



SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

SDS # : 080118

HYDRAUNYCOIL FH 42

Date of the previous version: 2016-02-10

Revision Date: 2017-11-06

Version 3

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name	HYDRAUNYCOIL FH 42
Number	40A
Substance/mixture	Mixture

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

Identified uses	Hydraulic oil.
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1.3. Details of the supplier of the safety data sheet

Supplier	A - TOTAL UK LIMITED 183 Eversholt St, Kings Cross London, NW1 1BU UNITED KINGDOM Tel: +44 (0)20 7339 8000 Fax: +44 (0)20 7339 8033
	B - TOTAL LUBRIFIANTS 562 Avenue du Parc de L'île 92029 Nanterre Cedex FRANCE Tél: +33 (0)1 41 35 40 00 Fax: +33 (0)1 41 35 84 71

For further information, please contact:

Contact Point	A - HSE
	B - HSE
E-mail Address	A - rm.gb-msds@total.co.uk
	B - rm.msds-lubs@total.com

1.4. Emergency telephone number

Emergency telephone: +44 1235 239670

UK: National Poisons Information Service (NPIS): NHS on 111 or a doctor

Section 2: HAZARDS IDENTIFICATION

Version EUUK



SDS # : 080118

HYDRAUNYCOIL FH 42

Revision Date: 2017-11-06

Version 3

2.1. Classification of the substance or mixture**REGULATION (EC) No 1272/2008***For the full text of the H-Statements mentioned in this Section, see Section 2.2.***Classification**

The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008

Aspiration toxicity - Category 1 - H304

Acute inhalation toxicity - vapour - Category 4 - H332

2.2. Label elements**Labelled according to** REGULATION (EC) No 1272/2008

Contains Dec-1-ene, dimers, hydrogenated, Dec-1-ene, trimers, hydrogenated.

**Signal word**
DANGER**Hazard Statements *****

H304 - May be fatal if swallowed and enters airways

H332 - Harmful if inhaled***

Precautionary statements

P405 - Store locked up

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTRE/doctor

P261 - Avoid breathing vapours

P271 - Use only outdoors or in a well-ventilated area

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P312 - Call a POISON CENTRE/doctor if you feel unwell

P331 - Do NOT induce vomiting***

2.3. Other hazards**Physical-Chemical Properties** Contaminated surfaces will be extremely slippery.**Environmental properties** Should not be released into the environment.**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.2. Mixture

SDS # : 080118

HYDRAUNYCOIL FH 42

Revision Date: 2017-11-06

Version 3

Hazardous components

Chemical Name	EC-No	REACH Registration Number	CAS-No	Weight %	Classification (Reg. 1272/2008)
Dec-1-ene, dimers, hydrogenated	-	01-2119493069-28-002	68649-11-6	50-100	Asp. Tox. 1 (H304) Acute Tox. 4 (H332)
Dec-1-ene, trimers, hydrogenated	-	01-2119493949-12	157707-86-3	10-25	Asp. Tox. 1 (H304)
Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]	273-066-3***	no data available	68937-41-7	0-2.5	Repr. 2 (H361) STOT RE 2 (H373) Aquatic Chronic 2 (H411)

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice	IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE. show the material safety data sheet or label if possible.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. In the event of a high pressure injection injury, worker should obtain immediate medical assistance.
Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Consult a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Do not ingest. If swallowed then seek immediate medical assistance.***
Protection of first-aiders	Use personal protective equipment.

4.2. Most important symptoms and effects, both acute and delayed

Eye contact	Not classified. Contact with eyes may cause irritation.
Skin contact	Not classified. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent. Repeated exposure may cause skin dryness or cracking.
Inhalation	Harmful by inhalation. Inhalation of vapours in high concentration may cause irritation of respiratory system.
Ingestion	Harmful: If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious inhalation pulmonary lesions (medical survey during 48 hours). Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

4.3. Indication of any immediate medical attention and special treatment needed



SDS # : 080118

HYDRAUNYCOIL FH 42

Revision Date: 2017-11-06

Version 3

Notes to physician Treat symptomatically.

Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media Foam. Carbon dioxide (CO₂). Dry powder. Water spray.

Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Special hazard Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration.

5.3. Precautions for fire-fighters

Special protective equipment for fire-fighters Wear self-contained breathing apparatus and protective suit.

Other information Cool containers / tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

General Information Do not touch or walk through spilled material. Contaminated surfaces will be extremely slippery. Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.

6.2. Environmental precautions

General Information Do not allow material to contaminate ground water system. Try to prevent the material from entering drains or water courses. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Dam up. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

Personal protective equipment See Section 8 for more detail.

Waste treatment See section 13.



SDS # : 080118

HYDRAUNYCOIL FH 42

Revision Date: 2017-11-06

Version 3

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling	When using, do not eat, drink or smoke. For personal protection see section 8. Use only in well-ventilated areas. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing.
Prevention of fire and explosion	Take precautionary measures against static discharges. Ground/bond containers, tanks and transfer/receiving equipment.
Hygiene measures	Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions	Keep away from food, drink and animal feedingstuffs. Keep in a banded area. Keep container tightly closed. Preferably keep in the original container. Otherwise, reproduce all the statutory information from the labels onto the new container. Do not remove the hazard labels of the containers (even if they are empty). Design the installations in order to avoid accidental emissions of product (due to seal breakage, for example) onto hot casings or electrical contacts. Protect from frost, heat and sunlight. Protect from moisture.***
Materials to avoid	Strong oxidising agents.***

7.3. Specific use(s)

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parametres

Exposure limits	Do not contain substance with european workplace exposure limits in concentration above regulatory thresholds
Legend	See section 16

DNEL Worker (Industrial/Professional)

Chemical Name	Short term, systemic effects	Short term, local effects	Long term, systemic effects	Long term, local effects
Dec-1-ene, dimers, hydrogenated 68649-11-6	60 mg/m ³ Inhalation			

DNEL Consumer

Chemical Name	Short term, systemic effects	Short term, local effects	Long term, systemic effects	Long term, local effects
Dec-1-ene, dimers, hydrogenated 68649-11-6	50 mg/m ³ Inhalation			



SDS # : 080118

HYDRAUNYCOIL FH 42

Revision Date: 2017-11-06

Version 3

8.2. Exposure controls

Occupational Exposure Controls

Engineering measures

Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Personal protective equipment

General Information

Protective engineering solutions should be implemented and in use before personal protective equipment is considered. If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.

Respiratory protection

In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Respirator with combination filter for vapour/particulate (EN 14387). The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.***

Eye protection

If splashes are likely to occur, wear: Safety glasses with side-shields.***

Skin and body protection

Wear suitable protective clothing. Protective shoes or boots. Long sleeved clothing.***

Hand protection

Hydrocarbon-proof gloves. Nitrile rubber. Fluorinated rubber. In case of prolonged contact with the product, it is recommended to wear gloves complying with EN 420 and EN 374 standards, protecting at least for 480 minutes and having a thickness of 0,38 mm at least. These values are indicative only. The level of protection is provided by the material of the glove, its technical characteristics, its resistance to the chemicals to be handled, the appropriateness of its use and its replacement frequency.***

Environmental exposure controls

General Information

Do not allow material to contaminate ground water system.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Colour	No information available		
Physical state @20°C	liquid		
Odour	No information available		
Odour Threshold	No information available		
<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH		Not applicable	
Melting point/range		No information available	
Boiling point/boiling range		No information available	



SDS # : 080118

HYDRAUNYCOIL FH 42

Revision Date: 2017-11-06

Version 3

Flash point	174 °C 345 °F		Cleveland Open Cup (COC) Cleveland Open Cup (COC)
Evaporation rate		No information available	
Flammability Limits in Air		No information available	
Vapour pressure	< 110 kPa @ 20 °C		
Vapour density		No information available	
Relative density		No information available	
Density	831 kg/m ³	@ 20 °C	
Water solubility		Insoluble	
Solubility in other solvents		No information available	
logPow		No information available	
Autoignition temperature		No information available	
Decomposition temperature		No information available	
Viscosity, kinematic	>= 6.7 mm ² /s >= 2.0 mm ² /s	@ 40 °C @ 100 °C	ISO 3104 ISO 3104
Explosive properties	Not explosive		
Oxidising properties	No information available		
Possibility of hazardous reactions	No data available		

9.2. Other information

Freezing point		No information available	
Pour point	-63 °C		ASTM D 97

Section 10: STABILITY AND REACTIVITY10.1. Reactivity10.2. Chemical stability

Stability Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Heat (temperatures above flash point), sparks, ignition points, flames, static electricity.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents.

10.6. Hazardous Decomposition Products

Hazardous Decomposition Products Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot.

SDS # : 080118

HYDRAUNYCOIL FH 42

Revision Date: 2017-11-06

Version 3

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity Local effects Product Information

Skin contact	. Not classified. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent. Repeated exposure may cause skin dryness or cracking.
Eye contact	. Not classified. Contact with eyes may cause irritation.
Inhalation	. Harmful by inhalation. Inhalation of vapours in high concentration may cause irritation of respiratory system.
Ingestion	. Harmful: If swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious inhalation pulmonary lesions (medical survey during 48 hours). Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Dec-1-ene, dimers, hydrogenated	LD50 >5000 mg/kg Oral (Rat)	LD50 (24h) >3000 mg/kg (Rabbit-OECD 402)	LC50 (4h) < 5 mg/l (Rat)
Dec-1-ene, trimers, hydrogenated	LD50 > 5000 mg/kg (rat - OECD 401)	LD50 > 3000 mg/kg (rat - OECD 402)	LC50 (4h) 1.17 mg/l (rat - vapour - OECD 403) LC50 (4h) 0.9 mg/l (rat - vapour - OECD 403) LC50 (4h) 1.4 mg/l (rat - vapour - OECD 403)
Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%]	LD50 > 5000 mg/kg (Rat)	LD50 > 10000 mg/kg (Rabbit)	LD50 > 200 mg/l (Rat)

Sensitisation

Sensitisation Not classified as a sensitizer.

Specific effects

Carcinogenicity This product is not classified carcinogenic.
Mutagenicity This product is not classified as mutagenic.
Reproductive toxicity This product does not present any known or suspected reproductive hazards.

Chemical Name	European Union
Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%] 68937-41-7	Repr. 2 (H361)***

Repeated dose toxicity

Subchronic Toxicity No information available.

Target Organ Effects (STOT)

Target Organ Effects (STOT) No information available.



SDS # : 080118

HYDRAUNYCOIL FH 42

Revision Date: 2017-11-06

Version 3

Other information**Other adverse effects**

Characteristic skin lesions (oil blisters) may develop following prolonged and repeated exposures (contact with contaminated clothing).

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Not classified.

Acute aquatic toxicity - Product Information

No information available.

Acute aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates.	Toxicity to fish	Toxicity to microorganisms
Dec-1-ene, dimers, hydrogenated 68649-11-6	EC50 (72h) >1000 mg/l Scenedesmus capricornutum static	EC50 (48h) >1000 mg/l Daphnia magna static	LC50 (96h) >1000 mg/l Oncorhynchus mykiss semi-static	
Dec-1-ene, trimers, hydrogenated 157707-86-3	EL50 (72h) > 1000 mg/l (Scenedesmus capricornutum - OECD 201) NOELR (72h) 1000 mg/l (Scenedesmus capricornutum - OECD 201)	EL50 (48h) > 150 mg/l (Daphnia magna) LL50 (96h) > 5002 ppm (Americamysis bahia - OECD 202)	LL50 (96h) > 1000 mg/l (Oncorhynchus mykiss)	
Phenol, isopropylated, phosphate (3:1) [Triphenyl phosphate > 5%] 68937-41-7		EC50 (48h) 2.44 mg/l Daphnia magna	LC50 (96h) 1.6 mg/l Oncorhynchus mykiss	

Chronic aquatic toxicity - Product Information

No information available.

Chronic aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates.	Toxicity to fish	Toxicity to microorganisms
Dec-1-ene, dimers, hydrogenated 68649-11-6		NOEC (21d) 125 mg/l Daphnia magna		
Dec-1-ene, trimers, hydrogenated 157707-86-3	NOELR (72h) 1000 mg/l (Scenedesmus capricornutum - OECD 201)	NOELR (21d) 125 mg/l (Daphnia magna - OECD 211) NOELR (96h) 5002 ppm (Americamysis bahia - OECD 202)	NOELR (96h) 1000 mg/l (Oncorhynchus mykiss)	

Effects on terrestrial organisms

No information available.



SDS # : 080118

HYDRAUNYCOIL FH 42

Revision Date: 2017-11-06

Version 3

12.2. Persistence and Degradability**General Information**

No information available.

12.3. Bioaccumulative potential**Product Information**

No information available.

logPow

No information available

Component Information

Chemical Name	log Pow
Dec-1-ene, dimers, hydrogenated - 68649-11-6	6.6

12.4. Mobility in soil**Soil**

Given its physical and chemical characteristics, the product generally shows low soil mobility.

Air

Loss by evaporation is limited.

Water

The product is insoluble and floats on water.

12.5. Results of PBT and vPvB assessment**PBT and vPvB assessment**

No information available.

12.6. Other adverse effects

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods**Waste from residues / unused products**

Should not be released into the environment. Do not empty into drains. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

EWC Waste Disposal No

The following Waste Codes are only suggestions: 13 01 11. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORT INFORMATION



SDS # : 080118

HYDRAUNYCOIL FH 42

Revision Date: 2017-11-06

Version 3

<u>ADR/RID</u>	not regulated
<u>IMDG/IMO</u>	not regulated
<u>ICAO/IATA</u>	not regulated
<u>ADN</u>	not regulated

Section 15: REGULATORY INFORMATION

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

European Union

Further information

No information available***

15.2. Chemical Safety Assessment**Chemical Safety Assessment** No information available15.3. National regulatory information**The United Kingdom**

- Avoid exceeding occupational exposure limits (see section 8).

Ireland

- Avoid exceeding occupational exposure limits (see section 8).

Section 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H332 - Harmful if inhaled

H304 - May be fatal if swallowed and enters airways

H361 - Suspected of damaging fertility or the unborn child

H373 - May cause damage to organs through prolonged or repeated exposure

H411 - Toxic to aquatic life with long lasting effects

Abbreviations, acronyms

ACGIH = American Conference of Governmental Industrial Hygienists

bw = body weight

bw/day = body weight/day



SDS # : 080118

HYDRAUNYCOIL FH 42

Revision Date: 2017-11-06

Version 3

EC x = Effect Concentration associated with x% response

GLP = Good Laboratory Practice

IARC = International Agency for Research of Cancer

LC50 = 50% Lethal concentration - Concentration of a chemical in air or a chemical in water which causes the death of 50% (one half) of a group of test animals

LD50 = 50% Lethal Dose - Chemical amount, given at once, which causes the death of 50% (one half) of a group of test animals

LL = Lethal Loading

NIOSH = National Institute of Occupational Safety and Health

NOAEL = No Observed Adverse Effect Level

NOEC = No Observed Effect Concentration

NOEL = No Observed Effect Level

OECD = Organization for Economic Co-operation and Development

OSHA = Occupational Safety and Health Administration

UVCB = Substance of unknown or Variable composition, Complex reaction products or Biological material

DNEL = Derived No Effect Level

PNEC = Predicted No Effect Concentration

dw = dry weight

fw = fresh water

mw = marine water

or = occasional release

Legend Section 8

TWA: Time Weight Average

STEL: Short Time Exposure Limit

+	Sensitiser	*	Skin designation
**	Hazard Designation	C:	Carcinogen
M:	Mutagen	R:	Toxic to reproduction

Revision Date: 2017-11-06

Revision Note: *** Indicates updated section. &. 1.***

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.

End of Safety Data Sheet

LUBGES-AI-A00405

1. Exposure scenario

Formulation additives, lubricants and greases, Industrial.

Use Descriptor

Sector of use

SU10 - Formulation

SU3 - Industrial Manufacturing (all)

Process category

PROC1 - Use in closed process, no likelihood of exposure

PROC2 - Use in closed, continuous process with occasional controlled exposure

PROC3 - Use in closed batch process (synthesis or formulation)

PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises

PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)

PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

PROC15 - Use as laboratory reagent

Environmental release category

ERC2 - Formulation of preparations

Specific Environmental Release Category

ATIEL-ATC SpERC 2.Ai-I.v1.

Processes, tasks, activities covered

Industrial formulation of lubricant additives, lubricants and greases. Includes material transfers, mixing, large and small scale packing, sampling, maintenance.

2. Operational conditions and risk management measures

2.1. Control of environmental exposure

No exposure scenario required

2.2. Control of exposure - Workers or Consumers

Product characteristics

Physical state

Liquid, vapour pressure < 0.5 kPa at STP

Concentration of substance in product

Covers percentage substance in the product up to 100 % (unless stated differently).

Amounts used

Not applicable.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently)

Human factors not influenced by risk management

not applicable

Other operational conditions affecting exposure

Covers percentage substance in the product up to 100 % (unless stated differently).

2.2a. Control of worker exposure

Contributing Scenarios	Operational conditions and risk management measures
General measures applicable to all activities	Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.
General exposures. Use in contained systems elevated temperature - PROC 2	No other specific measures identified.
Mixing operations (closed systems). Batch processes at elevated temperatures - PROC 3	Provide extract ventilation to points where emissions occur.
Mixing operations (open systems). Batch processes at elevated temperatures - PROC 4; 5	Provide extract ventilation to points where emissions occur. Avoid carrying out activities involving exposure for more than 4 hours.
Mixing operations (open systems) - PROC 4; 5	Provide extract ventilation to points where emissions occur.
Process sampling - PROC 4; 8b	Avoid carrying out activities involving exposure for more than 1 hour. Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.
Bulk transfers; dedicated facility - PROC 8b	Avoid carrying out operation for more than 4 hours. Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls.
Drum/batch transfers; dedicated facility - PROC 8b	Provide extract ventilation to points where emissions occur.
Drum/batch transfers; non-dedicated facility - PROC 8a	Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour). Avoid carrying out activities involving exposure for more than 1 hour. Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls.
Equipment cleaning and maintenance - PROC 8a; 8b	Drain down and flush system prior to equipment break-in or maintenance. Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls. Retain drain downs in sealed storage pending disposal or for subsequent recycle. Clear spills immediately.
Drum and small package filling - PROC 9	Provide a good standard of general or controlled ventilation (10 to 15 air changes per hour). Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.
Laboratory activities - PROC 15	Avoid carrying out activities involving exposure for more than 4 hours.
Storage - PROC 1; 2	Store substance within a closed system.

2.2b. Control of consumer exposure

Product Category(ies)	Operational conditions and risk management measures
Not applicable	

3. Exposure estimation and references

Health

The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product

Environment

Used ECETOC TRA model.

4. Guidance for Downstream User (DU) to check compliance with the Exposure scenario

Health

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

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. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>). If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

General

For further information see www.atiel.org/reach/introduction

LUBGES-BI-A00405

1. Exposure scenario

General use of lubricants and greases in vehicles or machinery. Industrial.

Use Descriptor

Sector of use

SU3 - Industrial Manufacturing (all)

Process category

PROC1 - Use in closed process, no likelihood of exposure

PROC2 - Use in closed, continuous process with occasional controlled exposure

PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Environmental release category

ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

ERC7 - Industrial use of substances in closed systems

Specific Environmental Release Category

ATIEL-ATC SpERC 4.Bi.v1.

Processes, tasks, activities covered

Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.

2. Operational conditions and risk management measures

2.1. Control of environmental exposure

No exposure scenario required

2.2. Control of exposure - Workers or Consumers

Product characteristics

Physical state

liquid

Vapour pressure

<0.5 kPa

Concentration of substance in product

Covers percentage substance in the product up to 100 % (unless stated differently).

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently)

Other operational conditions affecting exposure

Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes a good basic standard of occupational hygiene is implemented.

2.2a. Control of worker exposure

Contributing Scenarios	Operational conditions and risk management measures
General measures applicable to all activities	Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.
General exposures (closed systems) - PROC 1	No other specific measures identified.
Initial factory fill of equipment Use in contained systems - PROC 2; 9	No other specific measures identified.
Initial factory fill of equipment (open systems) - PROC 8b	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.
Operation of equipment containing engine oils and similar Use in contained systems - PROC 1	No other specific measures identified.
Equipment cleaning and maintenance - PROC 8b	Drain down system prior to equipment break-in or maintenance. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Wear chemically resistant gloves (tested to EN374) in combination with specific activity training. Retain drain downs in sealed storage pending disposal or for subsequent recycle.
Equipment cleaning and maintenance Operation is carried out at elevated temperature (> 20°C above ambient temperature) - PROC 8b	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. Wear chemically resistant gloves (tested to EN374) in combination with intensive management supervision controls. Retain drain downs in sealed storage pending disposal or for subsequent recycle.
Storage - PROC 1; 2	Store substance within a closed system.

2.2b. Control of consumer exposure

Product Category(ies)	Operational conditions and risk management measures
Not applicable	

3. Exposure estimation and references

Health

The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product

Environment

Used ECETOC TRA model.

4. Guidance for Downstream User (DU) to check compliance with the Exposure scenario

Health

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

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. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>). If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

General

For further information see www.atiel.org/reach/introduction

LUBGES-BP-A00405

1. Exposure scenario

General use of lubricants and greases in vehicles or machinery. Professional.

Use Descriptor

Sector of use

Professional

Process category

PROC1 - Use in closed process, no likelihood of exposure

PROC2 - Use in closed, continuous process with occasional controlled exposure

PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

PROC20 - Heat and pressure transfer fluids in dispersive, professional use but closed systems

Environmental release category

ERC9a - Wide dispersive indoor use of substances in closed systems

ERC9b - Wide dispersive outdoor use of substances in closed systems

Specific Environmental Release Category

ATIEL-ATC SpERC 9.Bp.v1.

Processes, tasks, activities covered

Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.

2. Operational conditions and risk management measures

2.1. Control of environmental exposure

No exposure scenario required

2.2. Control of exposure - Workers or Consumers

Product characteristics

Physical state

liquid

Vapour pressure

<0.5 kPa

Concentration of substance in product

Covers percentage substance in the product up to 100 % (unless stated differently).

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently)

Other operational conditions affecting exposure

Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes a good basic standard of occupational hygiene is implemented.

2.2a. Control of worker exposure	
Contributing Scenarios	Operational conditions and risk management measures
General measures applicable to all activities	Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin problems that may develop. Use suitable eye protection. Avoid direct eye contact with product, also via contamination on hands.
Operation of equipment containing engine oils and similar Use in contained systems - PROC 1	No other specific measures identified.
Material transfers; non-dedicated facility - PROC 8a	Avoid carrying out activities involving exposure for more than 4 hours. Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.
Equipment cleaning and maintenance; dedicated facility - PROC 8b; 20	Drain down system prior to equipment break-in or maintenance. Retain drain downs in sealed storage pending disposal or for subsequent recycle.
Storage - PROC 1; 2	Store substance within a closed system.

2.2b. Control of consumer exposure	
Product Category(ies)	Operational conditions and risk management measures
Not applicable	

3. Exposure estimation and references

Health

The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product

Environment

Used ECETOC TRA model.

4. Guidance for Downstream User (DU) to check compliance with the Exposure scenario

Health

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

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. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>). If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

General

For further information see www.atiel.org/reach/introduction