SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2020/878

CLAAS AGRIHYD HVLP-D 46

SDS # : 36525

previous revision date : 2024/04/26

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

1.1 Product identifier

Product name : CLAAS AGRIHYD HVLP-D 46

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

Identified uses
Hydraulic oil Formulation additives, lubricants and greases - Industrial General use of lubricants and greases in vehicles or machinery - Industrial General use of lubricants and greases in vehicles or machinery - Professional

1.3 Details of the supplier of the safety data sheet

TotalEnergies Lubrifiants
562 Avenue du Parc de L'ile
92029 Nanterre Cedex FRANCE
Tél: +33 (0)1 41 35 40 00
Fax: +33 (0)1 41 35 84 71

rm.msds-lubs@totalenergies.com

TotalEnergies Marketing Croatia d.o.o.,
Horvatova 80a, 10000 Zagreb, Hrvatska.
Tel: + 385 1 6700 339

ms.logistika@totalenergies.com

Contact

H.S.E

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number : Telephone number for medical information in case of poisoning: +385 (0) 1 23-48-342

Emergency phone: 112

Supplier

Telephone number : Total Emergency phone: +44 1235 239670

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Aquatic Chronic 3, H412

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

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

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

2.2 Label elements

Signal word : No signal word.

Hazard statements : H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : P273 - Avoid release to the environment.

Response : Not applicable.

Storage : Not applicable.

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

Supplemental label elements : Contains methyl methacrylate. May produce an allergic reaction.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

2.3 Other hazards

This mixture does not contain any substances that are assessed to be a PBT or a vPvB in a concentration >= 0,1 %. This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACh Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

Other hazards which do not result in classification : Hazard of slipping on spilled product.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/substance	Identifiers	% (w/w)	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Distillates (petroleum), hydrotreated light paraffinic	REACH #: 01-2119487077-29 EC: 265-158-7 CAS: 64742-55-8	≤10	Asp. Tox. 1, H304	-	[1]
isodecyl methacrylate	REACH #: 01-2119894925-17 EC: 249-978-2 CAS: 29964-84-9 Index: 607-134-00-4	<1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 1, H410	STOT SE 3, H335: C ≥ 10% M [Chronic] = 1	[1]

2,6-di-tert-butylphenol	REACH #: 01-2119490822-33 EC: 204-884-0 CAS: 128-39-2	≤0.3	Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	Skin Irrit. 2, H315: C ≥ 35% M [Acute] = 1 M [Chronic] = 1	[1]
methyl methacrylate	REACH #: 01-2119452498-28 EC: 201-297-1 CAS: 80-62-6 Index: 607-035-00-6	≤0.3	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Skin Sens. 1B, H317 STOT SE 3, H335	-	[1] [2]
ethyl acrylate	REACH #: 01-2119459301-46 EC: 205-438-8 CAS: 140-88-5 Index: 607-032-00-X	<0.1	Flam. Liq. 2, H225 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 3, H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 3, H412 **See Section 16 for the full text of the H statements declared above.**	ATE [Oral] = 800 mg/kg ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 3 mg/l Skin Irrit. 2, H315: C ≥ 5% Eye Irrit. 2, H319: C ≥ 5% STOT SE 3, H335: C ≥ 5%	[1] [2]

Additional information : Mineral oil of petroleum origin. Product containing mineral oil with less than 3% DMSO extract as measured by IP 346 The product is made from synthetic base oils

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit

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. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

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	:	No specific data.

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, water spray (fog) or foam.
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. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous combustion products	:	carbon monoxide carbon dioxide phosphorus oxides sulfur oxides Hydrogen sulfide Mercaptans Zinc 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.
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. Put on appropriate personal protective equipment.
For emergency responders	:	If specialized 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). Water polluting material.

6.3 Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. 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.

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. 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

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. 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

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. 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. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations : See exposure scenarios

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/substance	Exposure limit values
methyl methacrylate	**Ministry of Economy, Labour and Entrepreneurship ELV/ STELV (Croatia, 1/2021). Absorbed through skin. Skin sensitizer.** STELV: 100 ppm 15 minutes. ELV: 50 ppm 8 hours.
ethyl acrylate	**Ministry of Economy, Labour and Entrepreneurship ELV/ STELV (Croatia, 1/2021). Absorbed through skin. Skin sensitizer.** STELV: 42 mg/m³ 15 minutes. STELV: 10 ppm 15 minutes. ELV: 21 mg/m³ 8 hours. ELV: 5 ppm 8 hours.

Reportable hazardous constituent(s) contained in UVCB and/or multi-constituent substance(s) complying with the classification criteria and/or with an exposure limit (OEL)

No exposure limit value known.

Biological Limit Values (BLV)

No exposure indices known.

Recommended monitoring procedures : 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.

Advisory OEL : Mineral oil mist: USA: OSHA (PEL) TWA 5 mg/m3, NIOSH (REL) TWA 5 mg/m3, STEL 10 mg/m3, ACGIH (TLV) TWA 5 mg/m3 (highly refined)

DNELs/DMELs

Product/substance	Type	Exposure	Value	Population	Effects
Distillates (petroleum), hydrotreated light paraffinic	DNEL	Long term Oral	0.74 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.97 mg/ kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	1.19 mg/m³	General population	Local
	DNEL	Long term Inhalation	2.73 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	5.58 mg/m³	Workers	Local
isodecyl methacrylate	DNEL	Long term Inhalation	2.5 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	5 mg/kg bw/day	Workers	Systemic
2,6-di-tert-butylphenol	DNEL	Long term Dermal	6.75 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Oral	6.75 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Dermal	11.25 mg/ kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	20.9 mg/m³	General population	Systemic
	DNEL	Long term	70.61 mg/	Workers	Systemic

		Inhalation	m³		
methyl methacrylate	DNEL	Long term Oral	8.2 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	208 mg/m³	General population	Local
	DNEL	Short term Inhalation	416 mg/m³	Workers	Local
	DNEL	Short term Dermal	1.5 mg/cm²	General population	Local
	DNEL	Long term Dermal	1.5 mg/cm²	General population	Local
	DNEL	Short term Dermal	1.5 mg/cm²	Workers	Local
	DNEL	Long term Dermal	1.5 mg/cm²	Workers	Local
	DNEL	Long term Dermal	8.2 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	13.67 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	74.3 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	104 mg/m³	General population	Local
	DNEL	Long term Inhalation	208 mg/m³	Workers	Local
	DNEL	Long term Inhalation	348.4 mg/m³	Workers	Systemic
ethyl acrylate	DNEL	Short term Dermal	0.92 mg/cm²	General population	Local
	DNEL	Short term Dermal	0.92 mg/cm²	Workers	Local
	DNEL	Long term Inhalation	2.5 mg/m³	General population	Local
	DNEL	Long term Inhalation	21 mg/m³	Workers	Local

PNECs

Product/ingredient name	Compartment Detail	Name	Method Detail
isodecyl methacrylate	Fresh water	240 ng/l	-
	Marine water	24 ng/l	-
	Sewage Treatment Plant	50 mg/l	-
	Fresh water sediment	41.8 µg/kg dwt	-
	Marine water sediment	4.18 µg/kg dwt	-
	Soil	8.23 µg/kg dwt	-
2,6-di-tert-butylphenol	Fresh water	0.0007 mg/l	-
	Marine water	0.00007 mg/l	-
	Fresh water sediment	0.317 mg/kg dwt	-
	Marine water sediment	0.0317 mg/kg dwt	-
	Soil	0.697 mg/kg dwt	-
	Sewage Treatment Plant	10 mg/l	-
	Secondary Poisoning	60 mg/kg	-
methyl methacrylate	Fresh water	0.94 mg/l	-
	Marine water	0.94 mg/l	-
	Fresh water sediment	5.74 mg/kg dwt	-
	Soil	1.47 mg/kg dwt	-
	Sewage Treatment Plant	10 mg/l	-
ethyl acrylate	Fresh water	0.00272 mg/l	-
	Marine water	0.00027 mg/l	-
	Fresh water sediment	0.0213 mg/kg dwt	-

	Marine water sediment Soil Sewage Treatment Plant	0.0213 mg/kg dwt 1 mg/kg dwt 10 mg/l	- - -

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 : In case of contact through splashing: safety glasses with side-shields, EN 166.

Skin 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.
Hydrocarbon-proof gloves
nitrile rubber
Fluorinated rubber
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
In case of prolonged contact with the product, it is recommended to wear gloves complying with ISO 21420 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

Body protection : Wear work clothing with long sleeves.
Non-skid safety shoes or boots

Respiratory protection : Ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry into confined spaces. In case of inadequate ventilation wear respiratory protection: Type A/P1. Warning ! filters have a limited use duration. The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.

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

The conditions of measurement of all properties are at standard temperature (20°C / 68°F) and pressure (1013 hPa) unless otherwise indicated

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Liquid. [limpid]	
Color	: Yellow. to Amber.	
Odor	: Characteristic.	
pH	: Not applicable.	Product is non-soluble (in water).
Melting point/freezing point	: Technically not possible to measure	
Initial boiling point and boiling range	: >300°C [EN ISO 3405]	
Flash point	: Open cup: 220°C [ASTM D 92]	
Flammability	: Non-flammable.	
Lower and upper explosion limit	: Lower: 0.9% Upper: 7%	
Vapor pressure	: <0.013 kPa	
Vapor density	: >2 [Air = 1]	
Relative density	: 0.874 [ISO 12185]	
Density	: 0.874 g/cm³ [15°C] [ISO 12185]	
Solubility(ies)	:	

Media	Result
water	Not soluble

Miscible with water	: No.
Partition coefficient: n-octanol/ water	: Not applicable.
Auto-ignition temperature	: Not applicable.
Decomposition temperature	: Not applicable.
Viscosity	: Kinematic (40°C): 45 mm^2/s [ISO 3104]

Particle characteristics

Median particle size	: Not applicable.

9.2 Other information

Pour point	: -33°C (-27.4°F)

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 : Stable under recommended storage and handling conditions (see Section 7).

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

10.4 Conditions to avoid : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5 Incompatible materials : Strong oxidizing agents

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 hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Product/substance	Result	Species	Dose	Exposure	Test
Distillates (petroleum), hydrotreated light paraffinic	LC50 Inhalation Dusts and mists	Rat - Male, Female	>5.53 mg/l	4 hours	OECD 403 Acute Inhalation Toxicity
	LD50 Dermal	Rabbit - Male, Female	>5000 mg/kg	-	OECD 402 Acute Dermal Toxicity
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-	OECD 401 Acute Oral Toxicity
2,6-di-tert-butylphenol	LD50 Dermal	Rabbit	>5000 mg/kg	-	-
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-	OECD 401
methyl methacrylate	LC50 Inhalation Vapor	Rat	29.8 mg/l	4 hours	-
	LD50 Dermal	Rabbit	>5 g/kg	-	OECD 402
	LD50 Oral	Rat	7872 mg/kg	-	-
ethyl acrylate	LC50 Inhalation Vapor	Rat	6 mg/l	1 hours	-
	LC50 Inhalation Vapor	Rat	3 mg/l	4 hours	-
	LC50 Inhalation Vapor	Rat	0.5 mg/l	4 hours	-
	LD50 Dermal	Rat	3049 mg/kg	-	-
	LD50 Oral	Rat	800 mg/kg	-	-
	LD50 Oral	Rat	1120 mg/kg	-	-

Acute toxicity estimates

Product/substance	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
methyl methacrylate	7872	N/A	N/A	29.8	N/A
ethyl acrylate	800	1100	N/A	3	N/A

Conclusion/Summary : Based on available data, the classification criteria are not met.

Irritation/Corrosion

Product/substance	Result	Species	Score	Exposure	Test
2,6-di-tert-butylphenol	Eyes - Cornea opacity	Rabbit	0	-	OECD 405
	Skin - Primary dermal irritation index (PDII)	Rabbit	3.8	4 hours	OECD 404
methyl methacrylate	Skin - Irritant	Rabbit	-	4 hours	-
ethyl acrylate	Eyes - Mild irritant	Rabbit	-	45 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 10 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.

Eyes : Based on available data, the classification criteria are not met.

Respiratory : Based on available data, the classification criteria are not met.

Sensitization

Product/substance	Route of exposure	Species	Result
2,6-di-tert-butylphenol	skin	Guinea pig	Not sensitizing
methyl methacrylate	skin	Mouse	Sensitizing
ethyl acrylate	skin	Mouse	Sensitizing

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met. Contains sensitizer. May produce an allergic reaction.

Respiratory : Based on available data, the classification criteria are not met.

Mutagenicity

Product/substance	Test	Experiment	Result
2,6-di-tert-butylphenol	OECD 471	Experiment: In vitro Subject: Bacteria	Negative
	OECD 475	Experiment: In vitro Subject: Mammalian-Animal	Negative
	OECD 476	Experiment: In vitro Subject: Mammalian-Animal	Negative
	-	Experiment: In vitro Subject: Mammalian-Animal	Negative

Conclusion/Summary : Based on available data, the classification criteria are not met.

Carcinogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Reproductive toxicity

Product/substance	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
2,6-di-tert-butylphenol	Negative	Negative	Negative	Rat - Male, Female	Oral	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Teratogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Product/substance	Category	Route of exposure	Target organs
isodecyl methacrylate	Category 3	-	Respiratory tract irritation
methyl methacrylate	Category 3	-	Respiratory tract irritation
ethyl acrylate	Category 3	-	Respiratory tract irritation

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure)

Conclusion/Summary : Based on available data, the classification criteria are not met.

Aspiration hazard

Product/substance	Result
Distillates (petroleum), hydrotreated light paraffinic	ASPIRATION HAZARD - Category 1

Conclusion/Summary : Based on available data, the classification criteria are not met.

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 : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

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

Ingestion : No specific data.

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/substance	Result	Species	Dose	Exposure
2,6-di-tert-butylphenol	Sub-acute NOAEL Oral	Rat - Male, Female	100 mg/kg	-
	Sub-chronic NOAEL Oral	Rat - Male, Female	270 mg/kg	-

Conclusion/Summary : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACh Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

Harmful to aquatic life with long lasting effects.

12.1 Toxicity

Product/substance	Result	Species	Exposure	Test
Distillates (petroleum), hydrotreated light paraffinic	Acute EC50 101 mg/l	Daphnia - *Daphnia magna*	48 hours	OECD 202
	Acute LC50 101 mg/l	Fish	96 hours	-
isodecyl methacrylate	Chronic NOEC 0.012 mg/l	Algae - *Desmodesmus subspicatus*	72 hours	201
	Chronic NOEC 0.0542 mg/l	Daphnia - *Daphnia magna*	21 days	211
2,6-di-tert-butylphenol	Acute EC50 1.2 mg/l Fresh water	Algae - *Pseudokirchneriella subcapitata*	96 hours	EPA 797.1050
	Acute EC50 0.45 mg/l	Crustaceans - *Daphnia Magna*	48 hours	STDMETH, ASTM and USEPA
	Acute IC50 >1000 mg/l	Micro-organism	3 hours	OECD 209
	Acute LC50 1.4 mg/l Fresh water	Fish - *Pimephales promelas*	96 hours	STDMETH, ASTM and USEPA ASTM E 729-80
	Chronic NOEC 0.64 mg/l Fresh water	Algae - *Pseudokirchneriella subcapitata*	96 hours	EPA 797.1050
	Chronic NOEC 0.035 mg/l Fresh water	Crustaceans - *Daphnia magna*	21 days	OECD 211
methyl methacrylate	Acute EC50 110 mg/l	Algae - *Selenastrum capricornutum*	72 hours	-
	Acute EC50 69 mg/l	Daphnia - *Daphnia magna*	48 hours	-
	Acute LC50 79 mg/l	Fish	96 hours	-
	Chronic NOEC 37 mg/l	Daphnia - *Daphnia magna*	21 days	-
ethyl acrylate	Acute EC50 48 mg/l	Algae - *Desmodesmus subspicatus*	72 hours	-
	Acute EC50 7.9 mg/l	Daphnia - *Daphnia magna*	48 hours	-
	Acute LC50 4784 µg/l Fresh water	Crustaceans - *Gammarus pulex*	48 hours	-
	Acute LC50 2.31 mg/l	Fish	96 hours	-
	Acute NOEC <1.8 mg/l	Algae - *Pseudokirchnerella subcapitata*	96 hours	OECD 201
	Acute NOEC <3.8 mg/l	Algae - *Pseudokirchnerella subcapitata*	96 hours	OECD 201
	Acute NOEC 0.62 mg/l	Fish - *Cyprinodon variegatus*	96 hours	-
	Chronic NOEC 0.19 mg/l	Daphnia - *Daphnia magna*	21 days	-

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Product/substance	Test	Result	Dose	Inoculum
2,6-di-tert-butylphenol	OECD 302C	12 % - Not readily - 28 days	-	Activated sludge

Conclusion/Summary : Not available.

Product/substance	Aquatic half-life	Photolysis	Biodegradability
isodecyl methacrylate	-	-	Readily
2,6-di-tert-butylphenol	-	-	Not readily
methyl methacrylate	-	-	Readily
ethyl acrylate	-	-	Readily

12.3 Bioaccumulative potential

Product/substance	$LogK_{ow}$	BCF	Potential
isodecyl methacrylate	6.45 to 7.44	-	High
2,6-di-tert-butylphenol	4.48	660	High
methyl methacrylate	1.38	2.97	Low
ethyl acrylate	1.18	2.072	Low

12.4 Mobility in soil

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

Mobility : Not available.

Mobility in soil : Given its physical and chemical characteristics, the product generally shows low soil mobility The product is insoluble and floats on water Loss by evaporation is limited

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB in a concentration >= 0,1 %.

12.6 Endocrine disrupting properties

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACh Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

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.

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. The following Waste Codes are only suggestions: 13 01 10*

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

	ADR/RID	ADN	IMDG	ICAO/IATA
14.1 UN number or ID number	Not regulated.	9006	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,6-di-tert-butylphenol, isodecyl methacrylate)	-	-
14.3 Transport hazard class(es)	-	9	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	Yes.	No.	No.

Additional information

ADN : The product is only regulated as a dangerous good when transported in tank vessels.

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 Maritime transport in bulk according to IMO instruments : 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

Other EU regulations

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Explosive precursors : Not applicable.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

National regulatory information

The Chemical act
Ordinance on limit values on hazard substances exposure during work and biological threshold values
E.g Law on hazard chemical transport
Law on health and safety
Act on Sustainable Waste Management NN no. 94/13
OG no. 73/17
Ordinance on Waste Management NN. 23/14
Official Gazette no. 15/14
OG no. 121/15
OG no. 132/15
Ordinance on packaging and packaging waste NN no. 88/15
78/16
Ordinance on the waste catalogue NN no. 90/15

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

LU - Luxembourg prohibited chemicals in the workplace

Not listed.

Inventory list

Australia inventory (AIIC)	: All components are listed or exempted.
Canada inventory (DSL/NDSL)	: All components are listed or exempted.
China inventory (IECSC)	: All components are listed or exempted.
Europe inventory (EC)	: All components are listed or exempted.
Japan inventory	: **Japan inventory (CSCL)**: All components are listed or exempted. **Japan inventory (ISHL)**: All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC)	: All components are listed or exempted.
Philippines inventory (PICCS)	: All components are listed or exempted.
Korea inventory (KECI)	: All components are listed or exempted.
Taiwan Chemical Substances Inventory (TCSI)	: All components are listed or exempted.
Thailand inventory	: Not determined.
Turkey inventory	: Not determined.
United States inventory (TSCA 8b)	: All components are listed or exempted.
Vietnam inventory	: Not determined.

The information stated in this section relates solely to the conformity of the chemical product with the countries Inventories. The information used to confirm the inventory status of this product may be based on additional data to the chemical composition shown in Section 3. Other regulations may apply for importation or marketing authorizations.

15.2 Chemical Safety Assessment : See exposure scenarios

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ACGIH = American Conference of Governmental Industrial Hygienists
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
DMEL = Derived Minimal Effect Level
DMSO = Dimethyl Sulfoxide
EL50 = median Effective Loading
EUH statement = CLP-specific Hazard statement
HSE = Health, Safety and Environment
IC50 = Half maximal inhibitory concentration
IDHL = Immediately dangerous to life or health
LC50 = Median lethal concentration
LD50 = Median lethal dose
LL50 = median Lethal Loading
LogPow = logarithm of the octanol/water partition coefficient
N/A = Not available
NIOSH = National Institute of Occupational Safety and Health
NOAEL = No Observed Adverse Effect Level

NOEC No Observed Effect Concentration
NOEL = No Observed Effect Level
NOELR = No observed Effect Loading Rate
OECD = Organisation for Economic Co-operation and Development
OEL = Occupational Exposure Limit
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
QSAR = Quantitative Structure–Activity Relationship
REL = Recommanded Exposure Limit
STEL = Short Term Exposure Limit
TLV = Threshold Limit Value
TWA = Time Weight Average
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative
Unique Formula Identifier (UFI)
UVCB Substance of unknown or Variable composition, Complex reaction products or Biological material

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

Classification	Justification
Aquatic Chronic 3, H412	Calculation method

Full text of abbreviated H statements

H225	Highly flammable liquid and vapor.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	AQUATIC HAZARD (ACUTE) - Category 1
Aquatic Chronic 1	AQUATIC HAZARD (LONG-TERM) - Category 1
Aquatic Chronic 3	AQUATIC HAZARD (LONG-TERM) - Category 3
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITIZATION - Category 1
Skin Sens. 1B	SKIN SENSITIZATION - Category 1B
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3

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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 : Mixture

Code : 36525

Product name : CLAAS AGRIHYD HVLP-D 46

Section 1 - Title

Short title of the exposure scenario : Formulation additives, lubricants and greases - Industrial

List of use descriptors : **Identified use name:** Formulation additives, lubricants and greases - Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC15
Sector of end use: SU03, SU10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02

Processes and activities covered by the exposure scenario : Industrial formulation of lubricant additives, lubricants and greases. Includes material transfers, mixing, large and small scale packing, sampling, maintenance.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:

ATIEL-ATC SPERC 2.Ai-I.v1

Amounts used : Volume manufactured/imported (tonnes/year) : 1.00E+04

Fraction of EU tonnage used in region : 0.1
Fraction of regional tonnage used locally : 0.1

Frequency and duration of use : Emission days (days per year) : 300

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

Other conditions affecting environmental exposure : Negligible wastewater emissions as process operates without water contact.

Release fraction to air from process (after typical onsite RMMs consistent with EU Solvent Emissions Directive requirements) : 5.00E-05
Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): 2.04E-12
Release fraction to soil from process (after typical onsite RMMs): 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 : Treat air emission to provide a typical removal efficiency of (%) : 70

Prevent discharge of undissolved substance to or recover from onsite wastewater. User sites are assumed to be provided with oil/water separators and for waste water to be discharged via public sewer system.

Organizational measures to prevent/limit release from site : Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.

Conditions and measures related to sewage treatment plant : Estimated substance removal from wastewater via domestic sewage treatment (%): (%) : 0.1
Assumed domestic sewage treatment plant flow (m^3/d) : 2.00E+03
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/day) : 516 990

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 scenario controlling worker exposure for 2:

No exposure assessment presented for human health.

Section 3 - Exposure estimation and reference to its source

Website:	:	Not applicable.

Exposure estimation and reference to its source - Environment: 1:

Exposure assessment (environment):	:	Used ECETOC TRA model.
Exposure estimation and reference to its source	:	Not available.

Exposure estimation and reference to its source - Workers: 2:

Exposure assessment (human):	:	The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
Exposure estimation and reference to its source	:	Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

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. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see www.atiel.org/reach/introduction.
Health	:	Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information see www.atiel.org/reach/introduction.

Additional good practice advice beyond the REACH CSA

Environment	:	Not available.
Health	:	Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture

Code : 36525

Product name : CLAAS AGRIHYD HVLP-D 46

Section 1 - Title

Short title of the exposure scenario : General use of lubricants and greases in vehicles or machinery - Industrial

List of use descriptors : **Identified use name:** General use of lubricants and greases in vehicles or machinery - Industrial
Process Category: PROC01, PROC02, PROC08b, PROC09
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC07

Processes and activities covered by the exposure scenario : Covers general use of lubricants and greases in vehiculs or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:

ATIEL-ATC SPERC 4.Bi.v1

Amounts used : Volume manufactured/imported (tonnes/year) : 2.63E+03

Fraction of EU tonnage used in region : 0.1
Fraction of regional tonnage used locally : 0.1

Frequency and duration of use : Emission days (days per year) : 300

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

Other conditions affecting environmental exposure : Negligible wastewater emissions as process operates without water contact.

Release fraction to air from process (after typical onsite RMMs consistent with EU Solvent Emissions Directive requirements) : 5.00E-05
Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): 2.04E-12
Release fraction to soil from process (after typical onsite RMMs): 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 : Prevent discharge of undissolved substance to or recover from onsite wastewater. User sites are assumed to be provided with oil/water separators and for waste water to be discharged via public sewer system.

Organizational measures to prevent/limit release from site : Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.

Conditions and measures related to sewage treatment plant : Estimated substance removal from wastewater via domestic sewage treatment (%): (%) : 0.1
Assumed domestic sewage treatment plant flow (m^3/d) : 2.00E+03
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/day) : 136 029

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 scenario controlling worker exposure for 2:

No exposure assessment presented for human health.

Section 3 - Exposure estimation and reference to its source

Website:	:	Not applicable.

Exposure estimation and reference to its source - Environment: 1:

Exposure assessment (environment):	:	Used ECETOC TRA model.
Exposure estimation and reference to its source	:	Not available.

Exposure estimation and reference to its source - Workers: 2:

Exposure assessment (human):	:	The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
Exposure estimation and reference to its source	:	Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

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. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see www.atiel.org/reach/introduction.
Health	:	Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information see www.atiel.org/reach/introduction.

Additional good practice advice beyond the REACH CSA

Environment	:	Not available.
Health	:	Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture

Code : 36525

Product name : CLAAS AGRIHYD HVLP-D 46

Section 1 - Title

Short title of the exposure scenario : General use of lubricants and greases in vehicles or machinery - Professional

List of use descriptors : **Identified use name:** General use of lubricants and greases in vehicles or machinery - Professional
Process Category: PROC01, PROC02, PROC08a, PROC08b, PROC20
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b

Processes and activities covered by the exposure scenario : Covers general use of lubricants and greases in vehiculs or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:

ATIEL-ATC SPERC 9.Bp.v1

Amounts used : Volume manufactured/imported (tonnes/year) : 5.39E+03

Fraction of EU tonnage used in region : 0.1
Fraction of regional tonnage used locally : 0.1

Frequency and duration of use : Emission days (days per year) : 365

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

Other conditions affecting environmental exposure : Negligible wastewater emissions as process operates without water contact.

Release fraction to air from process (after typical onsite RMMs consistent with EU Solvent Emissions Directive requirements) : 5.00E-04
Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): 5.00E-04
Release fraction to soil from process (after typical onsite RMMs): 1.00E-03

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 : Prevent discharge of undissolved substance to or recover from onsite wastewater.

Organizational measures to prevent/limit release from site : Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.

Conditions and measures related to sewage treatment plant : Estimated substance removal from wastewater via domestic sewage treatment (%): (%) : 0.1
Assumed domestic sewage treatment plant flow (m^3/d) : 2.00E+03
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/day) : 1 372

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 scenario controlling worker exposure for 2:

No exposure assessment presented for human health.

Section 3 - Exposure estimation and reference to its source

Website:	:	Not applicable.

Exposure estimation and reference to its source - Environment: 1:

Exposure assessment (environment):	:	Used ECETOC TRA model.
Exposure estimation and reference to its source	:	Not available.

Exposure estimation and reference to its source - Workers: 2:

Exposure assessment (human):	:	The risk Management Mesures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.
Exposure estimation and reference to its source	:	Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

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. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see www.atiel.org/reach/introduction.
Health	:	Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information see www.atiel.org/reach/introduction.

Additional good practice advice beyond the REACH CSA

Environment	:	Not available.
Health	:	Not available.