SU10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ESVOC SpERC 3.22a.v1
Market sector by type of chemical product: PC24, PC37
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Covers the use of the substance for the treatment of water at industrial facilities in open and closed systems.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapour pressure < 0.5 kPa at STP

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other given operational conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

Bulk transfers - Use in contained systems: No other specific measures identified.

Drum/batch transfers - Dedicated facility: No other specific measures identified.

General exposures (closed systems): No other specific measures identified.

General exposures (open systems): No other specific measures identified.

Pouring from small containers: No other specific measures identified.

Equipment cleaning and maintenance: Drain down system prior to equipment break-in or maintenance.

Storage: Store substance within a closed system.

Section 2 Operational conditions and risk management measures

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage 3.3E3 Fraction of regional tonnage used locally 1 Annual site tonnage 3.0E1 Maximum daily site tonnage 1.0E2
Frequency and duration of use	:	Continuous release Emission days (days/year) 300
Environment factors not influenced by risk management	:	Local freshwater dilution factor 10 Local marine water dilution factor 100
Other given operational conditions affecting environmental exposure	:	Release fraction to air from process (initial release prior to RMM) 0.05 Release fraction to wastewater from process (initial release prior to RMM) 0.95 Release fraction to soil from process (initial release prior to RMM) 0
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. Treat air emission to provide a typical removal efficiency of 0 Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 98.9 If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 79.1
Organizational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs 98.9 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 1.0E2 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human):	:	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
Exposure estimation	:	Not available.

Section 3.2: Environment

Exposure assessment (environment):	:	The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.
Exposure estimation	:	Not available.

Section 3 Exposure estimation and reference to its source

Section 4 Guidance to check compliance with the exposure scenario

Health	:	Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.
Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Uses of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) in Water treatment chemicals - Professional

List of use descriptors :
Identified use name: Water treatment chemicals - Professional
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC13
Substance supplied to that use in form of: As such
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d, ERC08f, ESVOC SpERC 8.22b.v1
Market sector by type of chemical product: PC24, PC37
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Covers the use of the substance for the treatment of water in open and closed systems.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapour pressure < 0.5 kPa at STP

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other given operational conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

Drum/batch transfers - Dedicated facility: No other specific measures identified.

General exposures (closed systems): No other specific measures identified.

General exposures (open systems): No other specific measures identified.

Pouring from small containers: No other specific measures identified.

Equipment cleaning and maintenance: Drain down system prior to equipment break-in or maintenance.

Storage: Store substance within a closed system.

Section 2 Operational conditions and risk management measures

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage 1.7E3 Fraction of regional tonnage used locally 1 Annual site tonnage 1.5E0 Maximum daily site tonnage 4.0E0
Frequency and duration of use	:	Continuous release Emission days (days/year) 365
Environment factors not influenced by risk management	:	Local freshwater dilution factor 10 Local marine water dilution factor 100
Other given operational conditions affecting environmental exposure	:	Release fraction to air from wide dispersive use (regional only) 0.01 Release fraction to wastewater from wide dispersive use 0.99 Release fraction to soil from wide dispersive use (regional only) 0
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. Treat air emission to provide a typical removal efficiency of N/A Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 84.8 If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0.0
Organizational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 1.1E1 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human):	:	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
Exposure estimation	:	Not available.

Section 3.2: Environment

Exposure assessment (environment):	:	The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.
Exposure estimation	:	Not available.

Section 3 Exposure estimation and reference to its source

Section 4 Guidance to check compliance with the exposure scenario

Health	:	Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.
Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Uses of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) in Water treatment chemicals - Industrial

List of use descriptors :
Identified use name: Functional Fluids - Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC09
Substance supplied to that use in form of: As such
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC07, ESVOC SpERC 7.13a.v1
Market sector by type of chemical product: PC16, PC17
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Use as functional fluids e.g. cable oils, transfer oils, coolants, insulators, refrigerants, hydraulic fluids in industrial equipment including maintenance and related material transfers.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapour pressure < 0.5 kPa at STP

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other given operational conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

Bulk transfers Closed systems: No other specific measures identified.

Drum/batch transfers - Dedicated facility: No other specific measures identified.

Filling of articles/equipment Closed systems: No other specific measures identified.

Filling/preparation of equipment from drums or containers - Non-dedicated facility: No other specific measures identified.

General exposures (closed systems): No other specific measures identified.

General exposures (open systems) - Elevated temperature: Restrict area of openings to equipment. and Provide extract ventilation to points where emissions occur. (Elevated temperature)

Remanufacture of reject articles: No other specific measures identified.

Section 2 Operational conditions and risk management measures

Equipment cleaning and maintenance: Drain down system prior to equipment break-in or maintenance.

Storage: Store substance within a closed system.

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage 1.2E3 Fraction of regional tonnage used locally 1 Annual site tonnage 1.0E1 Maximum daily site tonnage 5.0E2
Frequency and duration of use	:	Continuous release Emission days (days/year) 20
Environment factors not influenced by risk management	:	Local freshwater dilution factor 10 Local marine water dilution factor 100
Other given operational conditions affecting environmental exposure	:	Release fraction to air from process (initial release prior to RMM) 5.0E-4 Release fraction to wastewater from process (initial release prior to RMM) 1.0E-6 Release fraction to soil from process (initial release prior to RMM) 0.001
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. Prevent discharge of undissolved substance to or recover from onsite wastewater. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. Treat air emission to provide a typical removal efficiency of 0 Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 64.4 If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0.0
Organizational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 3.3E3 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human):	:	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
Exposure estimation	:	Not available.

Section 3 Exposure estimation and reference to its source

Section 3.2: Environment

Exposure assessment (environment):	:	The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.
Exposure estimation	:	Not available.

Section 4 Guidance to check compliance with the exposure scenario

Health	:	Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.
Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Uses of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) in Functional fluids - Professional

List of use descriptors : **Identified use name:** Functional Fluids - Professional
Process Category: PROC01, PROC02, PROC03, PROC08a, PROC09, PROC20
Substance supplied to that use in form of: As such
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b, ESVOC SpERC 9.13b.v1
Market sector by type of chemical product: PC16, PC17
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Use as functional fluids e.g. cable oils, transfer oils, insulators, refrigerants, hydraulic fluids in closed professional equipment including incidental exposures during maintenance and related material transfers.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation.
Liquid, vapour pressure < 0.5 kPa at STP

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently)

Other given operational conditions affecting workers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

Bulk transfers Closed systems: No other specific measures identified.

Drum/batch transfers - Dedicated facility: No other specific measures identified.

Filling of articles/equipment Closed systems: No other specific measures identified.

Filling/preparation of equipment from drums or containers - Non-dedicated facility: No other specific measures identified.

General exposures (closed systems): No other specific measures identified.

General exposures (open systems) - Elevated temperature: Restrict area of openings to equipment. and Provide extract ventilation to points where emissions occur. (Elevated temperature)

Remanufacture of reject articles: No other specific measures identified.

Equipment cleaning and maintenance: Drain down system prior to equipment break-in or maintenance.

Section 2 Operational conditions and risk management measures

Storage: Store substance within a closed system.

Section 2.2 Control of environmental exposure

Product characteristics	:	Substance is complex UVCB.. Predominantly hydrophobic
Amounts used	:	Fraction of EU tonnage used in region 0.1 Regional use tonnage 1.2E3 Fraction of regional tonnage used locally 1 Annual site tonnage 6.0E-1 Maximum daily site tonnage 1.6E0
Frequency and duration of use	:	Continuous release Emission days (days/year) 365
Environment factors not influenced by risk management	:	Local freshwater dilution factor 10 Local marine water dilution factor 100
Other given operational conditions affecting environmental exposure	:	Release fraction to air from wide dispersive use (regional only) 0.05 Release fraction to wastewater from wide dispersive use 0.025 Release fraction to soil from wide dispersive use (regional only) 0.025
Technical conditions and measures at process level (source) to prevent release	:	Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	:	Risk from environmental exposure is driven by freshwater sediment. If discharging to domestic sewage treatment plant, no onsite wastewater treatment required. Treat air emission to provide a typical removal efficiency of N/A Treat on-site wastewater (prior to receiving water discharge) to provide the required removal efficiency of 64.9 If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 0.0
Organizational measures to prevent/limit release from site	:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Total efficiency of removal from wastewater after on-site and off-site (domestic treatment plant) RMMs 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 1.1E1 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenarios: Operational conditions and risk management measures

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human):	:	The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.
Exposure estimation	:	Not available.

Section 3 Exposure estimation and reference to its source

Section 3.2: Environment

Exposure assessment (environment):	:	The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.
Exposure estimation	:	Not available.

Section 4 Guidance to check compliance with the exposure scenario

Health	:	Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.
Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Required removal efficiency for air can be achieved using on-site technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Uses of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) in Coatings - Consumer

List of use descriptors : **Identified use name:** Uses in Coatings - Consumer
Substance supplied to that use in form of: As such
Sector of end use: SU21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d, ESVOC SpERC 8.3c.v1
Market sector by type of chemical product: PC01, PC04, PC08, PC09a, PC09b, PC09c, PC18, PC23, PC24, PC31, PC34
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including product transfer and preparation, application by brush, spray by hand or similar methods) and equipment cleaning.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation
Liquid, vapour pressure < 0.5 kPa at STP

Other given operational conditions affecting consumers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

No exposure assessment presented for human health.

Section 2.2 Control of environmental exposure

Product characteristics : Substance is complex UVCB. Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region 0.1
Regional use tonnage 2.0E3
Fraction of regional tonnage used locally 0.0005
Annual site tonnage 1.0E0
Maximum daily site tonnage2.8E0

Frequency and duration of use : Continuous release
Emission days (days/year) 365

Environment factors not influenced by risk management : Local freshwater dilution factor 10
Local marine water dilution factor 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only)0.985
Release fraction to wastewater from wide dispersive use0.01
Release fraction to soil from wide dispersive use (regional only)0.005

Section 2 Operational conditions and risk management measures

Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 1.8E1 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human):	:	The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.

Section 3.2: Environment

Exposure assessment (environment):	:	The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Section 4 Guidance to check compliance with the exposure scenario

Health	:	Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.
Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Uses of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) in Cleaning Agents - Consumer

List of use descriptors : **Identified use name:** Use in cleaning agents - Consumer
Substance supplied to that use in form of: As such
Sector of end use: SU21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ESVOC SpERC 8.4c.v1, ERC08d
Market sector by type of chemical product: PC01, PC04, PC08, PC09a, PC09b, PC09c, PC05 Artists Supply and Hobby preparations, PC10 Building and construction preparations not covered elsewhere, PC18, PC23, PC24, PC31
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Covers general exposures to consumers arising from the use of household products sold as washing and cleaning products, aerosols, coatings, de-icers, lubricants and air-care products.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation
Liquid, vapour pressure < 0.5 kPa at STP

Other given operational conditions affecting consumers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

No exposure assessment presented for human health.

Section 2.2 Control of environmental exposure

Product characteristics : Substance is complex UVCB. Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region 0.1
Regional use tonnage 2.0E3
Fraction of regional tonnage used locally 0.0005
Annual site tonnage 1.0E0
Maximum daily site tonnage2.7E0

Frequency and duration of use : Continuous release
Emission days (days/year) 365

Environment factors not influenced by risk management : Local freshwater dilution factor 10
Local marine water dilution factor 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only)0.95
Release fraction to wastewater from wide dispersive use0.025
Release fraction to soil from wide dispersive use (regional only)0.025

Section 2 Operational conditions and risk management measures

Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 1.8E1 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human):	:	The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.

Section 3.2: Environment

Exposure assessment (environment):	:	The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Section 4 Guidance to check compliance with the exposure scenario

Health	:	Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.
Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Uses of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) in Agrochemicals - Consumer

List of use descriptors : **Identified use name:** Use in agrochemicals - Consumer
Substance supplied to that use in form of: As such
Sector of end use: SU21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d, ESVOC SpERC 8.11b.v1
Market sector by type of chemical product: PC12, PC27
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Covers the consumer use in agrochemicals in liquid and solid forms.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation
Liquid, vapour pressure < 0.5 kPa at STP

Other given operational conditions affecting consumers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

No exposure assessment presented for human health.

Section 2.2 Control of environmental exposure

Product characteristics : Substance is complex UVCB. Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region 0.1
Regional use tonnage 2.0E3
Fraction of regional tonnage used locally 0.0005
Annual site tonnage 4.1E0
Maximum daily site tonnage 1.1E1

Frequency and duration of use : Continuous release
Emission days (days/year) 365

Environment factors not influenced by risk management : Local freshwater dilution factor 10
Local marine water dilution factor 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only) 0.9
Release fraction to wastewater from wide dispersive use 0.01
Release fraction to soil from wide dispersive use (regional only) 0.09

Section 2 Operational conditions and risk management measures

Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 7.2E1 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human):	:	The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.

Section 3.2: Environment

Exposure assessment (environment):	:	The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Section 4 Guidance to check compliance with the exposure scenario

Health	:	Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.
Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Uses of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) as a Lubricant - Consumer (low environmental release)

List of use descriptors : **Identified use name:** Lubricants - Consumer: Low environmental release
Substance supplied to that use in form of: As such
Sector of end use: SU21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b, ESVOC SpERC 9.6d.v1
Market sector by type of chemical product: PC01, PC24, PC31
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Covers the consumer use of formulated lubricants in closed and open systems including transfer operations, application, operation of engines and similar articles, equipment maintenance and disposal of waste oil.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation
Liquid, vapour pressure < 0.5 kPa at STP

Other given operational conditions affecting consumers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

No exposure assessment presented for human health.

Section 2.2 Control of environmental exposure

Product characteristics : Substance is complex UVCB. Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region 0.1
Regional use tonnage 1.1E5
Fraction of regional tonnage used locally 0.0005
Annual site tonnage 5.7E1
Maximum daily site tonnage 1.6E2

Frequency and duration of use : Continuous release
Emission days (days/year) 365

Environment factors not influenced by risk management : Local freshwater dilution factor 10
Local marine water dilution factor 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only) 0.01
Release fraction to wastewater from wide dispersive use 0.01
Release fraction to soil from wide dispersive use (regional only) 0.01

Section 2 Operational conditions and risk management measures

Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 6.9E2 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human):	:	The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.

Section 3.2: Environment

Exposure assessment (environment):	:	The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Section 4 Guidance to check compliance with the exposure scenario

Health	:	Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.
Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Uses of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) as a Lubricant - Consumer (high environmental release)

List of use descriptors : **Identified use name:** Lubricants - Consumer: High environmental release
Substance supplied to that use in form of: As such
Sector of end use: SU21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC08a, ERC08d, ESVOC SpERC 8.6e.v1
Market sector by type of chemical product: PC01, PC24, PC31
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Covers the consumer use of formulated lubricants in closed and open systems including transfer operations, application, operation of engines and similar articles, equipment maintenance and disposal of waste oil.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation
Liquid, vapour pressure < 0.5 kPa at STP

Other given operational conditions affecting consumers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

No exposure assessment presented for human health.

Section 2.2 Control of environmental exposure

Product characteristics : Substance is complex UVCB. Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region 0.1
Regional use tonnage 2.9E4
Fraction of regional tonnage used locally 0.0005
Annual site tonnage 1.4E1
Maximum daily site tonnage 3.9E1

Frequency and duration of use : Continuous release
Emission days (days/year) 365

Environment factors not influenced by risk management : Local freshwater dilution factor 10
Local marine water dilution factor 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only) 5.0E-3
Release fraction to wastewater from wide dispersive use 0.05
Release fraction to soil from wide dispersive use (regional only) 0.05

Section 2 Operational conditions and risk management measures

Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 1.6E2 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human):	:	The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.

Section 3.2: Environment

Exposure assessment (environment):	:	The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Section 4 Guidance to check compliance with the exposure scenario

Health	:	Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.
Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : UVCB

Product name : Q8 Induco 12

Section 1 Title

Short title of the exposure scenario : Uses of Other Lubricant Base Oils (IP 346 < 3%; <= 20.5 cSt @ 40 °C) (H304) in Functional fluids - Consumer

List of use descriptors : **Identified use name:** Functional Fluids - Consumer
Substance supplied to that use in form of: As such
Sector of end use: SU21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b, ESVOC SpERC 9.13c.v1
Market sector by type of chemical product: PC16, PC17
Article category related to subsequent service life: Not applicable.

Processes and activities covered by the exposure scenario : Use of sealed items containing functional fluids e.g. transfer oils, hydraulic fluids, refrigerants.

Assessment method : See section 3.

Section 2 Operational conditions and risk management measures

Section 2.1 Control of consumer exposure

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : liquid, With potential for aerosol generation
Liquid, vapour pressure < 0.5 kPa at STP

Other given operational conditions affecting consumers exposure : Operation is carried out at elevated temperature (> 20°C above ambient temperature) Assumes a good basic standard of occupational hygiene is implemented

Contributing scenarios: Operational conditions and risk management measures

No exposure assessment presented for human health.

Section 2.2 Control of environmental exposure

Product characteristics : Substance is complex UVCB. Predominantly hydrophobic

Amounts used : Fraction of EU tonnage used in region 0.1
Regional use tonnage 1.2E3
Fraction of regional tonnage used locally 0.0005
Annual site tonnage 6.0E-1
Maximum daily site tonnage 1.6E0

Frequency and duration of use : Continuous release
Emission days (days/year) 365

Environment factors not influenced by risk management : Local freshwater dilution factor 10
Local marine water dilution factor 100

Other given operational conditions affecting environmental exposure : Release fraction to air from wide dispersive use (regional only) 0.05
Release fraction to wastewater from wide dispersive use 0.025
Release fraction to soil from wide dispersive use (regional only) 0.025

Section 2 Operational conditions and risk management measures

Conditions and measures related to municipal sewage treatment plant	:	Not applicable as there is no release to wastewater. Estimated substance removal from wastewater via on-site sewage treatment 94.7 Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal 1.1E1 Assumed on-site sewage treatment plant flow 2000
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Section 3 Exposure estimation and reference to its source

Section 3.1: Health

Exposure assessment (human):	:	The ECETOC TRA tool has been used to estimate consumer exposures unless otherwise indicated.

Section 3.2: Environment

Exposure assessment (environment):	:	The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.

Section 4 Guidance to check compliance with the exposure scenario

Health	:	Predicted exposures are not expected to exceed the DN(M)EL when the risk management measures/operational conditions outlined in section 2 are implemented. Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. Available hazard data do not support the need for a DNEL to be established for other health effects. Risk management measures are based on qualitative risk characterisation.
Environment	:	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.