



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



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

<b>1.1 Product Identifier</b>	1E19M000	<b>Revision Date:</b>	10/04/2017
<b>Product Name:</b>	CARBOGUARD E-19 - B	<b>Supersedes Date:</b>	11/05/2015
		<b>Version Number:</b>	1
<b>1.2 Relevant identified uses of the substance or mixture and uses advised against</b>	Hardener for 2 components coatings - Industrial use.		
<b>Product to be mixed with:</b>	CARBOGUARD E-19 - A		
<b>Mixing ratio by volume Part A/ Part B:</b>	2 / 1		
<b>1.3 Details of the supplier of the safety data sheet</b>			
<b>Importer:</b>	StonCor Europe 9, Rue du Travail - 1400 Nivelles, Belgium		
<b>Manufacturer:</b>	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		
<b>Datasheet Produced by:</b>	Solvesi, Anna - ehs@stoncor.com		
<b>1.4 Emergency telephone number:</b>	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
Acute Toxicity, Oral, category 4	H302
Aspiration Hazard, category 1	H304
Skin Irritation, category 2	H315
Skin Sensitizer, category 1	H317

Serious Eye Damage, category 1	H318
Acute Toxicity, Inhalation, category 4	H332
STOT, single exposure, category 3, RTI	H335
STOT, repeated exposure, category 2	H373
Hazardous to the aquatic environment, Chronic, category 2	H411

## 2.2 Label elements

### Symbol(s) of Product



### Signal Word

Danger

### Named Chemicals on Label

Toluene, Triethylenetetramine, xylene, Fatty acids, C18-unsatd., dimers, oligomeric reaction products with triethylenetetramine

#### HAZARD STATEMENTS

Flammable Liquid, category 3	H226	Flammable liquid and vapour.
Acute Toxicity, Oral, category 4	H302	Harmful if swallowed.
Aspiration Hazard, category 1	H304	May be fatal if swallowed and enters airways.
Skin Irritation, category 2	H315	Causes skin irritation.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.
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, repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment, Chronic, category 2	H411	Toxic 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.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
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.
P310	Immediately call a POISON CENTER or doctor/physician.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+364	Take off contaminated clothing and wash it before reuse.

## 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>
103758-99-2	500-290-3	Fatty acids, C18-unsatd., dimers, oligomeric reaction products with triethylenetetramine	25-50

1330-20-7	215-535-7	xylene	25-50
100-41-4	202-849-4	Ethylbenzene	2.5-10
78-83-1	201-148-0	2-methylpropan-1-ol	2.5-10
112945-52-5	231-545-4	silicon dioxide, crystalline-free	2.5-10
112-24-3	203-950-6	Triethylenetetramine	1.0-2.5
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>
103758-99-2		GHS05-GHS07-GHS09	H315-317-318-411	
1330-20-7	01-2119488216-32	GHS02-GHS07-GHS08	H226-304-312-315-319-332-335-373	
100-41-4	01-2119489370-35	GHS02-GHS07-GHS08	H225-304-332-373-412	
78-83-1	01-2119484609-23	GHS02-GHS05-GHS07	H226-315-318-335-336	
112945-52-5	01-2119379499-16			
112-24-3		GHS05-GHS07	H302-312-314-317-412	
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.

**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. 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 in contact with skin. Harmful if swallowed. Irritating to eyes. Irritating to skin. May cause sensitization by skin contact. 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. Water spray/Dry powder/Alcohol-resistant foam/Carbon dioxide (CO<sub>2</sub>) 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.

## 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>
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with triethylenetetramine	103758-99-2				
xylene	1330-20-7	50	100	441	220
Ethylbenzene	100-41-4	100	125	552	441
2-methylpropan-1-ol	78-83-1	50	75	231	154
silicon dioxide, crystalline-free	112945-52-5			6 (Inh. dust)	2.4 (Resp. dust)
Triethylenetetramine	112-24-3				
Toluene	108-88-3	50	100	384	191

<u>Name</u>	<u>CAS-No.</u>	<u>OEL Note</u>
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with triethylenetetramine	103758-99-2	
xylene	1330-20-7	Sk
Ethylbenzene	100-41-4	Sk
2-methylpropan-1-ol	78-83-1	
silicon dioxide, crystalline-free	112945-52-5	
Triethylenetetramine	112-24-3	
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:** Respirator with a vapor filter. 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. 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). Long sleeved clothing. Remove and wash contaminated clothing before re-use. Rubber or plastic apron. 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:

Fatty acids, C18-unsatd., dimers, oligomeric reaction products with triethylenetetramine

**EC No.:**  
500-290-3

**CAS-No.:**  
103758-99-2

### 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							560 µg/kg bw/day
Inhalation				3.9 mg/m <sup>3</sup>				970 µg/m <sup>3</sup>
Dermal				1.1 mg/kg bw/day				560 µg/kg bw/day

### PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	4.34 µg/L
Fresh water sediments	434.02 mg/kg sediment dw
Marine water	434 ng/L
Marine sediments	43.4 mg/kg sediment dw
Food chain	
Microorganisms in sewage treatment	
soil (agricultural)	86.78 mg/kg soil 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 <sup>3</sup>	289 mg/m <sup>3</sup>		77 mg/m <sup>3</sup>	174 mg/m <sup>3</sup>	174 mg/m <sup>3</sup>		14.8 mg/m <sup>3</sup>
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:**

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 <sup>3</sup> irritation (respiratory tract)	Low hazard (no threshold derived)		77 mg/m <sup>3</sup>		Low hazard (no threshold derived)		15 mg/m <sup>3</sup>
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	

**Chemical Name:**

2-methylpropan-1-ol

**EC No.:**

201-148-0

**CAS-No.:**

78-83-1

**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							25 mg/kg
Inhalation			310 mg/m3				55 mg/m3	
Dermal								

**PNEC's - Predicted no effect concentration**

Environmental protection target	PNEC
Fresh water	0,4 mg/l
Fresh water sediments	1,52 mg/kg
Marine water	0,04 mg/l
Marine sediments	0,152 mg/kg
Food chain	
Microorganisms in sewage treatment soil (agricultural)	10 mg/l
Air	0,0699 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/m3	384 mg/m3	192 mg/m3	192 mg/m3	226 mg/m3	226 mg/m3	56.5 mg/m3	56.5 mg/m3
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)	13.61 mg/l
Air	2.89 mg/kg

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

<b>Appearance:</b>	Liquid
<b>Physical State</b>	LIQUID
<b>Odor</b>	SOLVENT
<b>Odor threshold</b>	Not determined
<b>pH</b>	N/D
<b>Melting point / freezing point (°C)</b>	Not determined
<b>Boiling point/range (°C)</b>	>35 - N.D.

<b>Flash Point, (°C)</b>	25
<b>Evaporation rate</b>	Not determined
<b>Flammability (solid, gas)</b>	Not determined
<b>Upper/lower flammability or explosive limits</b>	Not determined
<b>Vapour Pressure</b>	N/D
<b>Vapour density</b>	N/D
<b>Relative density</b>	Not determined
<b>Solubility in / Miscibility with water</b>	Not determined
<b>Partition coefficient: n-octanol/water</b>	Not determined
<b>Auto-ignition temperature (°C)</b>	Not determined
<b>Decomposition temperature (°C)</b>	Not determined
<b>Viscosity</b>	85 KU
<b>Explosive properties</b>	Not determined
<b>Oxidising properties</b>	Not determined

**9.2 Other information**

<b>VOC Content g/l:</b>	440
<b>Grams of VOC per liter of coating product as applied per ISO 11890-1 and/or ISO 11890-2.</b>	
<b>Specific Gravity (g/cm<sup>3</sup>)</b>	0.92

## 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 (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), 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.



<b>Repeated dose toxicity:</b>	No information available.
<b>Carcinogenicity:</b>	No information available.
<b>Mutagenicity:</b>	No information available.
<b>Toxicity for reproduction:</b>	No information available.
<b>STOT-single exposure:</b>	No information available.
<b>STOT-repeated exposure:</b>	No information available.
<b>Aspiration hazard:</b>	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>
103758-99-2	Fatty acids, C18-unsatd., dimers, oligomeric reaction products with triethylenetetramine	>2000 mg/kg bw (rat)	>2000 mg/kg bw (rat)	
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	>20000 mg/kg bw (rabbit)	
78-83-1	2-methylpropan-1-ol	2830 - 3350 mg/kg (oral-rat)	> 2000 mg/kg (dermal - rabbit)	> 20 mg/L (Inhalation, rat, 6h)
112945-52-5	silicon dioxide, crystalline-free	10000 mg/kg, oral, rat		
112-24-3	Triethylenetetramine	1716 mg/kg (oral, rat M-F)	1465 mg/kg, (dermal, rabbit, M-F)	
108-88-3	Toluene	5000 mg/kg rat oral	14000 mg/kg rabbit	8000 ppm/4hrs, rat, inhalation

**Additional Information:**

No Information

## SECTION 12: Ecological Information

### 12.1 Toxicity:

<b>EC50 48hr (Daphnia):</b>	No information
<b>IC50 72hr (Algae):</b>	No information
<b>LC50 96hr (fish):</b>	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>
103758-99-2	Fatty acids, C18-unsatd., dimers, oligomeric reaction products with triethylenetetramine	No information	No information	7.07 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	5.1 mg/L (Atlantic silverfish)

78-83-1	2-methylpropan-1-ol	1100 mg/L (Daphnia magna)	1799 mg/L (Scenedesmus subspicatus)	1430 mg/L (Pimephales promelas)
112945-52-5	silicon dioxide, crystalline-free	No information	No information	> 10.000 mg/l (LC50,96h,Brachydanio rerio)
112-24-3	Triethylenetetramine	31.1 mg/l (daphnia, EC50, static)	No information	330 mg/l (fish, LC50, static)
108-88-3	Toluene	No information	No information	5.5 mg/l (Oncorhynchus kisutch)

### 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>
112-24-3	Triethylenetetramine

### 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	III
14.5	Environmental hazards	Marine Pollutant: YES (Fatty acids, C18-unsatd., dimers, oligomeric reaction products with TETA)
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 :	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.

<b>SECTION 16: Other Information</b>
--------------------------------------

**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.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
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.
H361d	Suspected of damaging the unborn child.
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**

Regulatory Formula Source Changed

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

1. Identification
  - 11 - Toxicological Information
  - 13 - Disposal Information
  - 14 - Transportation Information
  - 15 - Regulatory Information
2. Hazard Identification
8. Exposure Controls/Personal Protection
9. Physical and Chemical Properties

Composition Information Changed

Substance Chemical Name Changed

Substance Hazard Threshold % 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/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.

