



IQ-X Hydraulic Fluid SERVO

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 11-11-2021 Revision date: 4-10-2022 Supersedes version of: 24-11-2021 Version: 1.3

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

1.1. Product identifier

Product form : Mixture
Trade name : IQ-X Hydraulic Fluid SERVO
Product code : 99.20.04
Product group : Trade product

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

1.2.1. Relevant identified uses

Intended for general public
Main use category : Industrial use, Professional use, Consumer use
Use of the substance/mixture : Hydraulic oil
Function or use category : Hydraulic fluids and additives

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Kroon Oil BV B.V.
Dollegoorweg, 15
NL- 7602 EC Almelo
Netherlands
T 0031 (0)546 81 81 65
vib@kroon-oil.nl

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Cardiff Centre) University Hospital Llandough	Penlan Road CF64 2XX Llandough	0344 892 0111	Only for healthcare professionals

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (inhalation:dust,mist) Category 4 H332
Aspiration hazard, Category 1 H304
Hazardous to the aquatic environment – Chronic Hazard, Category 3 H412
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Harmful if inhaled. May be fatal if swallowed and enters airways. Harmful to aquatic life with long lasting effects.

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2.2. Label elements

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

Hazard pictograms (CLP) :



GHS07

GHS08

Signal word (CLP) :

Danger

Contains :

Dec-1-ene, dimers, hydrogenated, Distillates (petroleum), hydrotreated heavy paraffinic

Hazard statements (CLP) :

H304 - May be fatal if swallowed and enters airways.

H332 - Harmful if inhaled.

H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP) :

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

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

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

P312 - Call a doctor if you feel unwell.

P405 - Store locked up.

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

EUH-statements :

EUH208 - Contains Dibutyl [[bis[(2-ethylhexyl)oxy]phosphinothioyl]thio]succinate, Dibutyl [[(dipropoxyphosphinothioyl)thio]succinate, Reaction mass of C12-14 tert-alkylamines and dimethyl hydrogen phosphate and methyl dihydrogen phosphate. May produce an allergic reaction.

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Comments :

Highly refined mineral oils and additives.

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Dec-1-ene, dimers, hydrogenated	CAS-No.: 68649-11-6 EC-No.: 500-228-5 REACH-no: 01-2119493069-28	50 – 80	Acute Tox. 4 (Inhalation:dust,mist), H332 Asp. Tox. 1, H304
Distillates (petroleum), hydrotreated heavy paraffinic (Note L)	CAS-No.: 64742-54-7 EC-No.: 265-157-1 EC Index-No.: 649-467-00-8 REACH-no: 01-2119484627-25	10 – 20	Asp. Tox. 1, H304

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Reaction mass of C12-14 tert-alkylamines and dimethyl hydrogen phosphate and methyl dihydrogen phosphate	EC-No.: 948-071-5 REACH-no: 01-2120785714-43	0,3 – 1	Acute Tox. 4 (Oral), H302 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 Aquatic Chronic 1, H410
Dibutyl [[bis[(2-ethylhexyl)oxy]phosphinothioyl]thio]succinate	CAS-No.: 68413-48-9 EC-No.: 270-220-1 REACH-no: 01-2120786863-37	< 0,3	Skin Sens. 1B, H317 Aquatic Chronic 4, H413
Dibutyl [(dipropoxyphosphinothioyl)thio]succinate	CAS-No.: 68413-47-8 EC-No.: 270-219-6 REACH-no: 01-2120772316-52	< 0,3	Skin Sens. 1B, H317 Aquatic Chronic 2, H411
Methyl methacrylate substance with national workplace exposure limit(s) (GB, IE); substance with a Community workplace exposure limit	CAS-No.: 80-62-6 EC-No.: 201-297-1 EC Index-No.: 607-035-00-6 REACH-no: 01-2119452498-28	< 0,1	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Skin Sens. 1B, H317 STOT SE 3, H335
2,6-di-tert-butyl-p-cresol substance with national workplace exposure limit(s) (GB, IE)	CAS-No.: 128-37-0 EC-No.: 204-881-4	< 0,1	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Ethyl acrylate substance with national workplace exposure limit(s) (GB, IE); substance with a Community workplace exposure limit (Note D)	CAS-No.: 140-88-5 EC-No.: 205-438-8 EC Index-No.: 607-032-00-X REACH-no: 01-2119459301-46	< 0,1	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Skin Sens. 1, H317
naphthalene substance with national workplace exposure limit(s) (GB, IE); substance with a Community workplace exposure limit	CAS-No.: 91-20-3 EC-No.: 202-049-5 EC Index-No.: 601-052-00-2 REACH-no: 01-2119561346-37	< 0,1	Carc. 2, H351 Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Ethyl acrylate	CAS-No.: 140-88-5 EC-No.: 205-438-8 EC Index-No.: 607-032-00-X REACH-no: 01-2119459301-46	(5 ≤C < 100) STOT SE 3, H335 (5 ≤C < 100) Eye Irrit. 2, H319 (5 ≤C < 100) Skin Irrit. 2, H315

Comments : The highly refined mineral oil contains <3% (w/w) DMSOextract, according to IP346.

Note D : Certain substances which are susceptible to spontaneous polymerisation or decomposition are generally placed on the market in a stabilised form. It is in this form that they are listed in Part 3. However, such substances are sometimes placed on the market in a non-stabilised form. In this case, the supplier must state on the label the name of the substance followed by the words 'non-stabilised'.

Note L : The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346 'Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions — Dimethyl sulphoxide extraction refractive index method', Institute of Petroleum, London. This note applies only to certain complex oil-derived substances in Part 3.

Full text of H- and EUH-statements: see section 16

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SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects after ingestion	: Risk of lung oedema.
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4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Combustible liquid.
Hazardous decomposition products in case of fire	: Toxic fumes may be released. Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.

5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Ventilate spillage area. Avoid breathing dust/fume/gas/mist/vapours/spray.
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6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Take up liquid spill into absorbent material.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.
- Storage temperature : < 40 °C

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

IQ-X Hydraulic Fluid SERVO	
EU - Indicative Occupational Exposure Limit (IOEL)	
Exposure limits/standards for materials that can be formed when handling this product. When mists/aerosols can occur the following is recommended	5 mg/m ³ - ACGIH TLV (inhalable fraction).
Methyl methacrylate (80-62-6)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Methyl methacrylate
IOEL STEL [ppm]	100 ppm
Regulatory reference	COMMISSION DIRECTIVE 2009/161/EU
Ireland - Occupational Exposure Limits	
Local name	Methyl methacrylate
OEL TWA [2]	50 ppm
OEL STEL [ppm]	100 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values), Sens. (In the workplace respiratory or dermal exposures to sensitising agents may occur. Sensitizers may evoke respiratory or dermal reactions, e.g. asthma, rhinitis and allergic contact dermatitis. The notation does not distinguish between respiratory or dermal sensitisation. Chemical agents that are sensitizers present special problems in the workplace. Should an employee become sensitised, subsequent exposure may cause intense responses, even at low exposure concentrations well below the OELV. Exposure should be eliminated or significantly reduced through control measures such as engineering and process controls and use of personal protective equipment (PPE))
Regulatory reference	Chemical Agents Code of Practice 2021
United Kingdom - Occupational Exposure Limits	
Local name	Methyl methacrylate
WEL TWA (OEL TWA) [1]	208 mg/m ³

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Methyl methacrylate (80-62-6)	
WEL TWA (OEL TWA) [2]	50 ppm
WEL STEL (OEL STEL)	416 mg/m ³
WEL STEL (OEL STEL) [ppm]	100 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
naphthalene (91-20-3)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Naphthalene
IOEL TWA	50 mg/m ³
Remark	(Year of adoption 2010)
Regulatory reference	COMMISSION DIRECTIVE 91/322/EEC; SCOEL Recommendations
Ireland - Occupational Exposure Limits	
Local name	Naphthalene
OEL TWA [1]	50 mg/m ³
OEL TWA [2]	10 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2021
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	50 mg/m ³
2,6-di-tert-butyl-p-cresol (128-37-0)	
Ireland - Occupational Exposure Limits	
Local name	2,6-Ditertiary-butyl-para-cresol [Butylated hydroxytoluene (BHT)]
OEL TWA [1]	2 mg/m ³
Regulatory reference	Chemical Agents Code of Practice 2021
United Kingdom - Occupational Exposure Limits	
Local name	2,6-Di-tert-butyl-p-cresol
WEL TWA (OEL TWA) [1]	10 mg/m ³
WEL STEL (OEL STEL)	30 mg/m ³
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Ethyl acrylate (140-88-5)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Ethylacrylate
IOEL TWA	21 mg/m ³ 21 mg/m ³
IOEL TWA [ppm]	5 ppm
IOEL STEL	42 mg/m ³ 42 mg/m ³
IOEL STEL [ppm]	10 ppm 10 ppm

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Ethyl acrylate (140-88-5)	
Regulatory reference	COMMISSION DIRECTIVE 2009/161/EU COMMISSION DIRECTIVE 2009/161/EU
Ireland - Occupational Exposure Limits	
Local name	Ethyl acrylate
OEL TWA [1]	20 mg/m ³
OEL TWA [2]	5 ppm
OEL STEL	41 mg/m ³
OEL STEL [ppm]	10 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values), Sk (Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body), Sens. (In the workplace respiratory or dermal exposures to sensitising agents may occur. Sensitizers may evoke respiratory or dermal reactions, e.g. asthma, rhinitis and allergic contact dermatitis. The notation does not distinguish between respiratory or dermal sensitisation. Chemical agents that are sensitizers present special problems in the workplace. Should an employee become sensitised, subsequent exposure may cause intense responses, even at low exposure concentrations well below the OELV. Exposure should be eliminated or significantly reduced through control measures such as engineering and process controls and use of personal protective equipment (PPE))
Regulatory reference	Chemical Agents Code of Practice 2021
United Kingdom - Occupational Exposure Limits	
Local name	Ethyl acrylate
WEL TWA (OEL TWA) [1]	21 mg/m ³
WEL TWA (OEL TWA) [2]	5 ppm
WEL STEL (OEL STEL)	42 mg/m ³
WEL STEL (OEL STEL) [ppm]	10 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



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8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

Eye protection			
Type	Field of application	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Reusable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	≥ 0.35		EN ISO 374

8.2.2.3. Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Green.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: -63 °C - ASTM D5950 (pour point)
Boiling point	: Not available
Flammability	: Not applicable
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 174 °C - ASTM D92 (COC)
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: 17,9 mm ² /s (40 °C) - ASTM D7279
Solubility	: Water: Practically not miscible
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: 0,817 kg/l (15 °C) - ASTM D4052
Relative density	: Not available
Relative vapour density at 20 °C	: Not available

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Particle characteristics : Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Reacts violently with (strong) oxidizers.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

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 (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Harmful if inhaled.

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ATE CLP (dust,mist)	1,552 mg/l/4h
Dec-1-ene, dimers, hydrogenated (68649-11-6)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 3000 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	1,17 mg/l/4h
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat	> 5,53 mg/l/4h
Methyl methacrylate (80-62-6)	
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

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naphthalene (91-20-3)	
LD50 oral rat	> 533 mg/kg
LD50 dermal rat	> 2000 mg/kg
Dibutyl [[bis[(2-ethylhexyl)oxy]phosphinothioyl]thio]succinate (68413-48-9)	
LD50 oral	11300 mg/kg bodyweight
Dibutyl [(dipropoxyphosphinothioyl)thio]succinate (68413-47-8)	
LD50 oral rat	> 2500 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)
2,6-di-tert-butyl-p-cresol (128-37-0)	
LD50 oral	890 mg/kg (rat)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
Ethyl acrylate (140-88-5)	
LD50 oral rat	1120 mg/kg bodyweight Animal: rat, Animal sex: male, 95% CL: 1010 - 1240
LD50 dermal rat	3049 mg/kg bodyweight Animal: rat, Animal sex: male, 95% CL: 2300 - 3846
LD50 dermal rabbit	1790 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	< 9137 mg/l/4h
Reaction mass of C12-14 tert-alkylamines and dimethyl hydrogen phosphate and methyl dihydrogen phosphate	
LD50 oral rat	300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 420 (Acute Oral Toxicity - Fixed Dose Method), Guideline: EU Method B.1 bis (Acute Oral Toxicity - Fixed Dose Procedure), Guideline: EPA OPPTS 870.1100 (Acute Oral Toxicity), Guideline: other:
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
2,6-di-tert-butyl-p-cresol (128-37-0)	
NOAEL (chronic, oral, animal/male, 2 years)	25 mg/kg bodyweight Animal: rat, Animal sex: male, Remarks on results: other:
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
Methyl methacrylate (80-62-6)	
STOT-single exposure	May cause respiratory irritation.
Ethyl acrylate (140-88-5)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Dibutyl [[bis[(2-ethylhexyl)oxy]phosphinothioyl]thio]succinate (68413-48-9)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEL (subchronic, oral, animal/male, 90 days)	1000 mg/kg bodyweight
Aspiration hazard	: May be fatal if swallowed and enters airways.

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Viscosity, kinematic	17,9 mm ² /s (40 °C) - ASTM D7279
Dec-1-ene, dimers, hydrogenated (68649-11-6)	
Viscosity, kinematic	≤ 20,5 mm ² /s (40°C)
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Viscosity, kinematic	< 20,5 mm ² /s
Aliphatic, alicyclic or aromatic hydrocarbon	Yes
Methyl methacrylate (80-62-6)	
Viscosity, kinematic	0,561 mm ² /s
Ethyl acrylate (140-88-5)	
Viscosity, kinematic	0,582 mm ² /s

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Harmful to aquatic life with long lasting effects.

Dec-1-ene, dimers, hydrogenated (68649-11-6)	
LC50 - Fish [1]	> 1000 mg/l
EC50 - Crustacea [1]	> 1000 mg/l (48h, Daphnia magna)
EC50 72h - Algae [1]	> 1000 mg/l (72h, Scenedesmus capricornutum)
NOEC chronic crustacea	125 mg/l (21d, Daphnia magna)
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LC50 - Fish [1]	> 100 mg/l (Pimephales promelas, 96h) (OECD 203 method)
EC50 - Crustacea [1]	> 10000 mg/l (Gammarus pulex, 48h) (OECD 202 method)
EC50 72h - Algae [1]	> 100 mg/l
NOEC (acute)	≥ 100 mg/l (Pseudokirchnerella subcapitata, 72h) (OECD 201 method)
NOEC chronic crustacea	10 mg/l (Daphnia magna, 21d) (OECD 211 method)
Methyl methacrylate (80-62-6)	
LC50 - Fish [1]	> 79 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	69 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 110 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
LOEC (chronic)	68 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

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Methyl methacrylate (80-62-6)	
NOEC (chronic)	37 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	9,4 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) Duration: '35 d'
naphthalene (91-20-3)	
LC50 - Fish [1]	0,51 mg/l 96h
EC50 - Crustacea [1]	3,4 mg/l Daphnia magna - 48h
Dibutyl [[bis[(2-ethylhexyl)oxy]phosphinothioyl]thio]succinate (68413-48-9)	
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
2,6-di-tert-butyl-p-cresol (128-37-0)	
EC50 - Crustacea [1]	0,48 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 0,4 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
LOEC (chronic)	1 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	0,023 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
Ethyl acrylate (140-88-5)	
LC50 - Fish [1]	4,6 mg/l (Oncorhynchus mykiss, 96h)
LC50 - Fish [2]	2,31 – 2,7 mg/l (Pimephales promelas, 96h)
EC50 - Crustacea [1]	7,9 mg/l (Daphnia magna, 48h)
EC50 - Other aquatic organisms [1]	4,4 mg/l waterflea
EC50 - Other aquatic organisms [2]	48 mg/l
EC50 96h - Algae [1]	2,65 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
ErC50 algae	48 mg/l (Desmodesmus subspicatus, 72h)
Reaction mass of C12-14 tert-alkylamines and dimethyl hydrogen phosphate and methyl dihydrogen phosphate	
LC50 - Fish [1]	18 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	6,8 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	1,9 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	0,71 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
ErC50 algae	1,9 mg/l
NOEC chronic fish	12 mg/l
NOEC chronic crustacea	3,9 mg/l
NOEC chronic algae	0,1 mg/l

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12.2. Persistence and degradability

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

Biodegradation	31 % (28d) (OECD 301F method)
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2,6-di-tert-butyl-p-cresol (128-37-0)

Biodegradation	4,5 % (28d) [MIT11]
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12.3. Bioaccumulative potential

naphthalene (91-20-3)

Partition coefficient n-octanol/water (Log Pow)	3,01
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Dibutyl [[bis[(2-ethylhexyl)oxy]phosphinothioyl]thio]succinate (68413-48-9)

Partition coefficient n-octanol/water (Log Pow)	6,5
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2,6-di-tert-butyl-p-cresol (128-37-0)

BCF - Fish [1]	646 (230 – 2500) mg/l (Cyprinus carpio, 56d, 25°C, [0.05 mg/l])
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Partition coefficient n-octanol/water (Log Kow)	5 octanol/water (0.1d)
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Ethyl acrylate (140-88-5)

Partition coefficient n-octanol/water (Log Pow)	1,18
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Reaction mass of C12-14 tert-alkylamines and dimethyl hydrogen phosphate and methyl dihydrogen phosphate

Partition coefficient n-octanol/water (Log Pow)	4,92 @25°C - pH: 7
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Partition coefficient n-octanol/water (Log Kow)	4,5 – 4,6
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

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ADR	IMDG	IATA	ADN	RID
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
3(a)	Methyl methacrylate ; Ethyl acrylate
3(b)	IQ-X Hydraulic Fluid SERVO ; Dec-1-ene, dimers, hydrogenated ; Distillates (petroleum), hydrotreated heavy paraffinic ; Methyl methacrylate ; Dibutyl [[bis[(2-ethylhexyl)oxy]phosphinothioyl]thio]succinate ; Dibutyl [(dipropoxyphosphinothioyl)thio]succinate ; Ethyl acrylate ; Reaction mass of C12-14 tert-alkylamines and dimethyl hydrogen phosphate and methyl dihydrogen phosphate
3(c)	IQ-X Hydraulic Fluid SERVO ; Dibutyl [[bis[(2-ethylhexyl)oxy]phosphinothioyl]thio]succinate ; Dibutyl [(dipropoxyphosphinothioyl)thio]succinate ; Reaction mass of C12-14 tert-alkylamines and dimethyl hydrogen phosphate and methyl dihydrogen phosphate
40.	Methyl methacrylate ; Ethyl acrylate

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REACH Annex XIV (Authorisation List)

Contains no REACH Annex XIV substances

REACH Candidate List (SVHC)

Contains no substance on the REACH candidate list

PIC Regulation (Prior Informed Consent)

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (1005/2009)

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Biocide Regulation (528/2012)

Child-resistant fastening : Applicable
Tactile warning : Applicable

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on drug precursors)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Revision date	Modified	
	Supersedes	Modified	
1.2	Use of the substance/mixture	Added	
1.2	Function or use category	Added	
5.2	Hazardous decomposition products in case of fire	Modified	
10.3	Possibility of hazardous reactions	Modified	
11.1	ATE CLP (dust,mist)	Modified	

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor

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Abbreviations and acronyms:

BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1

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Full text of H- and EUH-statements:	
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 4	Hazardous to the aquatic environment – Chronic Hazard, Category 4
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
EUH208	Contains Dibutyl [[bis[(2-ethylhexyl)oxy]phosphinothioyl]thio]succinate, Dibutyl [(dipropoxyphosphinothioyl)thio]succinate, Reaction mass of C12-14 tert-alkylamines and dimethyl hydrogen phosphate and methyl dihydrogen phosphate. May produce an allergic reaction.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
Skin Corr. 1C	Skin corrosion/irritation, Category 1, Sub-Category 1C
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.