Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

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

1.1. Product identifier

Trade name/designation:

RAVENOL DCT GT-R Fluid

Article No.:
1211129

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

Use of the substance/mixture:
Lubricant

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1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Ravensberger Schmierstoffvertrieb GmbH
Produktsicherheit
Jöllenbecker Str. 2
33824 Werther
Germany
Telephone: +49 5203 9719 0
Telefax: +49 5203 9719 40
E-mail: kontakt@ravenol.de
Website: www.ravenol.de

E-mail (competent person): sdb@ravenol.de

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1.4. Emergency telephone number

24 hr. emergency phone number, 24h: +49 700 24 112 112 (Contract ID: RAV) / +1 872 5888271 (Contract ID: RAV)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Hazard classes and hazard categories	Hazard statements	Classification procedure
Hazardous to the aquatic environment *(Aquatic Chronic 3)*	H412: Harmful to aquatic life with long lasting effects.	Calculation method.

*

2.2. Label elements

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

Hazard components for labelling:
2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol

Hazard statements for environmental hazards	
H412	Harmful to aquatic life with long lasting effects.

Supplemental hazard information	
EUH208	Contains methyl methacrylate. May produce an allergic reaction.

Precautionary statements Prevention	
P273	Avoid release to the environment.

Precautionary statements Disposal	
P501	Dispose of contents/container to an appropriate recycling or disposal facility.

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2.3. Other hazards

Other adverse effects:
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

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3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 68037-01-4 **EC No.:** 500-183-1 **REACH No.:** 01-2119486452-34	**1-decene, homopolymer, hydrogenated** Asp. Tox. 1 (H304) **Danger**	50 – < 100 weight-%
CAS No.: 72623-87-1 **EC No.:** 276-738-4 **REACH No.:** 01-2119474889-13	**Lubricating oils (petroleum), C20-50, hydrotreated neutral oil** Asp. Tox. 1 (H304) **Danger** **Specific concentration limit (SCL)** Asp. Tox. 1; H304: 0% ≤ C < 100%	20 – < 50 weight-%
CAS No.: 80-62-6 **EC No.:** 201-297-1 **Index No.:** 607-035-00-6	**methyl methacrylate** Flam. Liq. 2 (H225), STOT SE 3 (H335), Skin Irrit. 2 (H315), Skin Sens. 1 (H317) **Danger**	0.1 – < 1 weight-%
CAS No.: 1218787-32-6 **EC No.:** 620-540-6 **REACH No.:** 01-2119510877-33	**2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol** Acute Tox. 4 (H302), Aquatic Acute 1 (H400), Aquatic Chronic 1 (H410), Eye Dam. 1 (H318), Skin Corr. 1C (H314) **Danger** M-factor (acute): 10 M-factor (chronic): 1	0.1 – < 0.25 weight-%

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Remove contaminated, saturated clothing. If unconscious but breathing normally, place in recovery position and seek medical advice. Do not leave affected person unattended.

Following inhalation:
Provide fresh air. Consult a doctor immediately.

In case of skin contact:
After contact with skin, wash immediately with plenty of water and soap. Consult a doctor immediately.

After eye contact:
In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Following ingestion:
Rinse mouth thoroughly with water. Do NOT induce vomiting. Consult a doctor immediately.

Self-protection of the first aider:
Use personal protection equipment. No direct artificial respiration to be given by first aider.

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

Contains methyl methacrylate. May produce an allergic reaction.

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

Treat symptomatically. Observe risk of aspiration if vomiting occurs.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Co-ordinate fire-fighting measures to the fire surroundings.
Carbon dioxide (CO2)
Extinguishing powder
alcohol resistant foam
Use water spray jet to protect personnel and to cool endangered containers.

Unsuitable extinguishing media:
Full water jet

5.2. Special hazards arising from the substance or mixture

During heating or in case of fire, toxic gases is possible.
The formation of combustible vapours is possible at temperatures above: Flash point

Hazardous combustion products:

Carbon monoxide, Carbon dioxide (CO2), Nitrogen oxides (NOx),
During heating or in case of fire, toxic gases is possible.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Protective clothing.

5.4. Additional information

Do not inhale explosion and combustion gases. Move undamaged containers from immediate hazard area if it can be done safely. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

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6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Use personal protection equipment. Special danger of slipping by leaking/spilling product.

Protective equipment:

Personal protection equipment: see section 8

Emergency procedures:

Eliminate all ignition sources if safe to do so. Remove persons to safety. Provide adequate ventilation.

6.1.2. For emergency responders

Personal protection equipment:

Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

For containment:

Suitable material for taking up: Sand, Kieselguhr, Universal binder, Chemical binding agents, containing acids
Prevent spread over a wide area (e.g. by containment or oil barriers).

For cleaning up:

Remove from the water surface (e.g. skimming, sucking). Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Other information:

Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7
Disposal: see section 13
Personal protection equipment: see section 8

6.5. Additional information

Clear spills immediately. Use appropriate container to avoid environmental contamination.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Personal protection equipment: see section 8.
When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Do not put any product-impregnated cleaning rags into your trouser pockets. Clear spills immediately. Use appropriate container to avoid environmental contamination.

Fire prevent measures:

No special fire protection measures are necessary.

Environmental precautions:
Shafts and sewers must be protected from entry of the product.

Advices on general occupational hygiene
Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

7.2. Conditions for safe storage, including any incompatibilities
Technical measures and storage conditions:
Keep container tightly closed in a cool, well-ventilated place.

Requirements for storage rooms and vessels:
Suitable container/equipment material: Floors should be impervious, resistant to liquids and easy to clean. Shafts and sewers must be protected from entry of the product.
Keep/Store only in original container.

Hints on storage assembly:
not required

Storage class (TRGS 510, Germany): 10 – Combustible liquids that cannot be assigned to any of the above storage classes

Further information on storage conditions:
Store in a cool dry place. Keep away from heat.

7.3. Specific end use(s)
Recommendation:
Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

*
8.1. Control parameters
8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
PL	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ⑤ (Mgła olejowa mineralny)
MAK (AT)	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ⑤ (Ölnebel, mineralisch (einatembare Fraktion)
BE	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ⑤ (Brouillard d'huile minéral)
Québec (CA)	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ② 10 mg/m³ ⑤ (Oil mist mineral)
HU	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ⑤ (Olajköd ásványi)
SE	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 1 mg/m³ ② 3 mg/m³ ⑤ (Oljeånga eller rök)
ES	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ② 10 mg/m³ ⑤ (Niebla de aceite mineral)

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
NL	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ⑤ (Olienevel mineraal)
OSHA (US)	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ⑤ (Oil mist mineral)
NIOSH (US)	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ② 10 mg/m³ ⑤ (Oil mist mineral)
CZ	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ② 10 mg/m³ ⑤ (Rozprášený olej (olejová mlhovina) minerální)
NO	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 1 mg/m³ ⑤ (Oljetåke mineralsk)
NPEL (SK)	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 ppm (1 mg/m³) ② 15 ppm (3 mg/m³) ⑤ (Olejová hmlovina minerálny)
Alberta (CA)	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ② 10 mg/m³ ⑤ (Oil mist mineral)
HTP (FI)	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ⑤ (Oljeånga)
LT	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 1 mg/m³ ② 3 mg/m³ ⑤ (Tepalo rūkas arba dūmai)
BC (CA)	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 0.2 mg/m³ ⑤ (Oil mist mineral) 1
MY	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ⑤ (Kabus minyak mineral)
BC (CA)	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 1 mg/m³ ⑤ (Oil mist mineral, severely refined)
TW	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ⑤ (## ##)
Ontario (CA)	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ⑤ (Oil mist mineral)
GR	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ⑤ (Εκκνέφωμα λαδιού, ορυκτό)

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
MY	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 10 mg/m³ ⑤ (Kabus minyak, vegetal)
RO	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ② 10 mg/m³ ⑤ (Ceata uleioasa mineral)
CH	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ⑤ (einatembare Fraktion) C2; Tox: Lunge; Messmeth: NIOSH DFG
LV	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ⑤ (Eļļas migla)
JP	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 3 mg/m³ ⑤ (Oil mist mineral)
IDLH (US)	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 2,500 mg/m³
IE	Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4	① 5 mg/m³ ⑤ (Oil mist mineral, inhalable fraction)
CH	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm (210 mg/m³) ② 100 ppm (420 mg/m³) ⑤ S SSC; Tox: Lunge OAW Auge; Messmeth: INRS NIOSH
NL	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 205 mg/m³ ② 410 mg/m³
BE	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm (208 mg/m³) ② 100 ppm (416 mg/m³)
CZ	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 12 ppm (50 mg/m³) ② 36 ppm (150 mg/m³) ⑤ I, S
PL	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 100 mg/m³ ② 300 mg/m³
NO	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 25 ppm (100 mg/m³) ② 100 ppm (400 mg/m³) ⑤ AES
IE	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm ② 100 ppm ⑤ IOELV, Sens
HTP (FI)	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 10 ppm (42 mg/m³) ② 50 ppm (210 mg/m³)
LT	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm (208 mg/m³) ② 100 ppm (416 mg/m³) ⑤ J

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
SE	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm (200 mg/m³) ② 100 ppm (400 mg/m³)
NPEL (SK)	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm ② 100 ppm
IOELV (EU)	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm ② 100 ppm
DK	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 25 ppm (102 mg/m³) ② 50 ppm (204 mg/m³) ⑤ (kan optages gennem huden)
MAK (AT)	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	② 100 ppm (420 mg/m³) ⑤ (max. 8x5 min./Schicht, Momentanwert) Sh
BG	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm ② 100 ppm
HR	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm ② 100 ppm ⑤ (mora se uzeti u obzir prodiranje kroz kožu) koža, alergen koža
ES	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm (208 mg/m³) ② 100 ppm (416 mg/m³) ⑤ Sen,VLI
RO	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm (205 mg/m³) ② 100 ppm (410 mg/m³)
EE	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm ② 100 ppm ⑤ S
Alberta (CA)	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm (205 mg/m³) ② 100 ppm (410 mg/m³)
MAK (AT)	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm (210 mg/m³) ⑤ Sh
MY	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 100 ppm (410 mg/m³)
LV	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 10 mg/m³
BC (CA)	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm (100 mg/m³) ⑤ S(D)
VRC (FR)	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm (205 mg/m³) ② 100 ppm (410 mg/m³)
JP	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 8.3 mg/m³
WEL (GB)	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm (208 mg/m³) ② 100 ppm (416 mg/m³)

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
SI	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm (210 mg/m³) ② 100 ppm (420 mg/m³) ⑤ Y, EU3
TW	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 100 ppm (410 mg/m³)
KR	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm (205 mg/m³) ② 100 ppm (410 mg/m³)
IS	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm ② 100 ppm
CN	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 100 mg/m³
HU	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 208 mg/m³ ② 415 mg/m³ ⑤ (felvehető a bőrön keresztül) b, i, sz, N
RU	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 10 mg/m³ ③ 20 mg/m³
GR	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm ② 100 ppm
TR	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm ② 100 ppm
IDLH (US)	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 1,000 ppm
OSHA (US)	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 100 ppm (410 mg/m³)
NIOSH (US)	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 100 ppm (410 mg/m³)
ACGIH (US)	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm (205 mg/m³) ② 100 ppm (410 mg/m³)
TRGS 900 (DE)	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm (210 mg/m³) ② 100 ppm (420 mg/m³) ⑤ DFG, EU, Y
Québec (CA)	methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1	① 50 ppm (205 mg/m³)

8.1.2. Biological limit values

No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol **CAS No.:** 1218787-32-6 **EC No.:** 620-540-6	2.112 mg/m³	① DNEL worker ② Long-term – inhalation, systemic effects
2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol **CAS No.:** 1218787-32-6 **EC No.:** 620-540-6	0.3 mg/kg bw/day	① DNEL worker ② Long-term - dermal, systemic effects

Substance name	PNEC Value	① PNEC type
2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol **CAS No.:** 1218787-32-6 **EC No.:** 620-540-6	0.214 µg/L	① PNEC aquatic, freshwater
2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol **CAS No.:** 1218787-32-6 **EC No.:** 620-540-6	0.0214 µg/L	① PNEC aquatic, marine water
2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol **CAS No.:** 1218787-32-6 **EC No.:** 620-540-6	1.5 mg/L	① PNEC sewage treatment plant
2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol **CAS No.:** 1218787-32-6 **EC No.:** 620-540-6	0.87 µg/L	① PNEC aquatic, intermittent release

8.2. Exposure controls

8.2.1. Appropriate engineering controls

See section 7. No additional measures necessary.

8.2.2. Personal protection equipment



Eye/face protection:

During transfer: Eye glasses with side protection
Wear eye/face protection. EN 166

Skin protection:

Hand protection
Suitable material: NBR (Nitrile rubber), PVC (polyvinyl chloride), CR (polychloroprene, chloroprene rubber)
Thickness of the glove material: ≥ 0,4 mm
Breakthrough time: 480 min
Breakthrough times and swelling properties of the material must be taken into consideration.
The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
Tested protective gloves must be worn: EN ISO 374
Suitable protective clothing: Protective clothing

Respiratory protection:

Usually no personal respirative protection necessary.

8.2.3. Environmental exposure controls

See section 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

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9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid **Colour:** blue

Odour: characteristic

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	*not applicable*		
Melting point	*not determined*		
Freezing point	*not determined*		
Initial boiling point and boiling range	*not determined*		
Decomposition temperature	*not determined*		
Flash point	220 °C		
Evaporation rate	*not determined*		
Auto-ignition temperature	*not determined*		
Upper/lower flammability or explosive limits	*not determined*		
Vapour pressure	*not determined*		
Vapour density	*not determined*		
Density	840 kg/m³	20 °C	
Relative density	*not determined*		
Bulk density	*not determined*		
Water solubility	practically insoluble		
Partition coefficient: n-octanol/water	*not determined*		
Dynamic viscosity	*not determined*		
Kinematic viscosity	31 mm²/s	40 °C	

* **9.2. Other information**

Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

No known hazardous reactions. Risk of explosion if heated under confinement.

10.2. Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

To avoid thermal decomposition do not overheat.

10.5. Incompatible materials

Materials to avoid: Acid, Oxidising agent, Reducing agent

* **10.6. Hazardous decomposition products**

Hazardous combustion products: Carbon monoxide, Carbon dioxide (CO2), Nitrogen oxides (NOx), During heating or in case of fire, toxic gases is possible.

SECTION 11: Toxicological information

* **11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

1-decene, homopolymer, hydrogenated **CAS No.:** 68037-01-4 **EC No.:** 500-183-1
LD_{50} oral: >5,000 mg/kg (Rat)
LD_{50} dermal: >2,000 mg/kg (Rabbit)
LC_{50} Acute inhalation toxicity (dust/mist): >5 mg/L 4 h (Rat)
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4
LD_{50} oral: >5,000 mg/kg (Rat) OECD 401
LD_{50} dermal: >2,000 mg/kg (Rabbit) OECD 402
2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol **CAS No.:** 1218787-32-6 **EC No.:** 620-540-6
LD_{50} oral: ≥1,200 – ≤2,000 mg/kg (Rat)

Acute oral toxicity:
Based on available data, the classification criteria are not met.

Acute dermal toxicity:
Based on available data, the classification criteria are not met.

Acute inhalation toxicity:
Based on available data, the classification criteria are not met.

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

Serious eye damage/irritation:
Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation:
Contains methyl methacrylate. May produce an allergic reaction.

Germ cell mutagenicity:
No indications of human germ cell mutagenicity exist.

Carcinogenicity:
Evidence for human carcinogenicity.

Reproductive toxicity:
No indications of human reproductive toxicity exist.

STOT-single exposure:
Based on available data, the classification criteria are not met.

STOT-repeated exposure:
Based on available data, the classification criteria are not met.

Aspiration hazard:
Observe risk of aspiration if vomiting occurs.
For viscosity data, see section 9.

Additional information:
Frequently or prolonged contact with skin may cause dermal irritation.

* 11.2. Information on other hazards

Endocrine disrupting properties:
This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

SECTION 12: Ecological information

* 12.1. Toxicity

1-decene, homopolymer, hydrogenated **CAS No.:** 68037-01-4 **EC No.:** 500-183-1
LC_{50}: >750 mg/L 4 d (fish)
EC_{50}: 190 mg/L 2 d (crustaceans, Daphnia pulex (water flea))
EC_{50}: >1,000 mg/L 3 d (Algae/water plant)
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4
EC_{50}: >100 mg/L 2 d (Algae/water plant, Pseudokirchneriella subcapitata) OECD 201
EC_{50}: >10,000 mg/L 2 d (crustaceans, Daphnia magna (Big water flea)) OECD 202
NOEC: 10 mg/L 21 d (crustaceans, Daphnia magna (Big water flea)) OECD 211
NOEC: >100 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata) OECD 201
NOEC: >100 mg/L 4 d (fish, Pimephales promelas (fathead minnow))
2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol **CAS No.:** 1218787-32-6 **EC No.:** 620-540-6
LC_{50}: ≥0.1 mg/L 4 d (fish)
EC_{50}: 0.043 mg/L 2 d (crustaceans)
EC_{50}: 0.0867 mg/L 3 d (Algae/water plant)

Aquatic toxicity:
Harmful to aquatic life with long lasting effects.

Additional ecotoxicological information:
Do not allow uncontrolled discharge of product into the environment.

* ## 12.2. Persistence and degradability

methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1
Biodegradation: Yes, rapidly

Biodegradation:
Not readily biodegradable (according to OECD criteria)

* ## 12.3. Bioaccumulative potential

methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1
Log K_{OW}: 138

Accumulation / Evaluation:
The product has not been tested.

12.4. Mobility in soil
The product has not been tested.

* ## 12.5. Results of PBT and vPvB assessment

1-decene, homopolymer, hydrogenated **CAS No.:** 68037-01-4 **EC No.:** 500-183-1
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil **CAS No.:** 72623-87-1 **EC No.:** 276-738-4
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
methyl methacrylate **CAS No.:** 80-62-6 **EC No.:** 201-297-1
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.
2,2'-(C16-18 (Even numbered, C18 unsaturated) alkyl imino) diethanol **CAS No.:** 1218787-32-6 **EC No.:** 620-540-6
Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

* ## 12.6. Endocrine disrupting properties
This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects
No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Dispose of waste according to applicable legislation.

Waste treatment options
Appropriate disposal / Product:
Dispose of waste according to applicable legislation.

Appropriate disposal / Package:
Non-contaminated packages may be recycled.

Other disposal recommendations:
Consult the appropriate local waste disposal expert about waste disposal.

13.2. Additional information
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1. UN number or ID number			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
14.2. UN proper shipping name			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.3. Transport hazard class(es)			
not relevant	not relevant	not relevant	not relevant
14.4. Packing group			
not relevant	not relevant	not relevant	not relevant
14.5. Environmental hazards			
not relevant	not relevant	not relevant	not relevant
14.6. Special precautions for user			
not relevant	not relevant	not relevant	not relevant

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 legislation
Other regulations (EU):
Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]: This product is not assigned to a hazard category.
Safety data sheet available on request.

15.1.2. National regulations
[DE] National regulations
Störfallverordnung (12. BImschV)
for substances contained in the product:
This product is not assigned to a hazard category.
Technische Anleitung zur Reinhaltung der Luft (TA-Luft)
Remark:
To follow: 5.2.5
Water hazard class
WGK:
2 - deutlich wassergefährdend
Source:
Self-classification (mixture; calculation rule).
Identification number 436
Technische Regeln für Gefahrstoffe
TRGS 510
TRGS 500
Berufsgenossenschaftliche Vorschriften (DGUV-Vorschriften)
Berufsgenossenschaftliche Informationen (DGUV-Informationen) 868
Berufsgenossenschaftliche Regeln (DGUV-Regeln) 189, 190, 192, 195
Other regulations, restrictions and prohibition regulations
Altöl-Verordnung (AltölV)

[DK] National regulations
Other regulations, restrictions and prohibition regulations
Dänemark: Bekendtgørelse af lov om arbejdsmiljø: Beskæftigelsesministeriets lovbekendtgørelse nr. 1072 af 7. september 2010
Lister over stoffer og processer, der anses for at vaere kraeftfremkaldende

[FR] National regulations
Other regulations, restrictions and prohibition regulations
Frankreich: Tableaux de maladies professionelles
Nomenclature des installations classées pour la protection de l'environnement
Articles L. 4523-1 à L. 4523-17, L. 4611-1 à L. 4614-16, R. 4523-1 à R. 4523-17 et R. 4612-1 à R. 4615-21 du Code du travail

[NL] National regulations
Other regulations, restrictions and prohibition regulations
Niederlande: Lijst vank kankerverwekkende, mutagene en voor de voortplanting giftige stoffen (SZW)
Algemeene beoordelingsmethodiek Water (ABM)

Nederlandse emissierichtlijn (NeR)
NIET-Limitatieve lijst an voor de voortplanting giftige stoffen - Borstvoeding
NIET-Limitatieve lijst an voor de voortplanting giftige stoffen - Vruchtbaarheid
NIET-Limitatieve lijst an voor de voortplanting giftige stoffen - Ontwikkeling
SZW-lijst van kankerverwekkende stoffen
SZW-lijst van mutagene stoffen
Wet van 18 maart 1999, houdende bepalingen ter verbetering van de arbeidsomstandigheden (Arbeidsomstandighedenwet)
Wet op de ondernemingsraden 1971

[CH] National regulations

Other regulations, restrictions and prohibition regulations

Mengenschwelle (Schweiz - StFV)
Gefahrencode
Brandverhütung, BVD (Schweiz)

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

15.3. Additional information

No data available.

SECTION 16: Other information

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16.1. Indication of changes

1.3.	Details of the supplier of the safety data sheet
1.4.	Emergency telephone number
2.2.	Label elements
2.3.	Other hazards
3.2.	Mixtures
4.2.	Most important symptoms and effects, both acute and delayed
6.1.	Personal precautions, protective equipment and emergency procedures
8.1.	Control parameters
9.1.	Information on basic physical and chemical properties
9.2.	Other information
10.6.	Hazardous decomposition products
11.1.	Information on hazard classes as defined in Regulation (EC) No 1272/2008
11.2.	Information on other hazards
12.1.	Toxicity
12.2.	Persistence and degradability
12.3.	Bioaccumulative potential
12.5.	Results of PBT and vPvB assessment
12.6.	Endocrine disrupting properties
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture
16.1.	Indication of changes

16.2. Abbreviations and acronyms

See overview table at www.euphrac.eu
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

16.3. Key literature references and sources for data

67/548/EEC - Dangerous Substances Directive
1999/45/EEC - Dangerous Preparations Directive
EC 1907/2006 - REACH Regulation
1272/2008 EC - Regulation on classification, labeling and packaging of substances and mixtures, and amending Directives 67/548/EEC and 1999/45/EC and Regulation (EC) No 1907/2006
Regulation (EC) No 1907/2006 (REACH), Annex II
European Chemicals Agency (ECHA), C & L classification and labeling inventory
European Chemicals Agency (ECHA), ECHA CHEM Registered substances
OECD The Global Portal to Information on Chemical Substances (ChemPortal)
Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA): GESTIS substance database and International limit values for chemical substances

Federal Environment Agency, Section IV 2.4: Documentation and Information Centre substances hazardous to water Rigoletto (catalog substances hazardous to water)

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements	Classification procedure
Hazardous to the aquatic environment *(Aquatic Chronic 3)*	H412: Harmful to aquatic life with long lasting effects.	Calculation method.

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

16.6. Training advice

No data available

16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

* Data changed compared with the previous version.