



LUB006912 - Rymax Themis 220

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 2/7/2014 Revision date: 5/4/2023 Supersedes version of: 9/26/2022 Version: 3.3

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

1.1. Product identifier

Product form : Mixture
Product name : LUB006912 - Rymax Themis 220
Product code : LUB006912

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
Function or use category : Lubricants and additives

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Rymax Lubricants B.V.
Delweg, 8
NL- 6902 PJ Zevenaar – Netherlands
Netherlands
T tel: +31 (0) 316 740 856
info@rymax-lubricants.com - www.rymax-lubricants.com

1.4. Emergency telephone number

Emergency number : +31 (0) 316 740 856

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER	+44 20 7188 7188	
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA	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]

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 to aquatic life with long lasting effects.

2.2. Label elements

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

Signal word (CLP) : -
Hazard statements (CLP) : H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP) : P273 - Avoid release to the environment.
P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

LUB006912 - Rymax Themis 220

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

2.3. Other hazards

Other hazards which do not result in classification : Prolonged or repeated skin contact with the material will remove natural oils which leads to a dermatitis. Spills of this product present a serious slipping hazard.

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

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Distillates (petroleum), hydrotreated heavy paraffinic substance with national workplace exposure limit(s) (AT, BE, BG, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IT, LT, LV, NL, PL, PT, RO, SE, SI, SK, IS, NO, CH, TR); substance with a Community workplace exposure limit	CAS-No.: 64742-54-7 EC-No.: 265-157-1 EC Index-No.: 649-467-00-8 REACH-no: 01-2119484627-25	$\geq 45 - < 55$	Not classified
Residual oils (petroleum), solvent-dewaxed substance with national workplace exposure limit(s) (NL)	CAS-No.: 64742-62-7 EC-No.: 265-166-0 EC Index-No.: 649-471-00-X REACH-no: 01-2119480472-38	$\geq 45 - < 55$	Not classified
Distillates (petroleum), solvent-dewaxed heavy paraffinic substance with national workplace exposure limit(s) (AT, BE, BG, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IT, LT, LV, NL, PL, PT, RO, SE, SI, SK, IS, NO, CH, TR); substance with a Community workplace exposure limit	CAS-No.: 64742-65-0 EC-No.: 265-169-7 EC Index-No.: 649-474-00-6 REACH-no: 01-2119471299-27	$\geq 0.1 - < 1$	Not classified
Distillates (petroleum), solvent-refined heavy paraffinic substance with national workplace exposure limit(s) (BE, BG, CZ, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, LT, LV, NL, PL, PT, RO, SE, SI, SK, IS, NO, CH); substance with a Community workplace exposure limit	CAS-No.: 64741-88-4 EC-No.: 265-090-8 EC Index-No.: 649-454-00-7 REACH-no: 01-2119488706-23	$\geq 0.1 - < 1$	Not classified
C16-18-(even numbered, saturated and unsaturated)-alkylamines	EC-No.: 627-034-4 REACH-no: 01-2119473797-19	$\geq 0.1 - < 0.3$	Acute Tox. 4 (Oral), H302 Skin Corr. 1, H314 Eye Dam. 1, H318 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)
Alkylene bis(dialkyldithiocarbamate) substance with national workplace exposure limit(s) (DE)	-	< 0.3	Aquatic Chronic 4, H413

LUB006912 - Rymax Themis 220

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-Ethyl-1-Hexanol substance with national workplace exposure limit(s) (AT, BE, BG, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IT, LT, LU, LV, NL, PL, PT, RO, SE, SI, SK, IS, NO, CH, TR); substance with a Community workplace exposure limit	CAS-No.: 104-76-7 EC-No.: 203-234-3 REACH-no: 01-2119487289-20	< 0.1	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
Octylamine substance with national workplace exposure limit(s) (LV)	CAS-No.: 111-86-4 EC-No.: 203-916-0 REACH-no: 01-2119474880-31	< 0.1	Flam. Liq. 3, H226 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 2, H411

Specific concentration limits:		
Name	Product identifier	Specific concentration limits
C16-18-(even numbered, saturated and unsaturated)-alkylamines	EC-No.: 627-034-4 REACH-no: 01-2119473797-19	(10 ≤ C < 100) STOT RE 2, H373

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
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	: Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects	: After adequate first aid, no further treatment is required unless symptoms reappear.
Symptoms/effects after inhalation	: After adequate first aid, no further treatment is required unless symptoms reappear.
Symptoms/effects after skin contact	: After adequate first aid, no further treatment is required unless symptoms reappear.
Symptoms/effects after eye contact	: After adequate first aid, no further treatment is required unless symptoms reappear.

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

Ingestion of large quantities: immediately to hospital.

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 water jet since it may cause the fire to spread.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

LUB006912 - Rymax Themis 220

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

5.3. Advice for firefighters

Precautionary measures fire	: Exercise caution when fighting any chemical fire.
Firefighting instructions	: Use water spray or fog for cooling exposed containers.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Wear suitable protective clothing and gloves.
Emergency procedures	: Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. Wear suitable protective clothing, gloves and eye/face protection. 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

For containment	: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Avoid contact with skin and eyes. Ensure good ventilation of the work station. Wear personal protective equipment.
Handling temperature	: ≤ 40 °C
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

Technical measures	: Provide local exhaust or general room ventilation.
Storage conditions	: Store in a well-ventilated place. Keep cool.
Storage temperature	: ≤ 40 °C
Storage area	: Store in a well-ventilated place. Store away from heat.
Special rules on packaging	: Keep only in original container. Store in a closed container.

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

LUB006912 - Rymax Themis 220

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	5 mg/m ³
WEL STEL (OEL STEL)	10 mg/m ³
2-Ethyl-1-Hexanol (104-76-7)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	5.4 mg/m ³
WEL TWA (OEL TWA) [2]	1 ppm
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	5 mg/m ³
Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	5 mg/m ³
WEL STEL (OEL STEL)	10 mg/m ³

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:

Gloves. Safety glasses. Protective clothing.

Personal protective equipment symbol(s):



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

LUB006912 - Rymax Themis 220

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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
	Nitrile rubber (NBR), Neoprene rubber (HNBR)	5 (> 240 minutes)	0.7	3 (> 0.65)	EN ISO 374
	Polyvinylchloride (PVC)	2 (> 30 minutes)	0.4	3 (> 0.65)	EN ISO 374

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

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	: light yellow.
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: -21 °C (ASTM D7346)
Boiling point	: Not available
Flammability	: Non flammable.
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: > 201 °C (ASTM D92)
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: 206 mm ² /s @ 40°C (ASTM D7042)
Solubility	: insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 892 kg/m ³ @ 15°C (ASTM D4052)
Relative density	: Not available
Relative vapour density at 20°C	: Not available
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

LUB006912 - Rymax Themis 220

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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.

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) : Not classified

Residual oils (petroleum), solvent-dewaxed (64742-62-7)

LD50 oral (rat)	> 5000 mg/kg
LD50 dermal (rat)	> 2000 mg/kg

Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)

LD50 oral (rat)	> 5000 mg/kg bodyweight 401 Acute Oral Toxicity Test
LD50 dermal (rabbit)	> 5000 mg/kg 402 Acute Dermal Toxicity Test
LC50 inhalation (rat) (Vapours - mg/l/4h)	> 5.53 mg/l/4h 403 Acute Inhalation Toxicity Test

2-Ethyl-1-Hexanol (104-76-7)

LD50 oral (rat)	2040 mg/kg
LD50 dermal (rat)	1970 mg/kg
LC50 inhalation (rat) (Dust/Mist - mg/l/4h)	1 mg/l/4h
LC50 inhalation (rat) (Vapours - mg/l/4h)	> 0.89 mg/l/4h

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

LD50 oral (rat)	> 5000 mg/kg bodyweight 401 Acute Oral Toxicity Test
LD50 dermal (rabbit)	> 2000 mg/kg 402 Acute Dermal Toxicity Test
LC50 inhalation (rat) (mg/l)	> 5000 mg/l/4h
LC50 inhalation (rat) (Dust/Mist - mg/l/4h)	> 5.53 mg/l/4h 403 Acute Inhalation Toxicity Test

C16-18-(even numbered, saturated and unsaturated)-alkylamines

LD50 oral (rat)	1689 mg/kg
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LUB006912 - Rymax Themis 220

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

C16-18-(even numbered, saturated and unsaturated)-alkylamines	
LD50 dermal (rat)	> 2000 mg/kg
Octylamine (111-86-4)	
LD50 oral (rat)	200 mg/kg bw/day
LD50 dermal (rabbit)	200 – 2000 mg/kg
LC50 inhalation (rat) (Dust/Mist - mg/l/4h)	1.6 mg/l/4h
Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)	
LD50 oral (rat)	> 5000 mg/kg
LD50 dermal (rabbit)	> 2000 mg/kg
LC50 inhalation (rat) (mg/l)	> 5000 mg/m ³
LC50 inhalation (rat) (Vapours - mg/l/4h)	5.53 mg/l/4h
Alkylene bis(dialkyldithiocarbamate)	
LD50 oral (rat)	> 16000 mg/kg
LD50 dermal (rabbit)	> 2000 mg/kg
Skin corrosion/irritation	: Not classified
C16-18-(even numbered, saturated and unsaturated)-alkylamines	
pH	11.7
Octylamine (111-86-4)	
pH	11.8 Temp.: 25 °C Concentration: 10 other:g / 100 ml
Serious eye damage/irritation	: Not classified
C16-18-(even numbered, saturated and unsaturated)-alkylamines	
pH	11.7
Octylamine (111-86-4)	
pH	11.8 Temp.: 25 °C Concentration: 10 other:g / 100 ml
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Octylamine (111-86-4)	
NOAEL (animal/male, F0/P)	100 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEL (animal/female, F0/P)	100 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
STOT-single exposure	: Not classified
2-Ethyl-1-Hexanol (104-76-7)	
STOT-single exposure	May cause respiratory irritation.
C16-18-(even numbered, saturated and unsaturated)-alkylamines	
STOT-single exposure	May cause respiratory irritation.

LUB006912 - Rymax Themis 220

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Octylamine (111-86-4)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight
2-Ethyl-1-Hexanol (104-76-7)	
NOAEL (subchronic, oral, animal/male, 90 days)	250 mg/kg bodyweight
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408
C16-18-(even numbered, saturated and unsaturated)-alkylamines	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified
LUB006912 - Rymax Themis 220	
Viscosity, kinematic	206 mm ² /s @ 40°C (ASTM D7042)
Residual oils (petroleum), solvent-dewaxed (64742-62-7)	
Viscosity, kinematic	490 mm ² /s @40°C
Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)	
Viscosity, kinematic	150 (1.99 – 847) mm ² /s @40°C
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Viscosity, kinematic	98 (98 – 108) mm ² /s @40°C
Octylamine (111-86-4)	
Viscosity, kinematic	1.756 mm ² /s
Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)	
Viscosity, kinematic	28.51 mm ² /s @40°C

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term : Not classified
(acute)
Hazardous to the aquatic environment, long-term : Harmful to aquatic life with long lasting effects.
(chronic)

Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)	
LC50 - Fish [1]	> 100 mg/l Pimephales promelas
EC50 - Crustacea [1]	> 10000 mg/l Daphnia magna
NOEC chronic fish	> 1000 mg/l Oncorhynchus mykiss (14d)
NOEC chronic crustacea	> 10 mg/l Daphnia magna (21d)

LUB006912 - Rymax Themis 220

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)	
NOEC chronic algae	> 100 mg/l <i>Pseudokirchneriella subcapitata</i> (72h)
2-Ethyl-1-Hexanol (104-76-7)	
LC50 - Fish [1]	17.1 mg/l <i>Leuciscus idus melanotus</i>
EC50 - Crustacea [1]	39 mg/l <i>Daphnia magna</i>
EC50 72h - Algae [1]	16.6 mg/l <i>Desmodesmus subspicatus</i>
NOEC chronic algae	5.3 mg/l <i>Desmodesmus subspicatus</i>
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LC50 - Fish [1]	> 100 mg/l <i>Pimephales promelas</i>
EC50 - Crustacea [1]	> 10000 mg/l <i>Daphnia magna</i>
NOEC chronic fish	1000 mg/l <i>Oncorhynchus mykiss</i> (14d)
NOEC chronic crustacea	10 mg/l <i>Daphnia magna</i> (21d)
NOEC chronic algae	≥ 100 mg/l <i>Pseudokirchneriella subcapitata</i> (72h)
C16-18-(even numbered, saturated and unsaturated)-alkylamines	
LC50 - Fish [1]	0.06 mg/l <i>Pimephales promelas</i> (OECD 203)
EC50 - Crustacea [1]	0.011 mg/l <i>Daphnia magna</i> (OECD 202)
EC50 72h - Algae [1]	0.38 mg/l <i>Desmodesmus subspicatus</i>
LOEC (chronic)	0.032 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d'
NOEC (chronic)	0.013 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d'
NOEC chronic crustacea	0.013 mg/l <i>Daphnia magna</i> (21d)
NOEC chronic algae	0.15 mg/l <i>Selenastrum capricornutum</i> (96h)
Octylamine (111-86-4)	
LC50 - Fish [1]	5.19 mg/l <i>Pimephales promelas</i>
EC50 - Crustacea [1]	1.9 mg/l <i>Daphnia magna</i>
EC50 72h - Algae [1]	0.23 mg/l <i>Desmodesmus subspicatus</i>
NOEC chronic algae	0.07 mg/l <i>Desmodesmus subspicatus</i> (72h)
Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)	
LC50 - Fish [1]	> 100 mg/l <i>Pimephales promelas</i>
EC50 - Crustacea [1]	> 10000 mg/l <i>Daphnia magna</i>
NOEC chronic fish	1000 mg/l <i>Oncorhynchus mykiss</i> (14d)
NOEC chronic crustacea	10 mg/l <i>Daphnia magna</i> (21d)
NOEC chronic algae	≥ 100 mg/l <i>Pseudokirchneriella subcapitata</i> (72h)
Alkylene bis(dialkyldithiocarbamate)	
LC50 - Fish [1]	> 0.06 mg/l <i>Oncorhynchus mykiss</i>
EC50 - Crustacea [1]	> 0.052 mg/l <i>Daphnia magna</i>
EC50 72h - Algae [1]	> 0.033 mg/l <i>Desmodesmus subspicatus</i>
NOEC chronic crustacea	> 0.247 mg/l 21d <i>Daphnia magna</i>
NOEC chronic algae	> 0.033 mg/l 72hr <i>Desmodesmus subspicatus</i>

LUB006912 - Rymax Themis 220

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

12.2. Persistence and degradability

Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)

Biodegradation	31 % OECD 301F (28d)
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2-Ethyl-1-Hexanol (104-76-7)

Persistence and degradability	Readily biodegradable.
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Biodegradation	100 % OECD 301C
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Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

Persistence and degradability	Not readily biodegradable.
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Biodegradation	< 60 % OECD 301F (28d)
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C16-18-(even numbered, saturated and unsaturated)-alkylamines

Biodegradation	66 % OECD 301B (28d)
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Octylamine (111-86-4)

Persistence and degradability	Readily biodegradable.
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Biodegradation	99 % 11d
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Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)

Persistence and degradability	Not readily biodegradable.
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Biodegradation	31 % OECD 301F (28d)
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Alkylene bis(dialkyldithiocarbamate)

Persistence and degradability	Readily biodegradable.
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Biodegradation	21 % OECD 301B
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12.3. Bioaccumulative potential

Residual oils (petroleum), solvent-dewaxed (64742-62-7)

Partition coefficient n-octanol/water (Log Pow)	> 3.5
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Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)

Bioconcentration factor (BCF REACH)	260
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2-Ethyl-1-Hexanol (104-76-7)

Bioconcentration factor (BCF REACH)	25.33
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Partition coefficient n-octanol/water (Log Pow)	2.9
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Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

Partition coefficient n-octanol/water (Log Pow)	3.9 – 6
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C16-18-(even numbered, saturated and unsaturated)-alkylamines

Bioconcentration factor (BCF REACH)	> 500
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Partition coefficient n-octanol/water (Log Kow)	4.33 @25°C
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Octylamine (111-86-4)

Partition coefficient n-octanol/water (Log Pow)	2.9
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Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)

Partition coefficient n-octanol/water (Log Pow)	3.9 – 6
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LUB006912 - Rymax Themis 220

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Alkylene bis(dialkyldithiocarbamate)	
Bioconcentration factor (BCF REACH)	10.86
Partition coefficient n-octanol/water (Log Pow)	8.42

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.
Product/Packaging disposal recommendations	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
HP Code	: HP3 - "Flammable:" – flammable liquid waste: liquid waste having a flash point below 60 °C or waste gas oil, diesel and light heating oils having a flash point > 55 °C and ≤ 75 °C; – flammable pyrophoric liquid and solid waste: solid or liquid waste which, even in small quantities, is liable to ignite within five minutes after coming into contact with air; – flammable solid waste: solid waste which is readily combustible or may cause or contribute to fire through friction; – flammable gaseous waste: gaseous waste which is flammable in air at 20 °C and a standard pressure of 101.3 kPa; – water reactive waste: waste which, in contact with water, emits flammable gases in dangerous quantities; – other flammable waste: flammable aerosols, flammable self-heating waste, flammable organic peroxides and flammable self-reactive waste.

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
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

LUB006912 - Rymax Themis 220

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

ADR	IMDG	IATA	ADN	RID
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)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 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 the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

LUB006912 - Rymax Themis 220

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Revision date	Modified	
	Supersedes	Modified	
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Added	
2.2	Hazard statements (CLP)	Added	
2.2	Precautionary statements (CLP)	Added	
3	Composition/information on ingredients	Modified	
6.1	Protective equipment	Removed	
9.1	Flash point	Modified	
9.1	Freezing point	Modified	
9.1	Solubility	Added	
9.1	Density	Modified	
9.1	Viscosity, kinematic	Modified	
13.1	Waste disposal recommendations	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
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

LUB006912 - Rymax Themis 220

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Abbreviations and acronyms:

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. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
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 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Aquatic Chronic 4	Hazardous to the aquatic environment – Chronic Hazard, Category 4
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
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.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

LUB006912 - Rymax Themis 220

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Full text of H- and EUH-statements:	
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
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. 1	Skin corrosion/irritation, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Safety Data Sheet (SDS), EU RYMAX 2023

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.