



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



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

1.1 Product Identifier	1193PVF1	Revision Date:	17/07/2017
Product Name:	CARBOGUARD 193P VF - A	Supersedes Date:	04/05/2015
		Version Number:	1
1.2 Relevant identified uses of the substance or mixture and uses advised against	Base component of 2 components coating - Industrial use.		
Product to be mixed with:	CARBOGUARD 193P VF - B		
Mixing ratio by volume Part A/ Part B:	3 / 1		
1.3 Details of the supplier of the safety data sheet			
Importer:	StonCor Europe 9, Rue du Travail - 1400 Nivelles, Belgium		
Manufacturer:	Carboline Italia, S.p.a. Via Margherita Vigano' De Vizzi . n 77 20092 Cinisello Balsamo (MI) Italy		
	Regulatory / Technical Information: +32 67493710 Nivelles, Belgium +39 02253751 Cinisello Balsamo, Italy		
Datasheet Produced by:	Solvesi, Anna - ehs@stoncor.com		
1.4 Emergency telephone number:	CHEMTREC +1 703 5273887 (Outside US) PPC +1 412 6816669 (Outside US) Centro Antiveleni di Roma +39 06 49978000 (CAV Policlinico Umberto I - Roma)(24h/24h) Emergenza ambientale +39 335-601 32 88 / +39 347-949 84 88 / +39 348-246 90 99		

SECTION 2: Hazard Identification

2.1 Classification of the substance or mixture

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

HAZARD STATEMENTS

Other EU extensions	EUH205
Flammable Liquid, category 2	H225
Skin Irritation, category 2	H315
Skin Sensitizer, category 1	H317
Hazardous to the aquatic environment, Chronic, category 3	H412

2.2 Label elements

Symbol(s) of Product



Signal Word

Danger

Named Chemicals on Label

Epoxy resin based on bisphenol F

HAZARD STATEMENTS

Other EU extensions	EUH205	Contains epoxy constituents. May produce an allergic reaction.
Flammable Liquid, category 2	H225	Highly flammable liquid and vapour.
Skin Irritation, category 2	H315	Causes skin irritation.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, Chronic, category 3	H412	Harmful to aquatic life with long lasting effects.

PRECAUTION PHRASES

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.

ADDITIONAL INFORMATION

**	Note P : The classification as a carcinogen or mutagen need not apply; the substance contains less than 0,1 % w/w benzene
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2.3 Other hazards

No Information

Results of PBT and vPvB assessment:

no information

SECTION 3: Composition/Information On Ingredients

3.2 Mixtures

Hazardous Ingredients

<u>CAS-No.</u>	<u>EINEC No.</u>	<u>Name According to EEC</u>	<u>%</u>
9003-36-5	500-006-8	Epoxy resin based on bisphenol F	10-25
107-98-2	203-539-1	1-methoxypropan-2-ol	2.5-10
110-43-0	203-767-1	Heptan-2-one	2.5-10
13463-67-7	236-675-5	titanium dioxide	2.5-10
1330-20-7	215-535-7	xylene	1.0-2.5
	918-668-5	hydrocarbons, c9, aromatics**	1.0-2.5
100-41-4	202-849-4	Ethylbenzene	0.1-1.0

<u>CAS-No.</u>	<u>REACH Reg No.</u>	<u>CLP Symbols</u>	<u>CLP Hazard Statements</u>	<u>M-Factors</u>
9003-36-5	01-2119454392-40	GHS07-GHS09	H315-317-411	
107-98-2	01-2119457435-35	GHS02-GHS07	H226-336	

110-43-0	01-2119902391-49	GHS02-GHS07	H226-302-332-336
13463-67-7	01-2119489379-17		
1330-20-7	01-2119488216-32	GHS02-GHS07-GHS08	H226-304-312-315-319-332-335-373
	01-2119455851-35	GHS02-GHS07-GHS08-GHS09	H226-304-335-336-411
100-41-4	01-2119489370-35	GHS02-GHS07-GHS08	H225-304-332-373-412

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

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

AFTER INHALATION: Move to fresh air.

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.

AFTER EYE CONTACT: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. If eye irritation persists, consult a specialist.

AFTER INGESTION: Gently wipe or rinse the inside of the mouth with water. Give small amounts of water to drink. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

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

Irritating to eyes. Irritating to skin.

4.3 Indication of any immediate medical attention and special treatment needed

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

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

No Information

5.3 Advice for firefighters

Flash back possible over considerable distance. In the event of fire, wear self-contained breathing apparatus. Do not use a solid water stream as it may scatter and spread fire. Hazardous decomposition products formed under fire conditions. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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.

6.3 Methods and material for containment and cleaning up

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).

6.4 Reference to other sections

FURTHER INSTRUCTIONS: 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). Vapours may form explosive mixtures with air. 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. Do not breathe vapours or spray mist. Use only explosion-proof equipment. Keep away from sources of ignition - No smoking. 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: Direct sources of heat.

STORAGE CONDITIONS: Store in original container. Keep locked up or in an area accessible only to qualified or authorised persons. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

7.3 Specific end use(s)

No specific advice for end use available.

SECTION 8: Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with Occupational Exposure Limits (UK WELS)

<u>Name</u>	<u>CAS-No.</u>	<u>LTEL ppm</u>	<u>STEL ppm</u>	<u>STEL mg/m3</u>	<u>LTEL mg/m3</u>
Epoxy resin based on bisphenol F	9003-36-5				
1-methoxypropan-2-ol	107-98-2	100	150	560	375
Heptan-2-one	110-43-0	50	100	475	237
titanium dioxide	13463-67-7			10 (total dust)	4 (resp. dust)
xylene	1330-20-7	50	100	441	220
hydrocarbons, c9, aromatics**					100
Ethylbenzene	100-41-4	100	125	552	441

<u>Name</u>	<u>CAS-No.</u>	<u>OEL Note</u>
Epoxy resin based on bisphenol F	9003-36-5	
1-methoxypropan-2-ol	107-98-2	Can be absorbed through the skin.
Heptan-2-one	110-43-0	Can be absorbed through the skin.
titanium dioxide	13463-67-7	
xylene	1330-20-7	Sk
hydrocarbons, c9, aromatics**		
Ethylbenzene	100-41-4	Can be absorbed through the skin.

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.

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: Respirator with combination filter for vapour/particulate (EN 141). Respirator with a vapor filter. Wear a self-contained breathing apparatus or full-face airline respirator during spraying operations and long-term exposure. When working in confined or poorly ventilated spaces, a self-contained breathing apparatus or full-face airline respirator must be used.

EYE PROTECTION: Tightly fitting safety goggles. Safety glasses with side-shields conforming to EN166.

HAND PROTECTION: Rubber or plastic gloves. 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). Protective gloves complying with EN 374. Long sleeved clothing. Remove and wash contaminated clothing before re-use.

OTHER PROTECTIVE EQUIPMENT: No Information

ENGINEERING CONTROLS: Avoid contact with skin, eyes and clothing. Ensure adequate ventilation, especially in confined areas.

Chemical Name:

1-methoxypropan-2-ol

EC No.:

203-539-1

CAS-No.:

107-98-2

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required						3.3 mg/kg	
Inhalation	553.5 mg/m ³	553.5 mg/m ³		369 mg/m ³				43.9 mg/m ³
Dermal				183 mg/kg bw/day				18.1 mg/kg

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	10 mg/l
Fresh water sediments	100 mg/l
Marine water	1 mg/l
Marine sediments	5.2 mg/kg
Food chain	
Microorganisms in sewage treatment	
soil (agricultural)	5.49 mg/kg
Air	

Chemical Name:

titanium dioxide

EC No.:

236-675-5

CAS-No.:

13463-67-7

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							700 mg/kg/ bw/day
Inhalation			10 mg/m ³				10 mg/m ³	
Dermal								

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.127 mg/L
Fresh water sediments	1000 mg/kg dw
Marine water	1 mg/L
Marine sediments	100 mg/kg dw
Food chain	1667 mg/kg (oral)
Microorganisms in sewage treatment	100 mg/kg
soil (agricultural)	100 mg/kg dw
Air	

Chemical Name:

xylene

EC No.:

215-535-7

CAS-No.:

1330-20-7

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							1.6 mg/kg bw/day
Inhalation	289 mg/m ³	289 mg/m ³		77 mg/m ³	174 mg/m ³	174 mg/m ³		14.8 mg/m ³
Dermal				180 mg/kg bw/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 soil (agricultural)	6.58 mg/L
Air	2.31 mg/kg

Chemical Name:

hydrocarbons, c9, aromatics**

EC No.:

918-668-5

CAS-No.:**DNELs - Derived no effect level**

Route of Exposure	Workers				Consumers			
	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							11 mg/kg bw/day
Inhalation				150 mg/m ³				32 mg/m ³
Dermal				25 mg/kg bw/day				11 mg/kg bw/day

PNEC's - Predicted no effect concentration

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

Chemical Name:

Ethylbenzene

EC No.:

202-849-4

CAS-No.:

100-41-4

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							1.6 mg/kg bw/day
Inhalation	293 mg/m ³ irritation (respiratory tract)	Low hazard (no threshold derived)		77 mg/m ³		Low hazard (no threshold derived)		15 mg/m ³
Dermal				180 mg/kg bw/day				

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	100 µg/L
Fresh water sediments	13.7 mg/kg sediment dw
Marine water	10 - 100 µg/L
Marine sediments	1.37 mg/kg sediment dw
Food chain	
Microorganisms in sewage treatment	
soil (agricultural)	2.68 mg/kg soil dw
Air	

SECTION 9: Physical and Chemical Properties**9.1 Information on basic physical and chemical properties**

Appearance:	liquid
Physical State	LIQUID
Odor	epoxy
Odor threshold	Not determined
pH	Not determined
Melting point / freezing point (°C)	Not determined
Boiling point/range (°C)	80 - 200
Flash Point, (°C)	21
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	Not determined
Vapour Pressure	Not determined
Vapour density	Not determined
Relative density	Not determined
Solubility in / Miscibility with water	Not determined
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	Not determined
Decomposition temperature (°C)	Not determined
Viscosity	Not determined
Explosive properties	Not determined

Oxidising properties Not determined

9.2 Other information

VOC Content g/l: 231

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

Specific Gravity (g/cm³) 2.15

SECTION 10: Stability and Reactivity

10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

Stable under recommended storage conditions. Risk of ignition.

10.3 Possibility of hazardous reactions

No Information

10.4 Conditions to avoid

Direct sources of heat.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke.

SECTION 11: Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity:

Oral LD50: No Information

Inhalation LC50: No Information

Irritation: No information available.

Corrosivity: No information available.

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: No information available.

STOT-repeated exposure: No information available.

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:

<u>CAS-No.</u>	<u>Name According to EEC</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>
9003-36-5	Epoxy resin based on bisphenol F	>5000 mg/Kg (rat, oral)	>2000 mg/Kg (rat, dermal)	

107-98-2	1-methoxypropan-2-ol	4016 mg/kg (oral-rat)	>2000 mg/kg (dermal-rat)	10000 ppm/4hrs rat, inhalation
110-43-0	Heptan-2-one	1670 mg/kg rat oral	10206 mg/kg (dermal-rabbit)	2000 ppm / 4 hours
13463-67-7	titanium dioxide	>5000 mg/kg (oral-rat)	10000	
1330-20-7	xylene	>2000 mg/kg, rat, oral	3200 mg/kg, rabbit, dermal	20 mg/L (inh/vapour/rat)
	hydrocarbons, c9, aromatics**	3592 mg/kg	> 3160 mg/kg	> 6193 mg/m3
100-41-4	Ethylbenzene	3500 mg/kg rat, oral	>20000 mg/kg bw (rabbit)	

Additional Information:

This product may contain Titanium Dioxide, 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. This classification is relevant when exposed to titanium dioxide in dust or powder form only, including cured product that is subject to sanding, grinding, cutting, or other surface preparation activities.

SECTION 12: Ecological Information

12.1 Toxicity:

EC50 48hr (Daphnia):	No information
IC50 72hr (Algae):	No information
LC50 96hr (fish):	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 assessment:

no information

12.6 Other adverse effects:

No information

<u>CAS-No.</u>	<u>Name According to EEC</u>	<u>EC50 48hr</u>	<u>IC50 72hr</u>	<u>LC50 96hr</u>
9003-36-5	Epoxy resin based on bisphenol F	No information	1.8 mg/l (algae, EC50 static)	0.55 mg/l (fish)
107-98-2	1-methoxypropan-2-ol	>21000 mg/L (Daphnia)	No information	6812 mg/L (Leuciscus idus)
110-43-0	Heptan-2-one	No information	No information	131 mg/L (Pimephales promelas)
13463-67-7	titanium dioxide	>100 mg/l (EC50, 48h, Daphnia magna OECD202)	16 mg/l (EC50, 72h, Pseudokirchnerella subcapitata)	>100 mg/l (EC50, 96h, Oncorhynchus Mykiss OECD203)
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 macrochirus), 21.0 mg/L (Pimephales promelas)
	hydrocarbons, c9, aromatics**	3,2 mg/l (Daphnia Magna)	No information	No information
100-41-4	Ethylbenzene	No information	No information	5.1 mg/L (Atlantic silverfish)

Further Ecological Information

Contains the following ingredients which are classified as water dangerous according to EEC directive No. 76/464/EEC in percentages > 1%.

<u>CAS-No.</u>	<u>Name According to EEC</u>
9003-36-5	Epoxy resin based on bisphenol F hydrocarbons, c9, aromatics**

SECTION 13: Disposal Considerations

13.1 WASTE TREATMENT METHODS: Do not burn, or use a cutting torch on, the empty drum. If recycling is not practicable, dispose of in compliance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

European Waste Code: 080111*
Packaging Waste Code: 150110

SECTION 14: Transport Information

14.1 UN number	UN 1263
14.2 UN proper shipping name	.PAINT
Technical name	Not applicable
14.3 Transport hazard class(es)	3
Subsidiary shipping hazard	Not applicable
14.4 Packing group	II
14.5 Environmental hazards	MARINE POLLUTANT: NO
14.6 Special precautions for user	Not applicable
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:	Not available
WGK Class:	2
Directive 2004/42/CE :	ND
Covered by Directive 2012/18/EC (Seveso III):	P5c
Restrictions to product or to substances according to Annex XVII, Regulation (CE) 1907/2006:	Mix: Points 3; 40

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.

H317	May cause an allergic skin reaction.
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.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Reasons for revision

Composition Information Changed
 Substance Hazard Threshold % Changed
 Substance and/or Product Properties Changed in Section(s):
 01 - Identification
 02 - Hazard Identification
 03 - Composition/Information On Ingredients
 08 - Exposure Controls/Personal Protection
 09 - Physical and Chemical Properties
 11 - Toxicological Information
 13 - Disposal Information
 14 - Transportation Information
 15 - Regulatory Information
 Substance Regulatory CAS Number Changed
 Substance Chemical Name Changed
 Statement(s) Changed

This Safety Data Sheet (SDS) has been revised to meet the new EU CLP requirements. There have been both formatting and content changes based on the CLP classification (if applicable), please review each section of the SDS for specific changes.

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;
 European Union Commission Regulation No. 1907/2006 on REACH as amended within Commission Regulation (EU) 2015/830;
 European Union (EC) Regulation No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) and subsequent technical progress adaptations (ATP);
 EU Council Decision 2000/532/EC and its Annex entitled "List of Wastes".

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
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/m ³	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 the Protocol of 1978
IBC	International Bulk Container
RTI	Respiratory Tract Irritation
NE	Narcotic Effects

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.