

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Issue date: 10/06/2020 Revision date: 16/02/2024 Supersedes version of: 10/06/2020 Version: 2.0

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

1.1. Product identifier

Product form : Substance

Substance name : VANADIUM PENTOXIDE

Chemical name : divanadium pentaoxide; vanadium pentoxide

EC Index-No. : 023-001-00-8 EC-No. : 215-239-8 CAS-No. : 1314-62-1

Product code : B1187, B4001, B4008, B4010

Product group : End product

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

1.2.1. Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Laboratory chemicals
Function or use category : Laboratory chemicals

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Elemental Microanalysis Ltd

1 Hameldown Road

Okehampton, Devon, EX20 1UB

GB United Kingdom

T +44 1837 54446

enquiries@microanalysis.co.uk, https://www.elementalmicroanalysis.com/

1.4. Emergency telephone number

Emergency number : +44 (0) 7990 767375

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Germ cell mutagenicity, Category 2

Carcinogenicity, Category 1B

Reproductive toxicity, Category 2

Reproductive toxicity, Category 2

Reproductive toxicity, Additional category, Effects on or via lactation

H362

Acute toxicity (oral), Category 3

Acute toxicity (inhal.), Category 2

Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Specific target organ toxicity – Repeated exposure, Category 1 H372 Hazardous to the aquatic environment – Chronic Hazard, Category 2 H411

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

Adverse physicochemical, human health and environmental effects

May cause cancer. Suspected of causing genetic defects. May cause harm to breast-fed children. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure. Fatal if inhaled. Toxic if swallowed. May cause respiratory irritation. Toxic to aquatic life with long lasting effects.

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2.2. Label elements

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

Hazard pictograms (CLP)







GHS06

GHS08

8 GHS09

Signal word (CLP) : Danger

Hazard statements (CLP) : H341 - Suspected of causing genetic defects.

H350 - May cause cancer.

H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child.

H362 - May cause harm to breast-fed children.

H301 - Toxic if swallowed. H330 - Fatal if inhaled.

H335 - May cause respiratory irritation.

H372 - Causes damage to organs (respiratory tract) through prolonged or repeated

exposure (inhalation).

H411 - Toxic to aquatic life with long lasting effects.

P201 - Obtain special instructions before use.

Precautionary statements (CLP) : P201 - Obtain special instructions before use

P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P263 - Avoid contact during pregnancy and while nursing.

P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing

protection.

P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. P304+P340+P310 - IF INHALED: Remove person to fresh air and keep comfortable for

breathing. Immediately call a POISON CENTER or doctor.

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name : VANADIUM PENTOXIDE

CAS-No. : 1314-62-1 EC-No. : 215-239-8 EC Index-No. : 023-001-00-8

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
VANADIUM PENTOXIDE	CAS-No.: 1314-62-1 EC-No.: 215-239-8 EC Index-No.: 023-001-00-8	100	Muta. 2, H341 Carc. 1B, H350 Repr. 2, H361fd Lact., H362 Acute Tox. 3 (Oral), H301 (ATE=220 mg/kg bodyweight) Acute Tox. 2 (Inhalation), H330 (ATE=0.05 mg/l) STOT SE 3, H335 STOT RE 1, H372 Aquatic Chronic 2, H411

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

3.2. Mixtures

Not applicable

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SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a physician

immediately. Call a doctor.

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 : Rinse mouth. Call a physician immediately.

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

Symptoms/effects after inhalation : May cause respiratory 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 : Only qualified personnel equipped with suitable protective equipment may intervene. Do not

breathe dust/fume/gas/mist/vapours/spray.

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. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public

waters

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

: Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Avoid contact during pregnancy/while nursing. Do not breathe dust/fume/gas/mist/vapours/spray.

Hygiene measures

: Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

: Store locked up. Store in a well-ventilated place. Keep container tightly closed. 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

VANADIUM PENTOXIDE (1314-62-1)	
United Kingdom - Occupational Exposure Limits	
Local name	Vanadium pentoxide
WEL TWA (OEL TWA)	0.05 mg/m³
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
VANADIUM PENTOXIDE (1314-62-1)	
United Kingdom - Occupational Exposure Limits	
Local name	Vanadium pentoxide
WEL TWA (OEL TWA)	0.05 mg/m³
Regulatory reference	EH40/2005 (Fourth edition, 2020), HSE

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

VANADIUM PENTOXIDE (1314-62-1)	
DNEL/DMEL (Workers)	
Acute - local effects, inhalation	0.7 mg/m³
Long-term - local effects, inhalation	0.14 mg/m³
DNEL/DMEL (General population)	
Acute - systemic effects, oral	0.7 mg/kg bodyweight/day
Acute - local effects, inhalation	0.45 mg/m³

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VANADIUM PENTOXIDE (1314-62-1)	
Long-term - systemic effects,oral	0.14 mg/kg bodyweight/day
Long-term - local effects, inhalation	0.09 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	17.8 μg/l
PNEC aqua (marine water)	2.5 μg/l
PNEC aqua (intermittent, freshwater)	6.93 µg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	563 mg/kg dwt
PNEC sediment (marine water)	79 mg/kg dwt
PNEC (Soil)	
PNEC soil	7.2 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	0.167 mg/kg food
PNEC (STP)	
PNEC sewage treatment plant	450 μg/l

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:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

8.2.2.4. Thermal hazards

No additional information available

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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 : Orange.

Molecular mass : 181.879 g/mol Source: ChemIDPlus

Odour : odourless.
Odour threshold : Not available

Melting point : 671 °C Source: ECHA Freezing point : Not applicable

Boiling point : 1750 °C Source: ECHA
Flammability : Non flammable.
Explosive limits : Not applicable

Lower explosion limit : Not applicable
Upper explosion limit : Not applicable
Upper explosion limit : Not applicable
Flash point : Not applicable
Auto-ignition temperature : Not applicable
Decomposition temperature : Not available

pH : 4

pH solution : Not available Viscosity, kinematic : Not applicable

Solubility : Water: 0.92 g/l at 20°C Source: ECHA

Partition coefficient n-octanol/water (Log Kow) : Not available Vapour pressure : Not available Vapour pressure at 50°C : Not available

Density : 3.65 g/cm³ Type: 'density' Temp.: 21,7 °C

Relative density : 3.65 Source: ECHA
Relative vapour density at 20°C : Not applicable
Particle size : 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).

10.5. Incompatible materials

No additional information available

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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) : Toxic if swallowed.

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Fatal if inhaled.

VANADIUM PENTOXIDE (1314-62-1)	
LD50 oral rat	221.1 mg/kg Source: ECHA
LD50 dermal rat	> 2500 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat (Vapours)	4.29 mg/l Source: ECHA

VANADIUM PENTOXIDE (1314-62-1)	
LD50 oral rat	221.1 mg/kg Source: ECHA
LD50 dermal rat	> 2500 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat (Vapours)	4.29 mg/l Source: ECHA
Clain correction/irritation	Not alongified

Skin corrosion/irritation : Not classified pH: 4
Serious eye damage/irritation : Not classified pH: 4

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Suspected of causing genetic defects.

Carcinogenicity : May cause cancer.

VANADIUM PENTOXIDE (1314-62-1)	
IARC group	2B - Possibly carcinogenic to humans
VANADIUM PENTOXIDE (1314-62-1)	
IARC group	2B - Possibly carcinogenic to humans
Penroductive toxicity :	Suspected of damaging fertility. Suspected of damaging the unborn child. May cause harm

Reproductive toxicity : Suspected of damaging fertility. Suspected of damaging the unborn child. May cause harm to breast-fed children.

STOT-single exposure : May cause respiratory irritation.

VANADIUM PENTOXIDE (1314-62-1)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure :	Causes damage to organs (respiratory tract) through prolonged or repeated exposure

(inhalation).

VANADIUM PENTOXIDE (1314-62-1)	
NOAEL (oral, rat, 90 days)	16.9 mg/kg bodyweight Animal: rat, Animal sex: male
VANADIUM PENTOXIDE (1314-62-1)	
NOAEL (oral, rat, 90 days)	16.9 mg/kg bodyweight Animal: rat, Animal sex: male
STOT-repeated exposure	Causes damage to organs (respiratory tract) through prolonged or repeated exposure (inhalation).

Aspiration hazard : Not classified

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VANADIUM PENTOXIDE (1314-62-1)	
Viscosity, kinematic	Not applicable

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

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

Hazardous to the aquatic environment, long-term

(chronic)

Not rapidly degradable

Hazardous to the aquatic environment, short–term	: Not classified
(acute)	

VANADIUM PENTOXIDE (1314-62-1)	
LC50 - Fish [1]	0.693 mg/l Source: ECHA
EC50 72h - Algae [1]	2.907 mg/l Source: ECHA
VANADIUM PENTOXIDE (1314-62-1)	
VANADIUM PENTOXIDE (1314-62-1) LC50 - Fish [1]	0.693 mg/l Source: ECHA

: Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

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.

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HP Code

: HP5 - "Specific Target Organ Toxicity (STOT)/Aspiration Toxicity:" waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration.

HP6 - "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure.

HP7 - "Carcinogenic:" waste which induces cancer or increases its incidence

HP11 - "Mutagenic:" waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell.

HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

SECTION 14: Transport information

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

IMDG	IATA	ADN	RID
umber			
UN 2862	UN 2862	UN 2862	UN 2862
g name			
VANADIUM PENTOXIDE (VANADIUM PENTOXIDE)	Vanadium pentoxide (VANADIUM PENTOXIDE)	VANADIUM PENTOXIDE (VANADIUM PENTOXIDE)	VANADIUM PENTOXIDE (VANADIUM PENTOXIDE
ption			
UN 2862 VANADIUM PENTOXIDE (VANADIUM PENTOXIDE), 6.1, III, MARINE POLLUTANT/ENVIRONME NTALLY HAZARDOUS	UN 2862 Vanadium pentoxide (VANADIUM PENTOXIDE), 6.1, III, ENVIRONMENTALLY HAZARDOUS	UN 2862 VANADIUM PENTOXIDE (VANADIUM PENTOXIDE), 6.1, III, ENVIRONMENTALLY HAZARDOUS	UN 2862 VANADIUM PENTOXIDE (VANADIUM PENTOXIDE), 6.1, III, ENVIRONMENTALLY HAZARDOUS
lass(es)			
6.1	6.1	6.1	6.1
6	6	6	6
III	III	III	III
ards			
Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
	UN 2862 I name VANADIUM PENTOXIDE (VANADIUM PENTOXIDE) ption UN 2862 VANADIUM PENTOXIDE (VANADIUM PENTOXIDE), 6.1, III, MARINE POLLUTANT/ENVIRONME NTALLY HAZARDOUS lass(es) 6.1 III ards Dangerous for the environment: Yes	UN 2862 UN 2862 UN 2862 VANADIUM PENTOXIDE (VANADIUM PENTOXIDE) ption UN 2862 VANADIUM PENTOXIDE (VANADIUM PENTOXIDE (VANADIUM PENTOXIDE), 6.1, III, MARINE POLLUTANT/ENVIRONME NTALLY HAZARDOUS 6.1 6.1 6.1 III III Bards Dangerous for the environment: Yes Dangerous for the environment: Yes	UN 2862 UN 2862 UN 2862 G name VANADIUM PENTOXIDE (VANADIUM PENTOXIDE) (VANADIUM PENTOXIDE) Ption UN 2862 VANADIUM PENTOXIDE) UN 2862 VANADIUM PENTOXIDE) UN 2862 VANADIUM PENTOXIDE) UN 2862 VANADIUM PENTOXIDE) PENTOXIDE (VANADIUM PENTOXIDE), 6.1, III, ENVIRONMENTALLY HAZARDOUS Iass(es) 6.1 6.1 6.1 6.1 6.1 III III III

14.6. Special precautions for user

Overland transport

Classification code (ADR) : T5
Special provisions (ADR) : 600
Limited quantities (ADR) : 5kg
Excepted quantities (ADR) : E1

Packing instructions (ADR) : P002, IBC08, LP02, R001

Special packing provisions (ADR) : B3
Mixed packing provisions (ADR) : MP10
Portable tank and bulk container instructions (ADR) : T1

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Portable tank and bulk container special provisions

(ADR)

Tank code (ADR) : SGAH
Tank special provisions (ADR) : TU15, TE19
Vehicle for tank carriage : AT

Transport category (ADR) : 2

Special provisions for carriage - Bulk (ADR) : VC1, VC2, AP7 Special provisions for carriage - Loading, unloading : CV13, CV28

and handling (ADR)

Special provisions for carriage - Operation (ADR) : \$9 Hazard identification number (Kemler No.) : 60

Orange plates :

60 2862

Tunnel restriction code (ADR) : E EAC code : 2X

Transport by sea

Limited quantities (IMDG) : 5 kg Excepted quantities (IMDG) : E1 : P002, LP02 Packing instructions (IMDG) IBC packing instructions (IMDG) IBC08 IBC special provisions (IMDG) B3 T1 Tank instructions (IMDG) : Tank special provisions (IMDG) TP33 EmS-No. (Fire) F-A EmS-No. (Spillage) S-A Stowage category (IMDG) Α

Properties and observations (IMDG) : Brownish powder. Slightly soluble in water. Toxic if swallowed, by skin contact or by

inhalation.

Air transport

PCA Excepted quantities (IATA) : E1 PCA Limited quantities (IATA) Y645 PCA limited quantity max net quantity (IATA) 10kg PCA packing instructions (IATA) 670 PCA max net quantity (IATA) 100ka CAO packing instructions (IATA) 677 CAO max net quantity (IATA) 200kg ERG code (IATA) 6L

Inland waterway transport

Classification code (ADN) : T5

Special provisions (ADN) : 600, 802

Limited quantities (ADN) : 5 kg

Excepted quantities (ADN) : E1

Equipment required (ADN) : PP, EP

Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : T5
Special provisions (RID) : 600
Limited quantities (RID) : 5kg
Excepted quantities (RID) : E1

Packing instructions (RID) : P002, IBC08, LP02, R001

Special packing provisions (RID) : B3
Mixed packing provisions (RID) : MP10
Portable tank and bulk container instructions (RID) : T1
Portable tank and bulk container special provisions : TP33

(RID)

Tank codes for RID tanks (RID) : SGAH

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Special provisions for RID tanks (RID) : TU15
Transport category (RID) : 2

Special provisions for carriage – Bulk (RID) : VC1, VC2, AP7 Special provisions for carriage - Loading, unloading : CW13, CW28, CW31

and handling (RID)

Colis express (express parcels) (RID) : CE11 Hazard identification number (RID) : 60

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)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

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

SECTION 16: Other information

	SECTION TO CAROL MICHINATION		
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)		

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

Full text of H- and EUH-statements:		
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2	
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3	
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2	
Carc. 1B	Carcinogenicity, Category 1B	
H301	Toxic if swallowed.	
H330	Fatal if inhaled.	
H335	May cause respiratory irritation.	
H341	Suspected of causing genetic defects.	
H350	May cause cancer.	

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Full text of H- and EUH-statements:		
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.	
H362	May cause harm to breast-fed children.	
H372	Causes damage to organs (respiratory tract) through prolonged or repeated exposure (inhalation).	
H411	Toxic to aquatic life with long lasting effects.	
Lact.	Reproductive toxicity, Additional category, Effects on or via lactation	
Muta. 2	Germ cell mutagenicity, Category 2	
Repr. 2	Reproductive toxicity, Category 2	
STOT RE 1	Specific target organ toxicity – Repeated exposure, Category 1	
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	

The classification complies with : ATP 12

Safety Data Sheet (SDS)_EMAL, 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.