



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 | 1M134... | Revision Date: | 22/11/2016 |
| Product Name: | CARBOTHANE PU 134 - A | Supersedes Date: | 21/09/2015 |
| | | 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: | CARBOTHANE PU 134 - B | | |
| Mixing ratio by volume Part A/ Part B: | 7 / 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

| | |
|-------------------------------------|------|
| Flammable Liquid, category 3 | H226 |
| Skin Irritation, category 2 | H315 |
| Eye Irritation, category 2 | H319 |
| STOT, repeated exposure, category 2 | H373 |

2.2 Label elements

Symbol(s) of Product



Signal Word

Warning

Named Chemicals on Label

Ethylbenzene, Toluene, xylene

HAZARD STATEMENTS

| | | |
|-------------------------------------|------|--|
| Flammable Liquid, category 3 | H226 | Flammable liquid and vapour. |
| Skin Irritation, category 2 | H315 | Causes skin irritation. |
| Eye Irritation, category 2 | H319 | Causes serious eye irritation. |
| STOT, repeated exposure, category 2 | H373 | May cause damage to organs through prolonged or repeated exposure. |

PRECAUTION PHRASES

| | |
|-----------|--|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P314 | Get medical advice/attention if you feel unwell. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |

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

| <u>CAS-No.</u> | <u>EINEC No.</u> | <u>Name According to EEC</u> | <u>%</u> |
|----------------|------------------|---------------------------------|----------|
| 13463-67-7 | 236-675-5 | titanium dioxide | 10-25 |
| 108-65-6 | 203-603-9 | 2-methoxy-1-methylethyl-acetate | 10-25 |
| 1330-20-7 | 215-535-7 | xylene | 10-25 |
| 100-41-4 | 202-849-4 | Ethylbenzene | 2.5-10 |
| 108-88-3 | 203-625-9 | Toluene | 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> |
|----------------|----------------------|--------------------|----------------------------------|------------------|
| 13463-67-7 | 01-2119489379-17 | | | |
| 108-65-6 | 01-2119475791-29 | GHS02 | H226 | |
| 1330-20-7 | 01-2119488216-32 | GHS02-GHS07-GHS08 | H226-304-312-315-319-332-335-373 | |
| 100-41-4 | | GHS02-GHS07-GHS08 | H225-304-315-319-332-373-412 | |
| 108-88-3 | 01-2119471310-51 | GHS02-GHS07-GHS08 | H225-304-315-336-361d-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. Consult a physician after significant exposure.

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.

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. Danger of serious damage to health by prolonged exposure.

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.

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. 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> |
|---------------------------------|----------------|-----------------|-----------------|-------------------|-------------------|
| titanium dioxide | 13463-67-7 | | | 10 (total dust) | 4 (resp. dust) |
| 2-methoxy-1-methylethyl-acetate | 108-65-6 | 50 | 100 | 548 | 274 |
| xylene | 1330-20-7 | 50 | 100 | 441 | 220 |
| Ethylbenzene | 100-41-4 | 100 | 125 | 552 | 441 |
| Toluene | 108-88-3 | 50 | 100 | 384 | 191 |

| <u>Name</u> | <u>CAS-No.</u> | <u>OEL Note</u> |
|---------------------------------|----------------|-----------------|
| titanium dioxide | 13463-67-7 | |
| 2-methoxy-1-methylethyl-acetate | 108-65-6 | Sk |
| xylene | 1330-20-7 | Sk |
| Ethylbenzene | 100-41-4 | Sk |
| Toluene | 108-88-3 | Sk |

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: Use only with ventilation to keep levels below exposure guidelines reported in this document. User should test and monitor exposure levels to ensure all personnel are below guidelines. If not sure, or not able to monitor, use State or federally approved supplied air respirator. For silica containing coatings in a liquid state, and/or if no exposure limits are established above, air-supplied respirators are generally not required. Wear respiratory protection with combination filter (dust and gas filter, EN 141) during spraying operations: Gas filter type A1 (organic substances). Dust filter P3 (for fine dust).

EYE PROTECTION: Tightly fitting safety goggles.

HAND PROTECTION: Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. 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). Long sleeved clothing. Remove and wash contaminated clothing before re-use. Protective gloves complying with EN 374: Butyl rubber. Nitril rubber.

OTHER PROTECTIVE EQUIPMENT: No Information

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

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 | >1 mg/L |
| Fresh water sediments | 1000 mg/kg |
| Marine water | 0.127 mg/L |
| Marine sediments | 100 mg/kg |
| Food chain | 1667 mg/kg |
| Microorganisms in sewage treatment | 100 mg/kg |
| soil (agricultural) | 100 mg/kg d w |
| Air | |

Chemical Name:

2-methoxy-1-methylethyl-acetate

EC No.:

203-603-9

CAS-No.:

108-65-6

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 | | | | | | | 1.67 mg/kg |
| Inhalation | | | | 275 mg/m ³ | | | | 33 mg/m ³ |
| Dermal | | | | 153.5 mg/kg | | | | 54.8 mg/kg |

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:

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:

Toluene

EC No.:

203-625-9

CAS-No.:

108-88-3

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 | | | | | | | 8.13 mg/kg bw/day |
| Inhalation | 384 mg/m ³ | 384 mg/m ³ | 192 mg/m ³ | 192 mg/m ³ | 226 mg/m ³ | 226 mg/m ³ | 56.5 mg/m ³ | 56.5 mg/m ³ |
| Dermal | | | | 384 mg/Kg bw/day | | | | 226 mg/Kg bw/day |

PNEC's - Predicted no effect concentration

| Environmental protection target | PNEC |
|--|-------------|
| Fresh water | 0.68 mg/l |
| Fresh water sediments | 16.39 mg/kg |
| Marine water | 0.68 mg/l |
| Marine sediments | 16.39 mg/kg |
| Food chain | |
| Microorganisms in sewage treatment soil (agricultural) | 2.89 mg/kg |
| Air | |

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

| | |
|--|----------------|
| Appearance: | various colors |
| Physical State | LIQUID |
| Odor | SOLVENT |
| Odor threshold | Not determined |
| pH | N/A |
| Melting point / freezing point (°C) | |

| | |
|---|----------------|
| | Not determined |
| Boiling point/range (°C) | 138 - N.D. |
| Flash Point, (°C) | 25 |
| Evaporation rate | Not determined |
| Flammability (solid, gas) | Not determined |
| Upper/lower flammability or explosive limits | N/A - N/A |
| 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 | 90 - 110 KU |
| Explosive properties | Not determined |
| Oxidising properties | Not determined |

9.2 Other information

| | |
|---|------|
| VOC Content g/l: | 480 |
| Grams of VOC per liter of coating product as applied per ISO 11890-1 and/or ISO 11890-2. | |
| Specific Gravity (g/cm³) | 1.30 |

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

Hazardous polymerisation does not occur.

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 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: Irritant

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: | STOT SE 3 |
| 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> |
|----------------|---------------------------------|-------------------------|----------------------------|--------------------------------|
| 13463-67-7 | titanium dioxide | >5000 mg/kg (oral-rat) | 10000 | |
| 108-65-6 | 2-methoxy-1-methylethyl-acetate | 8532 mg/kg, (oral, rat) | >5000 mg/kg (dermal, rat) | 1105 mg/m ³ /4H |
| 1330-20-7 | xylene | >2000 mg/kg, rat, oral | 3200 mg/kg, rabbit, dermal | 20 mg/L (inh/vapour/rat) |
| 100-41-4 | Ethylbenzene | 3500 mg/kg rat, oral | | |
| 108-88-3 | Toluene | 5000 mg/kg rat oral | 14000 mg/kg rabbit | 8000 ppm/4hrs, rat, inhalation |

Additional Information:

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

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> |
|----------------|---------------------------------|--|---|--|
| 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) |
| 108-65-6 | 2-methoxy-1-methylethyl-acetate | 408 mg/L | No information | 161 mg/L |

| | | | | |
|-----------|--------------|------------------------------|------------------------------|--|
| 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) |
| 100-41-4 | Ethylbenzene | No information | No information | No information |
| 108-88-3 | Toluene | No information | No information | |

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: 08 01 11*
Packaging Waste Code: 15 01 10

SECTION 14: Transport Information

| | | |
|------|--|----------------------|
| 14.1 | UN number | UN1263 |
| 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 | III |
| 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: | 3 - 3 |
| 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 : | 500 g/l (subcat j) |

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. |
| H304 | May be fatal if swallowed and enters airways. |
| H312 | Harmful in contact with skin. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H361d | Suspected of damaging the unborn child. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H412 | Harmful to aquatic life with long lasting effects. |

Reasons for revision

Regulatory Formula Source Changed

Composition Information Changed

Substance and/or Product Properties Changed in Section(s):

09 - Physical & Chemical Information

11 - Toxicological Information

12 - Ecological Information

13 - Disposal Information

14 - Transportation Information

15 - Regulatory Information

Statement(s) Changed

Changes have been made to Section 3 of the Safety Data Sheet (SDS). Please refer to the Composition / Information on Ingredients in Section 3 of this SDS. Changes have been made to Section 8 of the Safety Data Sheet (SDS). Please refer to the Exposure Controls / Personal Protection information in Section 8 of the SDS. Changes have been made to Section 9 of the Safety Data Sheet (SDS). Please refer to the Physical and Chemical Properties information in Section 9 of this SDS. Changes have been made to Section 11 of the Safety Data Sheet (SDS). Please refer to the Toxicological Information in Section 11 of this SDS. Changes have been made to Section 12 of the Safety Data Sheet (SDS). Please refer to the Ecological Information in Section 12 of this SDS. Changes have been made to Section 13 of the Safety Data Sheet (SDS). Please refer to the Disposal Information in Section 13 of this SDS. Changes have been made to Section 15 of the Safety Data Sheet (SDS). Please refer to the Regulatory Information in Section 15 of this 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 |
| 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.