

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

1.1. Product identifier

Product form : Mixture
Trade name : API-MODIFIED
Product group : Trade product

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial
Use of the substance/mixture : High Pressure Thread Compound
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

Manufacturer

Whitmore Manufacturing LLC
930 Whitmore Drive
75087 Rockwall, Texas - USA
T 1.972.771.1000
Regulatory@whitmores.com - www.jetlube.com

Distributor

Whitmore
City Park, Watchmead
Welwyn Garden City, Hertfordshire, AL7 1LT - United Kingdom
T +44 1707 379870
Regulatory@whitmores.com - www.whitmores.com

1.4. Emergency telephone number

Emergency number : For Chemical Emergency Call CHEMTREC 24hr/day 7days/week
Within USA and Canada: 1.800.424.9300
Outside USA and Canada: +1.703.527.3887
(collect calls accepted)

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	
United Kingdom	Chemtrec - United Kingdom	London	Local (City) +44 20 3807 3798	
United Kingdom	Chemtrec - United Kingdom		Local (National) +44 870 820 0418	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Serious eye damage/eye irritation, Category 2 H319
Hazardous to the aquatic environment — Acute Hazard, Category 1 H400
Hazardous to the aquatic environment — Chronic Hazard, Category 1 H410
Full text of H-statements: see section 16

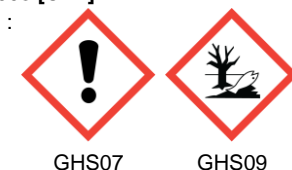
Adverse physicochemical, human health and environmental effects

Causes serious eye irritation. Very toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms (CLP)



GHS07

GHS09

Signal word (CLP)

: Warning

Hazard statements (CLP)

: H319 - Causes serious eye irritation.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP)

: P264 - Wash hands, forearms and face thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

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P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P391 - Collect spillage.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Component	
lead massive: [particle diameter ≥ 1 mm] (7439-92-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
graphite (7782-42-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Zinc (7440-66-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
copper (7440-50-8)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
antimony, powder (7440-36-0)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
calcium carbonate (471-34-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
magnesium oxide (1309-48-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, 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

Component	
lead massive: [particle diameter ≥ 1 mm](7439-92-1)	The substance is not 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

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]
lead massive: [particle diameter ≥ 1 mm] substance listed as REACH Candidate (Lead)	CAS-No.: 7439-92-1 EC-No.: 231-100-4 EC Index-No.: 082-014-00-7	20 - 30	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
graphite	CAS-No.: 7782-42-5 EC-No.: 231-955-3	15 - 20	Not classified
Distillates (petroleum), hydrotreated heavy naphthenic (Note L)	CAS-No.: 64742-52-5 EC-No.: 265-155-0 EC Index-No.: 649-465-00-7	20 - 30	Not classified

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Zinc	CAS-No.: 7440-66-6 EC-No.: 231-175-3 EC Index-No.: 030-001-01-9	10 - 15	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
copper	CAS-No.: 7440-50-8 EC-No.: 231-159-6	1 - 5	Not classified
antimony, powder substance with national workplace exposure limit(s) (GB)	CAS-No.: 7440-36-0 EC-No.: 231-146-5 EC Index-No.: 051-003-00-9	< 0.299985	Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Oral), H302 Aquatic Chronic 2, H411
POLYETHYLENE substance with national workplace exposure limit(s) (GB)	CAS-No.: 9002-88-4	0.265990864	Not classified
calcium carbonate substance with national workplace exposure limit(s) (GB)	CAS-No.: 471-34-1 EC-No.: 207-439-9	0.029998	Not classified
magnesium oxide substance with national workplace exposure limit(s) (GB)	CAS-No.: 1309-48-4 EC-No.: 215-171-9	0.029998	Not classified

Note L: The harmonised classification as a carcinogen applies unless it can be shown that the substance contains less than 3 % of dimethyl sulphoxide extract as measured by IP 346 ("Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions – Dimethyl sulphoxide extraction refractive index method" Institute of Petroleum, London), in which case a classification in accordance with Title II of this Regulation shall be performed also for that hazard class.

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 cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

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 eye contact : Eye irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Exercise caution. Spill area may be slippery. Avoid contact with skin and eyes.

6.1.2. For emergency responders

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

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Mechanically recover the product.

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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 : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

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

lead massive: [particle diameter $\geq 1\text{mm}$] (7439-92-1)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Inorganic lead and its compounds
IOEL TWA	0.15 mg/m ³ (BOEL)
Notes	Inorganic lead (lead fumes and dusts of $< 10\text{ }\mu\text{m}$) (Year of adoption 2002)
Regulatory reference	COUNCIL DIRECTIVE 98/24/EC
EU - Biological Limit Value (BLV)	
Local name	Lead and its inorganic compounds
BLV	30 $\mu\text{g}/100\text{ml}$ Parameter: Pb
Regulatory reference	SCOEL List of recommended health-based BLVs and BGVs
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	0.15 mg/m ³
graphite (7782-42-5)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	10 mg/m ³ 4 mg/m ³
copper (7440-50-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Copper
IOEL TWA	0.01 mg/m ³ (respirable fraction)
Notes	(Year of adoption 2014)
Regulatory reference	SCOEL Recommendations
United Kingdom - Occupational Exposure Limits	
Local name	Copper
WEL TWA (OEL TWA) [1]	0.2 mg/m ³ fume (as Cu) 1 mg/m ³ and compounds, dusts and mists (as Cu)
WEL STEL (OEL STEL)	2 mg/m ³ and compounds, dusts and mists (as Cu)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
antimony, powder (7440-36-0)	
United Kingdom - Occupational Exposure Limits	
Local name	Antimony

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antimony, powder (7440-36-0)	
WEL TWA (OEL TWA) [1]	0.5 mg/m ³
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
POLYETHYLENE (9002-88-4)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	10 mg/m ³ 4 mg/m ³
magnesium oxide (1309-48-4)	
United Kingdom - Occupational Exposure Limits	
Local name	Magnesium oxide
WEL TWA (OEL TWA) [1]	4 mg/m ³ (as Mg) fume and respirable dust 10 mg/m ³ (as Mg) inhalable dust fume
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
calcium carbonate (471-34-1)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	10 mg/m ³ 4 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 symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses. Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Neoprene or nitrile rubber gloves

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

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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	: Solid
Colour	: Metallic.
Appearance	: Paste.
Odour	: Petroleum-like odour.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not applicable
Boiling point	: Not available
Flammability	: Non flammable.
Explosive limits	: Not applicable
Lower explosive limit (LEL)	: Not applicable
Upper explosive limit (UEL)	: Not applicable
Flash point	: > 221 °C Open cup
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: Not available
pH solution	: Not available
Viscosity, kinematic	: Not applicable
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	: Not available
Relative density	: Not available
Relative vapour density at 20 °C	: Not applicable
Particle size	: Not available
Particle size distribution	: Not available
Particle shape	: Not available
Particle aspect ratio	: Not available
Particle aggregation state	: Not available
Particle agglomeration state	: Not available
Particle specific surface area	: Not available
Particle dustiness	: Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

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

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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

lead massive: [particle diameter ≥1mm] (7439-92-1)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 5.05 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
graphite (7782-42-5)	
LD50 oral rat	> 2000 mg/kg (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Experimental value, Oral)
LC50 Inhalation - Rat	> 2000 mg/m³ air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (dust))
LC50 Inhalation - Rat (Dust/Mist)	> 2 mg/l Source: ECHA
Zinc (7440-66-6)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LC50 Inhalation - Rat	> 5.41 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
antimony, powder (7440-36-0)	
LD50 oral rat	> 20000 mg/kg bodyweight (Rat, Inconclusive, insufficient data, Oral)
LD50 dermal rabbit	> 8300 mg/kg bodyweight Animal: rabbit, Guideline: other:No guideline specified at the time of conduct.
LC50 Inhalation - Rat	> 5.2 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Guideline: EU Method B.2 (Acute Toxicity (Inhalation)), Guideline: other:additional examinations performed: clinical signs, gross pathology, histopathological examination of nose, larynx, trachea and lungs (five levels) 24 hours and 14 days after cessation of exposure
LC50 Inhalation - Rat (Dust/Mist)	> 5.2 mg/l Source: ECHA
POLYETHYLENE (9002-88-4)	
LD50 oral rat	> 2000 mg/kg (Rat, Oral)
magnesium oxide (1309-48-4)	
LD50 oral rat	> 5000 mg/kg (Rat, Literature study, Oral)
LD50 dermal rabbit	> 2000 mg/kg bodyweight (Rabbit, Literature study, Dermal)
calcium carbonate (471-34-1)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 420 (Acute Oral Toxicity - Fixed Dose Method), Guideline: EU Method B.1 bis (Acute Oral Toxicity - Fixed Dose Procedure)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal))
LC50 Inhalation - Rat	> 3 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Guideline: EU Method B.2 (Acute Toxicity (Inhalation)), Guideline: EPA OPPTS 870.1300 (Acute inhalation toxicity)
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met)
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)

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Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

lead massive: [particle diameter ≥1mm] (7439-92-1)

IARC group 2A - Probably carcinogenic to humans

POLYETHYLENE (9002-88-4)

IARC group 3 - Not classifiable

Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)

antimony, powder (7440-36-0)

NOAEL (animal/male, F0/P) 1686 mg/kg bodyweight Animal: rat, Animal sex: male

NOAEL (animal/female, F0/P) 1879 mg/kg bodyweight Animal: rat, Animal sex: female

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

graphite (7782-42-5)

NOAEC (inhalation, rat, dust/mist/fume, 90 days) 0.000279 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)

Zinc (7440-66-6)

NOAEL (oral, rat, 90 days) 31.52 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

antimony, powder (7440-36-0)

LOAEC (inhalation, rat, dust/mist/fume, 90 days) ≥ 0.0045 mg/l air Animal: rat, Guideline: OECD Guideline 452 (Chronic Toxicity Studies)

NOAEC (inhalation, rat, dust/mist/fume, 90 days) ≥ 0.00051 mg/l air Animal: rat, Guideline: OECD Guideline 452 (Chronic Toxicity Studies)

calcium carbonate (471-34-1)

NOAEL (oral, rat, 90 days) 1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

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Viscosity, kinematic Not applicable

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short-term (acute) : Very toxic to aquatic life.

Hazardous to the aquatic environment, long-term (chronic) : Very toxic to aquatic life with long lasting effects.

Not rapidly degradable

lead massive: [particle diameter ≥1mm] (7439-92-1)

LC50 - Fish [1] 1170 µg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)

LC50 - Fish [2] 107 µg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)

graphite (7782-42-5)

LC50 - Fish [1] > 100 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)

EC50 - Crustacea [1] > 100 mg/l Test organisms (species): Daphnia magna

EC50 72h - Algae [1] 19 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

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graphite (7782-42-5)	
EC50 72h - Algae [2]	7.2 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
ErC50 algae	> 100 mg/l Source: ECHA
NOEC (chronic)	47 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
Zinc (7440-66-6)	
LC50 - Fish [1]	0.169 mg/l (Other, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Read-across, Zinc ion)
LC50 - Fish [2]	0.78 mg/l (96 h, Pimephales promelas, Static system, Fresh water, Read-across)
EC50 - Crustacea [1]	1.833 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Zinc ion)
ErC50 algae	0.15 mg/l
copper (7440-50-8)	
LC50 - Fish [1]	38.4 – 256.2 µg/l (96 h, Pimephales promelas, Flow-through system, Fresh water, Read-across)
EC50 - Crustacea [1]	3.8 – 118.5 µg/l (US EPA, 48 h, Daphnia magna, Static system, Fresh water, Weight of evidence)
antimony, powder (7440-36-0)	
LC50 - Fish [1]	6.9 mg/l Test organisms (species): other:Pargus major (red seabream)
LC50 - Fish [2]	14.4 mg/l Test organisms (species): Pimephales promelas
LC50 - Other aquatic organisms [1]	1.77 mg/l Source: ECHA
EC50 72h - Algae [1]	> 36.6 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
calcium carbonate (471-34-1)	
LC50 - Fish [1]	> 100 % (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, Saturated solution)
EC50 - Crustacea [1]	> 100 % (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Saturated solution)
EC50 72h - Algae [1]	> 14 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 96h - Algae [1]	22000 mg/l Source: Ecological Structure Activity Relationships
12.2. Persistence and degradability	
lead massive: [particle diameter ≥1mm] (7439-92-1)	
Persistence and degradability	Biodegradability in soil: not applicable. Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
graphite (7782-42-5)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
Zinc (7440-66-6)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

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copper (7440-50-8)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
antimony, powder (7440-36-0)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
POLYETHYLENE (9002-88-4)	
Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
magnesium oxide (1309-48-4)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)
calcium carbonate (471-34-1)	
Persistence and degradability	Biodegradability in soil: not applicable. Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)
12.3. Bioaccumulative potential	
lead massive: [particle diameter ≥1mm] (7439-92-1)	
Partition coefficient n-octanol/water (Log Pow)	0.73 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
graphite (7782-42-5)	
Bioaccumulative potential	No bioaccumulation data available.
Zinc (7440-66-6)	
BCF - Other aquatic organisms [1]	116 (21 day(s), Semi-static system, Salt water, Read-across)
Partition coefficient n-octanol/water (Log Pow)	-0.47 Source: NLM
Bioaccumulative potential	Bioaccumulation: not applicable.
copper (7440-50-8)	
Bioaccumulative potential	Bioaccumulation: not applicable.
antimony, powder (7440-36-0)	
Partition coefficient n-octanol/water (Log Pow)	0.73 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
POLYETHYLENE (9002-88-4)	
Bioaccumulative potential	No bioaccumulation data available.
magnesium oxide (1309-48-4)	
Bioaccumulative potential	Bioaccumulation: not applicable.
calcium carbonate (471-34-1)	
Partition coefficient n-octanol/water (Log Pow)	-2.12 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

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12.4. Mobility in soil

lead massive: [particle diameter ≥1mm] (7439-92-1)

Surface tension	Data waiving
Ecology - soil	Adsorbs into the soil. Toxic to flora.

Zinc (7440-66-6)

Ecology - soil	No (test)data on mobility of the substance available.
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copper (7440-50-8)

Ecology - soil	Adsorbs into the soil.
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antimony, powder (7440-36-0)

Ecology - soil	Adsorbs into the soil.
----------------	------------------------

magnesium oxide (1309-48-4)

Ecology - soil	No (test)data on mobility of the substance available.
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calcium carbonate (471-34-1)

Mobility in soil	4.971 Source: Quantitative Structure Activity Relation
Ecology - soil	Adsorbs into the soil.

12.5. Results of PBT and vPvB assessment

Component	
lead massive: [particle diameter ≥1mm] (7439-92-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
graphite (7782-42-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Zinc (7440-66-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
copper (7440-50-8)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
antimony, powder (7440-36-0)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
calcium carbonate (471-34-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
magnesium oxide (1309-48-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
Special provision(s) applied : 375	Special provision(s) applied : 969	Special provision(s) applied : A197	Special provision(s) applied : 375	Special provision(s) applied : 375

These substances when carried in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of ADR provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

14.1. UN number or ID number

UN 3077	UN 3077	UN 3077	UN 3077	UN 3077
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ADR	IMDG	IATA	ADN	RID
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Lead ; Zinc ; Copper)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Lead ; Zinc ; Copper)	Environmentally hazardous substance, solid, n.o.s. (Lead ; Zinc ; Copper)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Lead ; Zinc ; Copper)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Lead ; Zinc ; Copper)
Transport document description				
UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Lead ; Zinc ; Copper), 9, III, (-)	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Lead ; Zinc ; Copper), 9, III	UN 3077 Environmentally hazardous substance, solid, n.o.s. (Lead ; Zinc ; Copper), 9, III	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Lead ; Zinc ; Copper), 9, III	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Lead ; Zinc ; Copper), 9, III
14.3. Transport hazard class(es)				
9	9	9	9	9
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
Environmentally hazardous substances derogation applies (quantity of liquids ≤ 5 litres or net mass of solids ≤ 5 kg). The environmentally hazardous substance mark is therefore not required, as stated in the ADR regulation, section 5.2.1.8.1.				
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: M7
Special provisions (ADR)	: 274, 335, 375, 601
Limited quantities (ADR)	: 5kg
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P002, IBC08, LP02, R001
Special packing provisions (ADR)	: PP12, B3
Mixed packing provisions (ADR)	: MP10
Portable tank and bulk container instructions (ADR)	: T1, BK1, BK2, BK3
Portable tank and bulk container special provisions (ADR)	: TP33
Tank code (ADR)	: SGAV, LGBV
Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V13
Special provisions for carriage - Bulk (ADR)	: VC1, VC2
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13
Hazard identification number (Kemler No.)	: 90
Orange plates	:

Tunnel restriction code (ADR)	: -
EAC code	: 2Z

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Transport by sea

Special provisions (IMDG)	: 274, 335, 966, 967, 969
Limited quantities (IMDG)	: 5 kg
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP02, P002
Special packing provisions (IMDG)	: PP12
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B3
Tank instructions (IMDG)	: BK1, BK2, BK3, T1
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-F
Stowage category (IMDG)	: A
Stowage and handling (IMDG)	: SW23

Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y956
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 956
PCA max net quantity (IATA)	: 400kg
CAO packing instructions (IATA)	: 956
CAO max net quantity (IATA)	: 400kg
Special provisions (IATA)	: A97, A158, A179, A197
ERG code (IATA)	: 9L

Inland waterway transport

Classification code (ADN)	: M7
Special provisions (ADN)	: 274, 335, 375, 601
Limited quantities (ADN)	: 5 kg
Excepted quantities (ADN)	: E1
Equipment required (ADN)	: PP, A
Number of blue cones/lights (ADN)	: 0
Additional requirements/Remarks (ADN)	: * Only in the molten state. ** For carriage in bulk see also 7.1.4.1. *** Only in the case of transport in bulk.

Rail transport

Classification code (RID)	: M6
Special provisions (RID)	: 274, 335, 375, 601
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Special packing provisions (RID)	: PP1
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T4
Portable tank and bulk container special provisions (RID)	: TP1, TP29
Tank codes for RID tanks (RID)	: LGBV
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW31
Colis express (express parcels) (RID)	: CE8
Hazard identification number (RID)	: 90

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains a substance on the REACH candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: Lead (EC 231-100-4, CAS 7439-92-1)

Contains no REACH Annex XIV substances

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

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

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

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
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

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Abbreviations and acronyms	
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements	
Acute Tox. 4 (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
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
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.

Safety Data Sheet (SDS), EU

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