

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 8663B Revision Date: 16/02/2022

Product Name: CARBOTHANE 134 HP - B Supersedes Date: New SDS

Version Number: 1

UFI Code: No Information

1.2 Relevant identified uses of the substance or mixture and uses

advised against

Hardener for 2 components coatings - Industrial use. Please see Technical Data

Sheet.

Product to be mixed with:

Mixing ratio by volume Part A/

Part B:

CARBOTHANE 134 HP - A

1 / 1

1.3 Details of the supplier of the safety data sheet

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 0294759236 Cinisello Balsamo, Italy

Datasheet Produced by: Paiotta, Alice - hms@carboline.com

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

PPC +1 412 6816669 (Outside US)

Centro Antiveleni di Milano Tel+39 02 66101029 (CAV - Grande Ospedale

Metropolitano Niguarda - Milano)(24h/24h)

Emergenza ambientale +39 335-601 32 88 / +39 347-949 84 88 / +39 348-246 90

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Giftinformasjonen: +47 22 59 13 00

SECTION 2: Hazard Identification

2.1 Classification of the substance or mixture

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

HAZARD STATEMENTS

Skin drying or cracking EUH066
Other EU extensions EUH204
Other EU extensions EUH211
Flammable Liquid, category 3 H226
Skin Sensitizer, category 1 H317

Acute Toxicity, Inhalation, category 4	H332
STOT, single exposure, category 3, RTI	H335
Hazardous to the aquatic environment, Chronic, category 3	H412

2.2 Label elements

Symbol(s) of Product





Signal Word

Warning

Named Chemicals on Label

Hexamethylene diisocyanate, hexamethylene diisocyanate, oligomers, Solvent naphtha (petroleum), light arom.**

HAZARD STATEMENTS

Skin drying or cracking	EUH066	Repeated exposure may cause skin dryness or cracking.
Other EU extensions	EUH204	Contains isocyanates. May produce an allergic reaction.
Other EU extensions	EUH211	Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
Flammable Liquid, category 3	H226	Flammable liquid and vapour.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.
Acute Toxicity, Inhalation, category 4	H332	Harmful if inhaled.
STOT, single exposure, category 3, RTI	H335	May cause respiratory irritation.
Hazardous to the aquatic environment, Chronic, category 3	H412	Harmful to aquatic life with long lasting effects.
PRECAUTION PHRASES		
	P260	Do not breathe dust/fume/gas/mist/vapours/spray.
	P280	Wear protective gloves/protective clothing/eye protection/ face 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.
	P333+313	If skin irritation or rash occurs: Get medical advice/attention.
GHS ADDITIONAL INFORMATION		
	**	Note P : The classification as a carcinogen or mutagen need not apply; the substance contains less than 0,1 % w/w

benzene

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	EINEC No.	CAS-No.	<u>%</u>	Classifications	
hexamethylene diisocyanate, oligomers	500-060-2	28182-81-2	75-100	H317-332-335	Acute Tox. 4 Inhalation, Skin Sens. 1, STOT SE 3 RTI

n-butyl acetate	204-658-1	123-86-4	2.5 - <10	H226-336	Flam. Liq. 3, Skin Cracking, STOT SE 3 NE
Solvent naphtha (petroleum), light arom.**	265-199-0	64742-95-6	2.5 - <10	H226-304-335-336-411	
Hexamethylene diisocyanate	212-485-8	822-06-0	<0.1	H302-315-317-319-330- 334-335	Acute Tox. 1 Inhalation, Acute Tox. 4 Oral, Eye Irrit. 2, Resp. Sens. 1, Skin Irrit. 2, Skin Sens. 1, STOT SE 3 RTI

CAS-No.	M-Factors	REACH Reg No.
28182-81-2		01-2119485796-17
123-86-4		01-2119485493-29
64742-95-6		01-2119455851-35
822-06-0		01-2119457571-37

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

AFTER INHALATION: Provide fresh air, rest and warmth. Call a physician immediately. Give oxygen or artificial respiration if needed. When risk of unconsciousness, place and transport the victim in secured recovery position.

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:** 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: If vomiting occurs spontaneously: Keep head below hips to prevent aspiration of stomach vomit into lungs. Provide fresh air, rest and warmth. Do not induce vomiting. Get immediate medical attention. 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

Harmful by inhalation. May cause sensitization by skin contact. Danger of serious damage to health by prolonged exposure. Vapours may cause drowsiness and dizziness.

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

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

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). 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.

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 away from: oxidising materials, acids, and alkalis. Store in upright position only. Storage of flammable liquids.

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 (EU)

<u>Name</u>	CAS-No.	LTEL ppm	STEL ppm	STEL mg/m3	LTEL mg/m3
hexamethylene diisocyanate, oligomers	28182-81-2				
n-butyl acetate	123-86-4	50	150	723	241
Solvent naphtha (petroleum), light arom.**	64742-95-6				
Hexamethylene diisocyanate	822-06-0				

Name CAS-No. OEL Note

hexamethylene diisocyanate, oligomers 28182-81-2

n-butyl acetate 123-86-4

Solvent naphtha (petroleum), light 64742-95-6

arom.**

Hexamethylene diisocyanate 822-06-0

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: If splashes are likely to occur, wear: Face-shield, tightly fitting safety goggles (EN 166).

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: Butyl rubber. Nitril rubber. 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:

hexamethylene diisocyanate, oligomers

EC No.: CAS-No.: 500-060-2 28182-81-2

DNELs - Derived no effect level

		Wo	rkers		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	<u> </u>				
Inhalation								
Dermal								

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.127 mg/l
Fresh water sediments	266700 mg/kg (dry)
Marine water	0.0127 mg/l
Marine sediments	26670 mg/kg (dry)
Food chain	
Microorganisms in sewage treatment	
soil (agricultural)	53182 mg/kg (dry)
Air	

Chemical Name:

n-butyl acetate

EC No.: CAS-No.: 204-658-1 123-86-4

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			2 mg/kg bw/		2 mg/kg bw/day
						day -		-neurotoxicity-
						neurotoxicity-		
Inhalation	300 mg/m ³	600 mg/m ³	300 mg/m ³	48 mg/m ³	300 mg/m ³	300 mg/m ³	35.7 mg/m ³	12 mg/m ³
	(irritation				(irritation	(irritation	(irritation	
	(respiratory				(respiratory	(respiratory	(respiratory	
	tract))				tract))	tract))	tract))	
Dermal		11 mg/kg bw/		7 mg/kg bw/day	No hazard	6 mg/kg bw/		3.4 mg/kg bw/
		day -			identified	day -		day
		neurotoxicity-				neurotoxicity		

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.18 mg/l
Fresh water sediments	0.981 mg/kg
Marine water	0.018 mg/l
Marine sediments	0.0981 mg/kg
Food chain	
Microorganisms in sewage treatment	35.6 mg/L
soil (agricultural)	0.0903 mg/kg
Air	

Chemical Name:

Solvent naphtha (petroleum), light arom.**

EC No.: CAS-No.: 265-199-0 64742-95-6

DNELs - Derived no effect level

	Workers					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					11 mg/kg bw/	
	-				,		day	
Inhalation				150 mg/m ³			-	32 mg/m³
Dermal				25 mg/kg bw/day				11 mg/kg bw/day

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.635 mg/l
Fresh water sediments	3.29 mg/kg
Marine water	0.0635 mg/l
Marine sediments	0.329 mg/kg
Food chain	
Microorganisms in sewage treatment	100 mg/l
soil (agricultural)	0.29 mg/kg
Air	

Chemical Name:

Hexamethylene diisocyanate

EC No.: CAS-No.: 212-485-8 822-06-0

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	70 μg/m³	70 μg/m³	35 μg/m³	35 μg/m³				
	irritation	irritation	irritation	irritation				
	(respiratory	(respiratory	(respiratory	(respiratory tract)				
	tract)	tract)	tract)					
Dermal		· · · · · · · · · · · · · · · · · · ·	<u> </u>	·				

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC		
Fresh water	77.4 μg/L		
Fresh water sediments	13.34 μg/kg sediment dw		
Marine water	7.74 μg/L		
Marine sediments	1.344 μg/kg sediment dw		
Food chain			
Microorganisms in sewage treatment			
soil (agricultural)	2.6 μg/kg soil dw		
Air			

SECTION 9: Physical and Chemical Properties

Appearance: Clear

Physical State Liquid

Odor Solvent

Odor threshold Not determined
pH Not determined
Melting point / freezing point (°C) Not determined

Boiling point/range (°C) 126 - 200

Flash Point, (°C) 53

Evaporation rate > 1 (air=1)

Flammability (solid, gas) Not determined

Upper/lower flammability or explosive

limits

Not determined

Vapour PressureNot determinedVapour densityNot determined

Relative density 1.13 g/cm3 DIN EN ISO2811

Solubility in / Miscibility with water

Partition coefficient: n-octanol/water

Auto-ignition temperature (°C)

Not determined

Not determined

Not determined

Viscosity

Not determined

9.2 Other information

VOC Content g/l: 350.00

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

Specific Gravity (g/cm3) 1.13

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 hazardous decomposition products may be produced such as: Carbon monoxide (CO), carbon dioxide (CO2), oxides of nitrogen (NOx).

SECTION 11: Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity:

Oral LD50: No information available.

Inhalation LC50: No information available.

Irritation: No Information

Corrosivity: No information available.

Sensitization: May cause a skin allergic reaction

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 lungs

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:

CAS-No.	Name According to EEC	Oral LD50	Dermal LD50	Vapor LC50	Gas LC50	Dust/Mist LC50
28182-81-2	hexamethylene diisocyanate, oligomers	>5000 mg/kg (oral, rat)	>2000 mg/kg (dermal, rat, M-F)	18500 mg/m3/1H inhalation, rat	No information	No information

123-86-4	n-butyl acetate	10760 mg/kg (rat- oral)	14112 mg/Kg (rabbit-dermal)	23.4 mg/l/4/h (rat)	No information	No information
64742-95-6	Solvent naphtha (petroleum), light arom.**	8400 mg/kg, oral, rat	No information	3670 ppm/8 hours, rat, inhalation	No information	No information
822-06-0	Hexamethylene diisocyanate	710 mg/kg (oral- rat)	No information	0.124 mg/L (inhalation, 4h, rat)	23 ppm / 4h	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. Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effect, such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system. Respiration of solvent vapour may cause dizziness. Repeated and prolonged exposure to solvents may cause brain and nervous system damage. This product may contain Quartz (silicon dioxide), which is listed by IARC as a known carcinogenic to humans (Group 1). This classification is relevant when exposed to Quartz (silicon dioxide) in dust or powder form only, including cured product that is subject to sanding, grinding, cutting, or other surface preparation activities. Chronic exposure causes drying effect on the skin and eczema. Inhalation of vapour or mist can cause headache, nausea, irritation of nose, throat, and lungs. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. 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.

SECTION 12: Ecological Information

12.1 Toxicity:

EC50 48hr (Daphnia):

IC50 72hr (Algae):

No information

No information

No information

No information

No information

No information

To mornidae

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
28182-81-2	hexamethylene diisocyanate, oligomers	>100 mg/L (Daphnia magna)	>100 mg/L (ErC50, 72h Scenedesmus subspicatus)	' >100 mg/L (Brachydanio rerio)
123-86-4	n-butyl acetate	44 mg/L (Daphnia)	648 mg/L (Desmodesmus subspicatus)	18 mg/L (Pimephales promelas)
64742-95-6	Solvent naphtha (petroleum), light arom.**	3.2 mg/l (EC50, 48h, Daphnia magna)	2.6 mg/l (IC50, 72h Pseudokirchneriella subcapitata)	No information
822-06-0	Hexamethylene diisocyanate	No information	77.4 mg/L (ErC50, static, desmodesmus subspicatus)	8.8 mg/L (Brachydanio rerio)

SECTION 13: Disposal Considerations

13.1 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. 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: 080111* Packaging Waste Code: 150110*

SECTION 14: Transport Information

14.1 UN number UN126314.2 UN proper shipping name Paint

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 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

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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

Germany WGK Class: Not available

Directive 2004/42/CE: 500 g/l (subcat j)

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

Restrictions to product or to substances according to

Annex XVII, Regulation (CE) 1907/2006: Entry 3, 40

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:

Flammable liquid and vapour. H226 H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H317 May cause an allergic skin reaction. Causes serious eye irritation. H319 H330 Fatal if inhaled. H332 Harmful if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H411 Toxic to aquatic life with long lasting effects.

Reasons for revision

This is a new Safety Data Sheet (SDS).

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/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

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.