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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 MDL Multi-disc locking differentials

Article No.: 1222103 UFI: UWU8-G325-QH6K-Q1M3

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

Lubricant

* 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

* 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
Respiratory or skin sensitisation (Skin Sens. 1)	H317: May cause an allergic skin reaction.	Calculation method.
	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 pictograms:



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Hazard components for labelling:

Amines, C10-14-tert-alkyl

Hazard statements for health hazards

H317 May cause an allergic skin reaction. Hazard statements for environmental hazards

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements Prevention

P261	Avoid breathing vapours and spray.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye/face protection.

Procoutionary statements Persona

Frecautionary	statements response
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
Precautionary	statements Disposal
P501	Dispose of contents/container to an appropriate recycling or disposal facility.

Dispose of contents/container to an appropriate recycling or disposal facility.

* 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

* 3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 64742-54-7 EC No.: 265-157-1 REACH No.: 01-2119484627-25	Distillates (petroleum), hydrotreated heavy paraffinic; Base oil - not specified Asp. Tox. 1 (H304) Solution Danger	30 - < 55 weight-%
EC No.: 701-175-2 REACH No.: 01-2119456798-18	Amines, C10-14-tert-alkyl Acute Tox. 2 (H330), Acute Tox. 3 (H311), Acute Tox. 4 (H302), Aquatic Acute 1 (H400), Aquatic Chronic 1 (H410), Eye Dam. 1 (H318), Skin Corr. 1B (H314), Skin Sens. 1A (H317) M-factor (acute): 1 M-factor (chronic): 1	0 - < 1 weight-%
CAS No.: 74499-35-7 Index No.: 604-092-00-9	 Phenol, (tetrapropenyl) Derivate Candidate List of Substances of Very High Concern for Authorisation! Aquatic Acute 1 (H400), Aquatic Chronic 1 (H410), Eye Dam. 1 (H318), Repr. 1B (H360F), Skin Corr. 1C (H314) Concern (acute): 10 M-factor (chronic): 10 Additional information: This substance has endocrine disrupting properties with respect to humans. This substance has endocrine disrupting properties with respect to non-target organisms. 	0 - < 0.02 weight-%

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.

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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.

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

When hot, product develops flammable vapours.

Hazardous combustion products:

Carbon monoxide, Carbon dioxide (CO2), Nitrogen oxides (NOx), Gases/vapours, toxic 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

* 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

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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:

Wear personal protection equipment (refer to 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

No data available

8.1.2. Biological limit values

No data available



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8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type
		② Exposure route
Amines, C10-14-tert-alkyl	2.5 mg/m ³	① DNEL Consumer
EC No.: 701-175-2		② Long-term – inhalation, systemic effects
Amines, C10-14-tert-alkyl	12.1 mg/m ³	① DNEL worker
EC No.: 701-175-2		② Long-term – inhalation, local effects
Amines, C10-14-tert-alkyl	1.2 mg/m ³	① DNEL Consumer
EC No.: 701-175-2		② Long-term – inhalation, local effects

* 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

* 9.1. Information on basic physical and chemical properties

Appearance

Colour: yellow

Physical state: Liquid **Odour:** characteristic

Safety relevant basis data			
Parameter	Value	at °C	 Method Remark
рН	not applicable		
Melting point	not determined		
Freezing point	not determined		
Initial boiling point and boiling range	not determined		
Decomposition temperature	not determined		
Flash point	192 °C		
Evaporation rate	not determined		
Auto-ignition temperature	not determined		
Upper/lower flammability or explosive limits	not determined		
Vapour pressure	not determined		



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Parameter	Value	at °C	 Method
			② Remark
Vapour density	not determined		
Density	873 kg/m³	15 °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	117 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, Oxidizing 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.

Further information

No information available.

SECTION 11: Toxicological information

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

	-	
Distillates (petroleum), hydrotreated heavy paraffinic; Base oil - not specified EC No.: 265-157-1	CAS No.	.: 64742-54-7
LD ₅₀ oral: 5,000 mg/kg (Rat) OECD 401		

LD₅₀ dermal: 5,000 mg/kg (Rabbit) OECD 402

LC₅₀ Acute inhalation toxicity (dust/mist): 5.53 mg/L 4 h (Rat) OECD 403

Amines, C10-14-tert-alkyl EC No.: 701-175-2

LD₅₀ oral: 612 mg/kg (Rat) OECD TG 401

LD₅₀ dermal: 251 mg/kg (Rabbit) OECD TG 402

LC₅₀ Acute inhalation toxicity (dust/mist): >1.19 mg/L 4 h (Rat)

Phenol, (tetrapropenyl) Derivate CAS No.: 74499-35-7

LD₅₀ oral: >2,000 mg/kg (Rat)

LD₅₀ dermal: >2,000 mg/kg

LC₅₀ Acute inhalation toxicity (dust/mist): >5 mg/L

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.

afety Da AVENOL	Ita Sheet according to Regulation (EC) No. 1907/2006 (REACH) Page 7 MDL Multi-disc locking differentials
evision	date: 14 Jun 2022 Version: 4 Print date: 14 Jun 2022
	rosion/irritation:
	n available data, the classification criteria are not met.
	eye damage/irritation:
	n available data, the classification criteria are not met.
	r ory or skin sensitisation: Ise an allergic skin reaction.
-	Il mutagenicity:
	n available data, the classification criteria are not met.
	jenicity:
	n available data, the classification criteria are not met.
	ctive toxicity:
	n available data, the classification criteria are not met.
	n gle exposure: n available data, the classification criteria are not met.
	peated exposure:
	n available data, the classification criteria are not met.
	on hazard:
	n available data, the classification criteria are not met.Observe risk of aspiration if vomiting
occurs.	
	osity data, see section 9.
	al information: tly or prolonged contact with skin may cause dermal irritation.
-	
	formation on other hazards
	ne disrupting properties: duct contains a substance that has endocrine disrupting properties with respect to humans.
SECTIO	DN 12: Ecological information
L2.1. To	oxicity
	tes (petroleum), hydrotreated heavy paraffinic; Base oil - not specified CAS No.: 64742-54-7 265-157-1
LC ₅₀ :	100 mg/L 4 d (fish)
LC ₅₀ :	10,000 mg/L 4 d (crustaceans)
EC ₅₀ :	10,000 mg/L 2 d (crustaceans)
NOFC	
	: 100 mg/L 4 d (fish)
	: 100 mg/L 4 d (fish) : 100 mg/L 3 d (Algae/water plant)
NOEC NOEC	: 100 mg/L 3 d (Algae/water plant) : ≥100 mg/L 3 d (Algae/water plant, Algen)
NOEC NOEC Amines	: 100 mg/L 3 d (Algae/water plant) : ≥100 mg/L 3 d (Algae/water plant, Algen) , C10-14-tert-alkyl EC No.: 701-175-2
NOEC NOEC Amines LC ₅₀ :	: 100 mg/L 3 d (Algae/water plant) : ≥100 mg/L 3 d (Algae/water plant, Algen) , C10-14-tert-alkyl EC No.: 701-175-2 1.3 mg/L 4 d (fish, rainbow trout)
NOEC NOEC Amines LC ₅₀ : NOEC	: 100 mg/L 3 d (Algae/water plant) : ≥100 mg/L 3 d (Algae/water plant, Algen) , C10-14-tert-alkyl EC No.: 701-175-2 1.3 mg/L 4 d (fish, rainbow trout) : 0.078 mg/L 56 d (fish, rainbow trout)
NOEC NOEC Amines LC ₅₀ : NOEC EC ₅₀ :	: 100 mg/L 3 d (Algae/water plant) : ≥100 mg/L 3 d (Algae/water plant, Algen) , C10-14-tert-alkyl EC No.: 701-175-2 1.3 mg/L 4 d (fish, rainbow trout) : 0.078 mg/L 56 d (fish, rainbow trout) 2.5 mg/L 2 d (crustaceans, Daphnia magna)
NOEC NOEC Amines LC ₅₀ : NOEC EC ₅₀ :	: 100 mg/L 3 d (Algae/water plant) : ≥100 mg/L 3 d (Algae/water plant, Algen) , C10-14-tert-alkyl EC No.: 701-175-2 1.3 mg/L 4 d (fish, rainbow trout) : 0.078 mg/L 56 d (fish, rainbow trout) 2.5 mg/L 2 d (crustaceans, Daphnia magna) : 0.05 mg/L 3 d (Algae/water plant, Selenastrum capricornutum)
NOEC NOEC Amines LC ₅₀ : NOEC EC ₅₀ : NOEC EC ₅₀ :	<pre>: 100 mg/L 3 d (Algae/water plant) : ≥100 mg/L 3 d (Algae/water plant, Algen) , C10-14-tert-alkyl EC No.: 701-175-2 1.3 mg/L 4 d (fish, rainbow trout) : 0.078 mg/L 56 d (fish, rainbow trout) 2.5 mg/L 2 d (crustaceans, Daphnia magna) : 0.05 mg/L 3 d (Algae/water plant, Selenastrum capricornutum) 0.435 mg/L 3 d (Algae/water plant, Selenastrum capricornutum)</pre>
NOEC NOEC Amines LC ₅₀ : NOEC EC ₅₀ : NOEC EC ₅₀ : Phenol,	<pre>: 100 mg/L 3 d (Algae/water plant) : ≥100 mg/L 3 d (Algae/water plant, Algen) , C10-14-tert-alkyl EC No.: 701-175-2 1.3 mg/L 4 d (fish, rainbow trout) : 0.078 mg/L 56 d (fish, rainbow trout) 2.5 mg/L 2 d (crustaceans, Daphnia magna) : 0.05 mg/L 3 d (Algae/water plant, Selenastrum capricornutum) 0.435 mg/L 3 d (Algae/water plant, Selenastrum capricornutum) (tetrapropenyl) Derivate CAS No.: 74499-35-7</pre>
NOEC NOEC Amines LC ₅₀ : NOEC EC ₅₀ : NOEC EC ₅₀ : NOEC EC ₅₀ : Phenol, LC ₅₀ :	: 100 mg/L 3 d (Algae/water plant) : ≥100 mg/L 3 d (Algae/water plant, Algen) , C10-14-tert-alkyl EC No.: 701-175-2 1.3 mg/L 4 d (fish, rainbow trout) : 0.078 mg/L 56 d (fish, rainbow trout) 2.5 mg/L 2 d (crustaceans, Daphnia magna) : 0.05 mg/L 3 d (Algae/water plant, Selenastrum capricornutum) 0.435 mg/L 3 d (Algae/water plant, Selenastrum capricornutum) (tetrapropenyl) Derivate CAS No.: 74499-35-7 =40 mg/L 4 d (fish)
NOEC NOEC Amines LC ₅₀ : NOEC EC ₅₀ : NOEC EC ₅₀ : Phenol, LC ₅₀ : EC ₅₀ :	<pre>: 100 mg/L 3 d (Algae/water plant) : ≥100 mg/L 3 d (Algae/water plant, Algen) , C10-14-tert-alkyl EC No.: 701-175-2 1.3 mg/L 4 d (fish, rainbow trout) : 0.078 mg/L 56 d (fish, rainbow trout) 2.5 mg/L 2 d (crustaceans, Daphnia magna) : 0.05 mg/L 3 d (Algae/water plant, Selenastrum capricornutum) 0.435 mg/L 3 d (Algae/water plant, Selenastrum capricornutum) (tetrapropenyl) Derivate CAS No.: 74499-35-7 =40 mg/L 4 d (fish) = 0.037 mg/L 2 d (crustaceans)</pre>
NOEC NOEC Amines LC ₅₀ : NOEC EC ₅₀ : NOEC EC ₅₀ : Phenol, LC ₅₀ : EC ₅₀ : EC ₅₀ : EC ₅₀ :	: $100 \text{ mg/L} 3 \text{ d}$ (Algae/water plant) : $\geq 100 \text{ mg/L} 3 \text{ d}$ (Algae/water plant, Algen) , C10-14-tert-alkyl EC No.: 701-175-2 1.3 mg/L 4 d (fish, rainbow trout) : $0.078 \text{ mg/L} 56 \text{ d}$ (fish, rainbow trout) 2.5 mg/L 2 d (crustaceans, Daphnia magna) : $0.05 \text{ mg/L} 3 \text{ d}$ (Algae/water plant, Selenastrum capricornutum) 0.435 mg/L 3 d (Algae/water plant, Selenastrum capricornutum) (tetrapropenyl) Derivate CAS No.: 74499-35-7 =40 mg/L 4 d (fish) = $0.037 \text{ mg/L} 2 \text{ d}$ (crustaceans) = $0.36 \text{ mg/L} 3 \text{ d}$ (Algae/water plant)
NOEC NOEC Amines LC ₅₀ : NOEC EC ₅₀ : NOEC EC ₅₀ : Phenol, LC ₅₀ : EC ₅₀ : Phenol, LC ₅₀ : EC ₅₀ : NOEC	: 100 mg/L 3 d (Algae/water plant) : \geq 100 mg/L 3 d (Algae/water plant, Algen) , C10-14-tert-alkyl EC No. : 701-175-2 1.3 mg/L 4 d (fish, rainbow trout) : 0.078 mg/L 56 d (fish, rainbow trout) 2.5 mg/L 2 d (crustaceans, Daphnia magna) : 0.05 mg/L 3 d (Algae/water plant, Selenastrum capricornutum) 0.435 mg/L 3 d (Algae/water plant, Selenastrum capricornutum) (tetrapropenyl) Derivate CAS No.: 74499-35-7 =40 mg/L 4 d (fish) =0.037 mg/L 2 d (crustaceans) =0.36 mg/L 3 d (Algae/water plant) : =0.0037 mg/L 21 d (crustaceans)
NOEC NOEC Amines LC50: NOEC EC50: NOEC EC50: Phenol, LC50: EC50: Phenol, LC50: EC50: NOEC	: $100 \text{ mg/L} 3 \text{ d}$ (Algae/water plant) : $\geq 100 \text{ mg/L} 3 \text{ d}$ (Algae/water plant, Algen) , C10-14-tert-alkyl EC No.: 701-175-2 1.3 mg/L 4 d (fish, rainbow trout) : $0.078 \text{ mg/L} 56 \text{ d}$ (fish, rainbow trout) 2.5 mg/L 2 d (crustaceans, Daphnia magna) : $0.05 \text{ mg/L} 3 \text{ d}$ (Algae/water plant, Selenastrum capricornutum) 0.435 mg/L 3 d (Algae/water plant, Selenastrum capricornutum) (tetrapropenyl) Derivate CAS No.: 74499-35-7 =40 mg/L 4 d (fish) = $0.037 \text{ mg/L} 2 \text{ d}$ (crustaceans) = $0.36 \text{ mg/L} 3 \text{ d}$ (Algae/water plant)

Do not allow uncontrolled discharge of product into the environment.

* 12.2. Persistence and degradability

Amines, C10-14-tert-alkyl EC No.: 701-175-2

Biodegradation: Yes, slowly



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Phenol, (tetrapropenyl) Derivate CAS No.: 74499-35-7

Biodegradation: Yes, slowly

Biodegradation:

Not readily biodegradable (according to OECD criteria)

* 12.3. Bioaccumulative potential

Phenol, (tetrapropenyl) Derivate CAS No.: 74499-35-7

Bioconcentration factor (BCF): 1,601

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

Distillates (petroleum), hydrotreated heavy paraffinic; Base oil - not specified CAS No.: 64742-54-7 **EC No.:** 265-157-1

Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. Amines, C10-14-tert-alkyl EC No.: 701-175-2

Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII. Phenol, (tetrapropenyl) Derivate CAS No.: 74499-35-7

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 contains a substance that has endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of waste according to applicable legislation.

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code packaging Remark:

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)	(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.			

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Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.2. UN proper shi	oping 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.
14.3. Transport haza	ard 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 precau	itions for user	•	,
not relevant	not relevant	not relevant	not relevant

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], Hazard categories:

• E1 Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1 Safety data sheet available on request.

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/ EEC) for expectant or nursing mothers.

Störfallverordnung

for substances contained in the product:

Hazard categories:

• E1 Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

Technische Anleitung 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 væere kræftfremkaldende

RAVENOL

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FR] National regulations

Franl	regulations, restrictions and prohibition regulations
	creich: Tableaux de maladies professionelles
	enclature des installations classées pour la protection de l'environnement
	es 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
	ode du travail
[I	IL] National regulations
	regulations, restrictions and prohibition regulations
	erlande: Lijst vank kankerverwekkende, mutagene en voor de voortplanting giftige stoffen (SZW)
	neene beoordelingsmethodiek Water (ABM)
	rlandse emissierichtlijn (NeR)
	Limitatieve lijst an voor de voortplanting giftige stoffen - Borstvoeding
	Limitatieve lijst an voor de voortplanting giftige stoffen - Vruchtbaarheid Limitatieve lijst an voor de voortplanting giftige stoffen - Ontwikkeling
	lijst van kankerverwekkende stoffen
	lijst van mutagene stoffen
	van 18 maart 1999, houdende bepalingen ter verbetering van de arbeidsomstandigheden
(Arbe	eidsomstandighedenwet)
	op de ondernemingsraden 1971
	CH] National regulations
	regulations, restrictions and prohibition regulations
	jenschwelle (Schweiz - StFV)
	hrencode
Bran	dverhütung, BVD (Schweiz)
15.2.	Chemical Safety Assessment
Chem	ical safety assessments for substances in this mixture were not carried out.
15 3	
13.5.	Additional information
	Additional information ta available.
No da	ta available.
No da	
No da	ta available.
No da	ta available. ION 16: Other information Indication of changes
No da SECT 16.1.	ta available. ION 16: Other information Indication of changes Product identifier
No da SECT 16.1.	ta available. TON 16: Other information Indication of changes Product identifier Details of the supplier of the safety data sheet
No da SECT 16.1. 1.1. 1.3. 1.4.	ta available. ION 16: Other information Indication of changes Product identifier Details of the supplier of the safety data sheet Emergency telephone number
No da SECT 16.1. 1.1. 1.3. 1.4. 2.1.	ta available. TON 16: Other information Indication of changes Product identifier Details of the supplier of the safety data sheet Emergency telephone number Classification of the substance or mixture
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No da SECT 16.1. 1.1. 1.3. 1.4. 2.1. 2.2. 2.3.	ta available. ION 16: Other information Indication of changes Product identifier Details of the supplier of the safety data sheet Emergency telephone number Classification of the substance or mixture Label elements Other hazards
No da SECT 16.1. 1.1. 1.3. 1.4. 2.1. 2.2. 2.3. 3.2.	ta available.
No da SECT 16.1. 1.1. 1.3. 1.4. 2.1. 2.2. 2.3. 3.2. 4.1.	ta available. ION 16: Other information Indication of changes Product identifier Details of the supplier of the safety data sheet Emergency telephone number Classification of the substance or mixture Label elements Other hazards Mixtures Description of first aid measures
No da SECT 16.1. 1.1. 1.3. 1.4. 2.1. 2.2. 2.3. 3.2. 4.1. 4.2.	ta available.
No da SECT 16.1. 1.1. 1.3. 1.4. 2.1. 2.2. 2.3. 3.2. 4.1. 4.2. 5.1.	ta available.
No da SECT 16.1. 1.1. 1.3. 1.4. 2.1. 2.2. 2.3. 3.2. 4.1. 4.2. 5.1. 6.1.	ta available. ION 16: Other information Indication of changes Product identifier Details of the supplier of the safety data sheet Emergency telephone number Classification of the substance or mixture Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed Extinguishing media Personal precautions, protective equipment and emergency procedures
No da SECT 16.1. 1.1. 1.3. 1.4. 2.2. 2.3. 3.2. 4.1. 4.2. 5.1. 6.1. 7.1.	ta available. ION 16: Other information Indication of changes Product identifier Details of the supplier of the safety data sheet Emergency telephone number Classification of the substance or mixture Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed Extinguishing media Personal precautions, protective equipment and emergency procedures Precautions for safe handling
No da SECT 16.1. 1.1. 1.3. 1.4. 2.1. 2.2. 2.3. 3.2. 4.1. 4.2. 5.1. 6.1. 7.1. 8.1.	ta available. ION 16: Other information Indication of changes Product identifier Details of the supplier of the safety data sheet Emergency telephone number Classification of the substance or mixture Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed Extinguishing media Personal precautions, protective equipment and emergency procedures Precautions for safe handling Control parameters
No da SECT 16.1. 1.1. 1.3. 1.4. 2.1. 2.2. 2.3. 3.2. 4.1. 4.2. 5.1. 6.1. 7.1. 8.1. 8.2.	ta available. ION 16: Other information Indication of changes Product identifier Details of the supplier of the safety data sheet Emergency telephone number Classification of the substance or mixture Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed Extinguishing media Personal precautions, protective equipment and emergency procedures Precautions for safe handling Control parameters Exposure controls
No da SECT 16.1. 1.1. 1.3. 1.4. 2.1. 2.2. 2.3. 3.2. 4.1. 4.2. 5.1. 6.1. 7.1. 8.1. 8.2. 9.1.	ta available. ION 16: Other information Indication of changes Product identifier Details of the supplier of the safety data sheet Emergency telephone number Classification of the substance or mixture Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed Extinguishing media Personal precautions, protective equipment and emergency procedures Precautions for safe handling Control parameters Exposure controls Information on basic physical and chemical properties
No da SECT 16.1. 1.1. 1.3. 1.4. 2.1. 2.2. 2.3. 3.2. 4.1. 4.2. 5.1. 6.1. 7.1. 8.1. 8.2.	ta available. ION 16: Other information Indication of changes Product identifier Details of the supplier of the safety data sheet Emergency telephone number Classification of the substance or mixture Label elements Other hazards Mixtures Description of first aid measures Most important symptoms and effects, both acute and delayed Extinguishing media Personal precautions, protective equipment and emergency procedures Precautions for safe handling Control parameters Exposure controls Information on basic physical and chemical properties Other information
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No da SECT 16.1. 1.1. 1.3. 1.4. 2.1. 2.2. 2.3. 3.2. 4.1. 4.2. 5.1. 6.1. 7.1. 8.1. 8.2. 9.1. 9.2.	ta available.
No da SECT 16.1. 1.1. 1.3. 1.4. 2.2. 2.3. 3.2. 4.1. 4.2. 5.1. 6.1. 7.1. 8.1. 8.2. 9.1. 9.2. 10.6	ta available.

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

12.1.

12.2.

12.3.

12.5.

12.6.

15.1.

16.1.

Toxicity

Persistence and degradability

Endocrine disrupting properties

Results of PBT and vPvB assessment

Bioaccumulative potential

Indication of changes

*

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16.4.	Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]
16.5.	Relevant R-, H- and EUH-phrases (Number and full text)

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

hazardous to water Rigoletto (catalog substances hazardous to water)

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

* 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
Respiratory or skin sensitisation (Skin Sens. 1)	H317: May cause an allergic skin reaction.	Calculation method.
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)

H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H360F	May damage fertility.
H400	Very toxic to aquatic life.
H410	Very toxic to aguatic 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