

# **Safety Data Sheet** according to Regulation (EC) No. 2015/830

# SECTION 1: Identification of the Substance/Mixture and the Company/Undertaking

**Revision Date:** 15/02/2022 1155-0908 **Product Identifier** 

THERMALINE 440\_400 EU **Product Name:** 

PRIMER / FINISH PART B

**Version Number:** 3

24/09/2021

Supercedes Date:

6V12-V03F-V007-YKUF **UFI Code:** 

Relevant identified uses of the 1.2 substance or mixture and uses

advised against

Hardener for 2 components coatings - Industrial use. Advised against: Please see Technical Data Sheet.

THERMALINE 440\_400 EU PRIMER / FINISH PART A

Product to be mixed with:

Mixing ratio by volume Part A/ Part B:

1.3 Details of the supplier of the safety data sheet

> Importer: None

Carboline Norge AS Manufacturer:

Postboks 593 3412 Lierstranda

Norway

Regulatory / Technical Information:

+47 32 85 73 00 +47 32 85 74 00

Tarka, Malgorzata - hms@carboline.com **Datasheet Produced by:** 

CHEMTREC +1 703 5273887 (Outside US) Emergency telephone number: 1.4

# **SECTION 2: Hazard Identification**

#### 2.1 Classification of the substance or mixture

Classification according to Classification, Labeling & Packaging Regulation (EC) 1272/2008

# **HAZARD STATEMENTS**

Flammable Liquid, category 3	H226
Skin Irritation, category 2	H315
Serious Eye Damage, category 1	H318
Acute Toxicity, Inhalation, category 4	H332
STOT, single exposure, category 3, RTI	H335
STOT, single exposure, category 3, NE	H336

### STOT, repeated exposure, category 2

## 2.2 Label elements

## Symbol(s) of Product



## Signal Word

Danger

### Named Chemicals on Label

Butan-1-ol, ethylbenzene, 1-methoxypropan-2-ol, xylene

## **HAZARD STATEMENTS**

Flammable Liquid, category 3	H226	Flammable liquid and vapour.
Skin Irritation, category 2	H315	Causes skin irritation.
Serious Eye Damage, category 1	H318	Causes serious eye damage.
Acute Toxicity, Inhalation, category 4	H332	Harmful if inhaled.
STOT, single exposure, category 3, RTI	H335	May cause respiratory irritation.
STOT, single exposure, category 3, NE	H336	May cause drowsiness or dizziness.
STOT, repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
PRECAUTION PHRASES		
	P260	Do not breathe dust/fume/gas/mist/vapours/spray.
	P280	Wear protective gloves/protective clothing/eye protection/

P302+352 IF ON SKIN: Wash with plenty of soap and water.
P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes.

H373

Remove contact lenses, if present and easy to do so.

Continue rinsing.

P308+313 IF exposed or concerned: Get medical advice/attention

### 2.3 Other hazards

No Information

# Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT/vPvB in accordance with Annex XIII.

# **SECTION 3: Composition/Information On Ingredients**

## 3.2 Mixtures

## Hazardous ingredients

Name According to EEC 1-methoxypropan-2-ol	EINEC No.	<u>CAS-No.</u>	<u>%</u>	<u>Classifications</u>	Flam. Liq. 3, STOT
	203-539-1	107-98-2	25 - <50	H226-336	SE 3 NE
xylene	215-535-7	1330-20-7	10 - <25	H226-304-312-315 -319-332-335-373	Acute Tox. 4 Dermal, Acute Tox. 4 Inhalation, Asp. Tox. 1, Eye Irrit. 2, Flam. Liq. 3, Skin Irrit. 2, STOT RE 2, STOT SE 3 RTI

Date Printed: 15/02/20	022				Product: 1155-0908
Butan-1-ol	200-751-6	71-36-3	2.5 - <10	H226-302-315-318 -335-336	Acute Tox. 4 Oral, Eye Dam. 1, Flam. Liq. 3, Skin Irrit. 2, STOT SE 3 NE, STOT SE 3 RTI
ethylbenzene	202-849-4	100-41-4	2.5 - <10	H225-304-332-373 -412	Acute Tox. 4 Inhalation, Aquatic Chronic 3, Asp. Tox. 1, Flam. Liq. 2, STOT RE 2
silicon dioxide,	231-545-4	112945-52-5	1.0 - <2.5		

CAS-No.	M-Factors	REACH Reg No.
107-98-2		01-2119457435-35
1330-20-7		01-2119488216-32
71-36-3		01-2119484630-38
100-41-4		01-2119489370-35
112945-52-5		01-2119379499-16

Additional Information: The text for CLP Hazard Statements shown above (if any) is given in Section 16.

# **SECTION 4: First-aid Measures**

### 4.1 Description of First Aid Measures

crystalline-free

**GENERAL NOTES:** Show this safety data sheet to the doctor in attendance.

AFTER INHALATION: Move to fresh air. Give oxygen or artificial respiration if needed. When risk of unconsciousness, place and transport the victim in secured recovery position. Provide fresh air, rest and warmth. Call a physician immediately. AFTER SKIN CONTACT: Use a mild soap if available. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician. Do not use solvent or thinners to clean skin. AFTER EYE CONTACT: Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses.

**AFTER INGESTION:** Do not induce vomiting. Get immediate medical attention. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously: Keep head below hips to prevent aspiration of stomach vomit into lungs. Provide fresh air, rest and warmth.

### Self protection of the first aider:

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

Harmful by inhalation. Danger of serious damage to health by prolonged exposure. Irritating to respiratory system and skin. Vapours may cause drowsiness and dizziness. Causes serious eye damage.

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

Treat symptomatically.

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

When symptoms persist or in all cases of doubt seek medical advice.

# **SECTION 5: Fire-fighting Measures**

## 5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam

**FOR SAFETY REASONS NOT TO BE USED:** Alcohol, Alcohol based solutions, any other media not listed above. Do not use a solid water stream as it may scatter and spread fire.

### 5.2 Special hazards arising from the substance or mixture

Heating or fire conditions liberates toxic gas. Flash back possible over considerable distance. As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10). Vapours may form explosive mixtures with air. Solvent vapours are heavier than air and may spread along floors and ignite.

### 5.3 Advice for firefighters

Fire will produce dense black smoke containing hazardous combustion products (see section 10). In the event of fire, wear self-contained breathing apparatus. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Keep containers and surroundings cool with water spray.

# **SECTION 6: Accidental Release Measures**

## 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Remove all sources of ignition.

## 6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

### 6.3 Methods and material for containment and cleaning up

Do not let product enter drains. Prevent further leakage or spillage if safe to do so. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Clean with detergents. Avoid solvents.

### 6.4 Reference to other sections

Please refer to EU disposal requirements or country specific disposal requirements for this material. See Section 13 for further information.

# SECTION 7: Handling and Storage

### 7.1 Precautions for safe handling

Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Electrical equipment should be protected to the appropriate standard. Preparation may charge electrostatically: always use earthing leads when transferring from one container to another. Use only in area provided with appropriate exhaust ventilation. Provide sufficient air exchange and/or exhaust in work rooms. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Wear personal protective equipment. Open drum carefully as content may be under pressure. Do not breathe vapours or spray mist. Use only explosion-proof equipment.

Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.

### 7.2 Conditions for safe storage, including any incompatibilities

CONDITIONS TO AVOID: Avoid heat, sparks, flames and other ignition sources.

**STORAGE CONDITIONS:** Store in original container. Keep locked up or in an area accessible only to qualified or authorised persons. Keep container closed. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. Store in upright position only. Storage of flammable liquids. Store away from: oxidising materials, acids, and alkalis.

### 7.3 Specific end use(s)

The mixing and application to be in accordance with the technical data sheets.

# **SECTION 8: Exposure Controls/Personal Protection**

### 8.1 Control parameters

# Ingredients with Occupational Exposure Limits (EU)

<u>Name</u>	CAS-No.	LTEL ppm	STEL ppm	STEL mg/m3	LTEL mg/m3
1-methoxypropan-2-ol	107-98-2	100	150	568	375
xylene	1330-20-7	50	100	442	221
Butan-1-ol	71-36-3				
ethylbenzene	100-41-4	100	200	884	442
silicon dioxide, crystalline-free	112945-52-5				

<u>Name</u>	CAS-No.	OEL Note
1-methoxypropan-2-ol	107-98-2	Can be absorbed through the skin.
xylene	1330-20-7	Can be absorbed through the skin.
Butan-1-ol	71-36-3	Can be absorbed through the skin.
ethylbenzene	100-41-4	Can be absorbed through the skin.
silicon dioxide, crystalline-free	112945-52-5	

**FURTHER ADVICE:** Refer to the regulatory exposure limits for the workforce enforced in each country. Some components may not have been classified under the EU CLP Regulation. Annotations: Carc = Capable of causing cancer and/or heritable genetic damage, Sen = Capable of causing occupational asthma, Sk = Can be absorbed through the skin.

# 8.2 Exposure controls

### **Personal Protection**

**RESPIRATORY PROTECTION:** Wear respiratory protection with combination filter (dust and gas filter, EN 14387:2004 +A1:2008) during spraying operations: Gas filter type A2 (organic substances). Dust filter P3 (for fine dust). When working in confined or poorly ventilated spaces, a battery powered assisted air-fed mask must be used.

EYE PROTECTION: Face-shield.

HAND PROTECTION: Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the break through time measured according to EN 374, due to the numerous outside influences (e.g. temperature). Long sleeved clothing. Remove and wash contaminated clothing before re-use. Use chemical resistant gloves and lotions and barrier creams to prevent drying of the skin. Protective gloves complying with EN 374: Nitrile rubber. Butyl rubber. Viton®. Recommended glove material for mixed product: Protective gloves complying with EN 374: Butyl rubber. Nitril rubber.

**OTHER PROTECTIVE EQUIPMENT:** Ensure that eyewash stations and safety showers are close to the workstation location. **ENGINEERING CONTROLS:** Ensure adequate ventilation, especially in confined areas.

### **Chemical Name:**

1-methoxypropan-2-ol

**EC No.: CAS-No.:** 203-539-1 107-98-2

# DNELs - Derived no effect level

		Wo	orkers		Consumers			
Route of	Acute effect	Acute effects	Chronic	Chronic effects	Acute effect	Acute effects	Chronic	Chronic effects
Exposure	local	systemic	effects local	systemic	local	systemic	effects local	systemic
Oral		Not required					3.3 mg/kg	43.9 mg/m3
Inhalation	553.5 mg/m3	553.5 mg/m <sup>3</sup>		369 mg/m3				18.1 mg/kg
Dermal			_	50.6 mg/kg bw/				
				day				

PNEC

## PNEC's - Predicted no effect concentration

Environmental protection target	
Fresh water	10 mg/L
Fresh water sediments	41.6 mg/kg
Marine water	1 mg/L
Marine sediments	4.17 mg/kg
Food chain	
Microorganisms in sewage treatment	100 mg/L
soil (agricultural)	2.47 mg/kg
Air	

# **Chemical Name:**

xylene

**EC No.:** CAS-No.: 215-535-7 1330-20-7

# **DNELs - Derived no effect level**

		Wo			Con	sumers		
Route of	Acute effect	Acute effects	Chronic	Chronic effects	Acute effect	Acute effects	Chronic	Chronic effects
Exposure	local	systemic	effects local	systemic	local	systemic	effects local	systemic
Oral	Not required				174 mg/m <sup>3</sup>	174 mg/m <sup>3</sup>		1.6 mg/kg bw/
Inhalation	289 mg/m <sup>3</sup>	289 mg/m <sup>3</sup>		77 mg/m³		<u> </u>		day
Dermal			_	180 mg/kg bw/				14.8 mg/m <sup>3</sup>
				day				108 mg/kg bw/
								day

PNEC's - Predicted no effect concentration

Environmental protection target	
	PNEC
Fresh water	0.327 mg/L
Fresh water sediments	12.46 mg/kg
Marine water	0.327 mg/L
Marine sediments	12.46 mg/kg
Food chain	
Microorganisms in sewage treatment	6.58 mg/L
soil (agricultural)	2.31 mg/kg
Air	

# **Chemical Name:**

Butan-1-ol

**EC No.:** CAS-No.: 200-751-6 71-36-3

# **DNELs - Derived no effect level**

	Workers				Consumers			
Route of	Acute effect	Acute effects	Chronic	Chronic effects	Acute effect	Acute effects	Chronic	Chronic effects
Exposure	local	systemic	effects local	systemic	local	systemic	effects local	systemic
Oral	Not required						55 mg/m3	3,1 mg/kg bw/
Inhalation			310 mg/m3					day
Dermal								

PNEC's - Predicted no effect concentration

	PNEC
Environmental protection target	
Fresh water	0,082 mg/l
Fresh water sediments	0,178 mg/kg dw
Marine water	0,0082 mg/l
Marine sediments	0,0178 mg/kg dw
Food chain	
Microorganisms in sewage treatment	
soil (agricultural)	0,015 mg/kg dw
Air	

## **Chemical Name:**

silicon dioxide, crystalline-free

EC No.: CAS-No.: 231-545-4 112945-52-5

### **DNELs - Derived no effect level**

	Workers			Consumers				
Route of	Acute effect	Acute effects	Chronic	Chronic effects	Acute effect	Acute effects	Chronic	Chronic effects
Exposure	local	systemic	effects local	systemic	local	systemic	effects local	systemic
Oral		Not	required			· •		
Inhalation				4 mg/m³				
Dermal		-				PNEC		

## PNEC's - Predicted no effect concentration

Environmental protection target	
Fresh water	
Fresh water sediments	
Marine water	
Marine sediments	
Food chain	
Microorganisms in sewage treatment	
soil (agricultural)	
Air	

# **SECTION 9: Physical and Chemical Properties**

9.1 Information on basic physical and chemical properties Appearance:

> **Physical State** LIQUID Odor Solvent

Odor threshold Not determined Ηq Not determined Melting point / freezing point (°C) Not determined Boiling point/range (°C) 114 - 144

Flash Point, (°C) 26

**Evaporation rate** Not determined Flammability (solid, gas) Not determined

Upper/lower flammability or explosive

limits

1.0 - 13.7

Yellowish

Vapour Pressure, mmHg Not determined Vapour density >1 (air = 1) Relative density 0.93 - 1.03 Solubility in / Miscibility with water Negligible

Partition coefficient: n-octanol/water Not determined

Auto-ignition temperature (°C) 287

Decomposition temperature (°C) Not determined Viscosity 75 - 100 KU **Explosive properties** Not determined Oxidising properties Not determined

9.2 Other information

VOC Content g/l:

570

Grams of VOC per liter of coating product as applied per ISO 11890-1 and/or ISO 11890-2.

Specific Gravity (g/cm3) 1.03

# **SECTION 10: Stability and Reactivity**

### 10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

No reactivity hazards known under normal storage and use conditions.

### 10.4 Conditions to avoid

Avoid heat, sparks, flames and other ignition sources.

### 10.5 Incompatible materials

Keep away from strong oxidising agents and strongly acid or alkaline materials.

### 10.6 Hazardous decomposition products

In case of fire or hot work operations, hazardous decomposition products may be formed such as:Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), aliphatic amines, aldehydes.

# **SECTION 11: Toxicological Information**

## 11.1 Information on toxicological effects

**Acute Toxicity:** 

Oral LD50: No information available on the product itself as the product is not tested.

Inhalation LC50: No information available on the product itself as the product is not tested.

Irritation: No information available.

Corrosivity: Causes serious eye damage.

Sensitization: No information available.

Repeated dose toxicity: No information available.

Carcinogenicity: No information available.

Mutagenicity: No information available.

**Toxicity for reproduction:** No information available.

STOT-single exposure: Vapour/spray mist may irritate respiratory system and lungs.

STOT-repeated exposure: Central nervous system depression.

Aspiration hazard: No information available.

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Name According to EEC	Oral LD50	Dermal LD50	Vapor LC50	Gas LC50	Dust/Mist LC50
107-98-2	1-methoxypropan-2-ol	4016 mg/kg (oral-rat)	>13000 mg/kg (dermal-rabbit)	10000 ppm/4hrs rat, inhalation	No information	No information

1330-20-7	xylene	>2000 mg/kg (oral-rat)	1100 mg/kg (ATE dermal- rabbit)	11 mg/L (ATE inh/vapour)	4500 ppmV (ATE inh - Gas)	1.5 mg/L (ATE inh/dust/mist)
71-36-3	Butan-1-ol	790 mg/kg (oral-rat)	3400 mg/kg (dermal-rabbit)	8000 mg/l 4hrs rat, inhalation	No information	No information
100-41-4	ethylbenzene	3500 mg/kg rat, oral	5510 mg/kg, rabbit	4000 ppm, rat, 4h	10000 ppm	1.5 mg/L
112945-52-5	silicon dioxide, crystalline-free	10000 mg/kg (oral-rat)	No information	No information	No information	No information

### **Additional Information:**

This product may contain Ethyl Benzene, which is listed by IARC as possibly carcinogenic to humans (Group 2B). This listing is based on inadequate evidence of carcinogenicity in humans and sufficient evidence in experimental animals. Corrosive - causes irreversible eye damage. Chronic exposure causes drying effect on the skin and eczema. Gas or vapour is harmful on prolonged exposure or in high concentrations. Irritant of eyes and mucous membranes. CNS depressant. Inhalation is the main hazard in industrial use. The solvent vapours can be harmful and cause headaches, nausea, and intoxication. Acts as a defatting agent on skin. Chronic exposure has been associated with various neurotoxic effects including permanent brain damage. Inhalation of vapour or mist can cause headache, nausea, irritation of nose, throat, and lungs.

# **SECTION 12: Ecological Information**

12.1 Toxicity:

EC50 48hr (Daphnia):

IC50 72hr (Algae):

No information

No information

No information

12.2 Persistence and degradability: No information

12.3 Bioaccumulative potential: No information

12.4 Mobility in soil: No information

12.5 Results of PBT and vPvB The product does not meet the criteria for PBT/vPvB in accordance with Annex XIII.

assessment:

**12.6 Other adverse effects:** No information

CAS-No.	Name According to EEC	EC50 48hr	IC50 72hr	LC50 96hr
107-98-2	1-methoxypropan-2-ol	>21000 mg/L (Daphnia magna)	No information	6812 mg/L (Leuciscus idus)
1330-20-7	xylene	165 mg/L (Daphnia magna 24h)	3 - 5 mg/L (Selenastrum sp.)	2 - 11 mg/L (Roccus saxatilis), 8.2 mg/L (Salmo gairdneri), 13.5 mg/L (Lepomis macrichirus), 21.0 mg/L (Pimephales promelas)
71-36-3	Butan-1-ol	No information	No information	1740 mg/l (Pimephales promelas)
100-41-4	ethylbenzene	1.37 mg/L	No information	32 mg/L (Bluegill)
112945-52-5	silicon dioxide, crystalline-free	No information	No information	>10000 mg/L (LC50,96h,Brachydanio rerio)

# **SECTION 13: Disposal Considerations**

WASTE TREATMENT METHODS: Do not burn, or use a cutting torch on, the empty drum. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Empty containers should be taken to an approved waste handling site for recycling or disposal. Rags/wiping cloths and the like, moistened with flammable liquids, must be discarded into designated fireproof buckets. Dispose of waste material at an approved (hazardous) waste treatment/disposal facility in accordance with applicable local state, and federal regulations. Do not dispose of waste with normal garbage, or to sewer systems.

European Waste Code: 08 01 11\*

Packaging Waste Code: 15 01 10\*

# **SECTION 14: Transport Information**

14.1UN numberUN126314.2UN proper shipping namePAINT

Technical name Not applicable

14.3 Transport hazard class(es)

Subsidiary shipping hazard Not applicable

14.4 Packing group

14.5 Environmental hazards Marine pollutant: No
14.6 Special precautions for user EmS-No.: F-E, S-E

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code

Not applicable

# **SECTION 15: Regulatory Information**

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

National Regulations:

Denmark Product Registration Number: Not available

Danish MAL Code: Not available

Danish MAL Code - Mixture: Not available

Sweden Product Registration Number: Not available

Norway Product Registration Number: PR-33171

WGK Class: 3

Covered by Directive 2012/18/EC (Seveso III): P5c

Restrictions to product or to substances according to Annex XVII, Regulation (CE) 1907/2006:

Annex XIV - Authorisation List:

CAS-No. Name According to EEC

Not Applicable

SVHC - Substances of very high concern (Candidate List):

CAS-No. Name According to EEC

Not Applicable

15.2 Chemical Safety Assessment:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

# SECTION 16: Other Information

Text for CLP Hazard Statements shown in Section 3 describing each ingredient:

H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

H373 May cause damage to organs through prolonged or repeated exposure.

H412 Harmful to aquatic life with long lasting effects.

### Reasons for revision

Changes have been made to Section 1 of the Safety Data Sheet (SDS). Please refer to the Identification information in Section 1 of this SDS.  $\cdot$ 

List of References

This Safety Data Sheet was compiled with data and information from the following sources:

The Ariel Regulatory Database provided by the 3E Corporation in Copenhagen, Denmark ESIS (The European Chemical Substances Information System), provided by the European Commission Joint Research Centre in Ispra, Italy Annex VI of the EU Council Directive 67/548/EEC Council Directive 67/548/EEC - Annex I or EU Council Directive 1999/45/EC

Acronym & Abbreviation Key

CLP Classification, Labeling & Packaging Regulation

EC European Commission
EU European Union
US United States

CAS Chemical Abstract Service

EINECS European Inventory of Existing Chemical Substances

EU Council Decision 2000/532/EC and its Annex entitled "List of Wastes"

REACH Registration, Evaluation, Authorization of Chemicals Regulation
GHS Globally Harmonized System of Classification and Labeling of Chemicals

LTEL Long term exposure limit
STEL Short term exposure limit
OEL Occupational exposure limit

ppm Parts per million

mg/m3 Milligrams per cubic meter

TLV Threshold Limit Value

ACGIH American Conference of Governmental Industrial Hygienists

OSHA Occupational Safety & Health Administration

PEL Permissible Exposure Limits
VOC Volatile organic compounds

g/l Grams per liter

mg/kg milligrams per kilogram

N/A Not applicable LD50 Lethal dose at 50%

LC50 Lethal concentration at 50%

EC50 Half maximal effective concentration
IC50 Half maximal inhibitory concentration
PBT Persistent bioaccumulative toxic chemical
vPvB Very persistent and very bioaccumulative

EEC European Economic Community

ADR International Transport of Dangerous Goods by Road RID International Transport of Dangerous Goods by Rail

UN United Nations

IMDG International Maritime Dangerous Goods Code
IATA International Air Transport Association

MARPOL International Convention for the Prevention of Pollution From Ships, 1973 as modified by

IBC International Bulk Container

For further information, please contact: Technical Services Department

The information on this sheet corresponds to our present knowledge. It is not a specification and it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage, and use of the product. It is not applicable to unusual or non-standard uses of the product or where instructions and recommendations are not followed.