

		Page: 1
<b>SAFETY DATA SHEET</b>		Revision Date: 02/17/2020
		Print Date: 02/19/2020
		SDS Number: 000000266527
Biosperse™ CX3195 CHLORINE STABILIZER ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 853757		Version: 1.1

## SECTION 1. IDENTIFICATION

### Product identifier

Trade name : Biosperse™ CX3195  
CHLORINE STABILIZER  
™ Trademark, Solenis or its subsidiaries or affiliates,  
registered in various countries

### Recommended use of the chemical and restrictions on use

<b>Details of the supplier of the safety data sheet</b> Solenis LLC 500 Hercules Road Wilmington, Delaware 19808 United States of America (USA)  RegulatoryRequestsNA@solenis.com Solenis LLC	<b>Emergency telephone number</b> 1-844-SOLENIS (844-765-3647)  <b>Product Information</b> Contact your local Solenis representative
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## SECTION 2. HAZARDS IDENTIFICATION

### GHS classification in accordance with 29 CFR 1910.1200

Serious eye damage : Category 1

### GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H318 Causes serious eye damage.

Precautionary statements : **Prevention:**  
P280 Wear eye protection/ face protection.

**Response:**  
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

		Page: 2
<b>SAFETY DATA SHEET</b>		Revision Date: 02/17/2020
		Print Date: 02/19/2020
		SDS Number: 000000266527
Biosperse™ CX3195 CHLORINE STABILIZER ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 853757		Version: 1.1

**Other hazards**

None known.

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Components**

Chemical name	CAS-No.	Classification	Concentration (%)
Ammonium carbamate	1111-78-0	Acute Tox. 4; H302 Eye Dam. 1; H318	>= 15 - < 20

Actual concentration is withheld as a trade secret

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**SECTION 4. FIRST AID MEASURES**

- General advice : Move out of dangerous area.  
Consult a physician.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : If breathed in, move person into fresh air.  
If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Continue rinsing eyes during transport to hospital.  
Remove contact lenses.  
Protect unharmed eye.
- If swallowed : Obtain medical attention.  
Do NOT induce vomiting.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : No symptoms known or expected.  
Causes serious eye damage.
- Notes to physician : No hazards which require special first aid measures.

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**SECTION 5. FIREFIGHTING MEASURES**

<b>SAFETY DATA SHEET</b>	Revision Date: 02/17/2020
	Print Date: 02/19/2020
	SDS Number: 000000266527
Biosperse™ CX3195 CHLORINE STABILIZER ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 853757	Version: 1.1

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Water spray  
Foam  
Carbon dioxide (CO2)  
Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Ammonia  
Carbon monoxide  
Carbon dioxide (CO2)
- Specific extinguishing methods : Product is compatible with standard fire-fighting agents.
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.  
Comply with all applicable federal, state, and local regulations.
- Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Keep in suitable, closed containers for disposal.

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**SECTION 7. HANDLING AND STORAGE**

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Do not breathe vapours/dust.  
Container hazardous when empty.  
Avoid contact with skin and eyes.  
Smoking, eating and drinking should be prohibited in the application area.

	Page: 4
<b>SAFETY DATA SHEET</b>	Revision Date: 02/17/2020
	Print Date: 02/19/2020
	SDS Number: 000000266527
Biosperse™ CX3195 CHLORINE STABILIZER ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 853757	Version: 1.1

For personal protection see section 8.  
 Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Store between 5 and 25 °C in a dry, well ventilated place away from sources of heat, ignition and direct sunlight.

Keep container tightly closed in a dry and well-ventilated place.  
 Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability : No decomposition if stored and applied as directed.

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

**Engineering measures** : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

### Personal protective equipment

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Wear chemical splash goggles and face shield when there is potential for exposure of the eyes or face to liquid, vapor or mist.  
 Maintain eye wash station in immediate work area.

Skin and body protection : Wear resistant gloves (consult your safety equipment supplier).  
 Wear as appropriate:  
 Impervious clothing  
 Safety shoes  
 Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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

	Page: 5
<b>SAFETY DATA SHEET</b>	Revision Date: 02/17/2020
	Print Date: 02/19/2020
	SDS Number: 000000266527
Biosperse™ CX3195 CHLORINE STABILIZER ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 853757	Version: 1.1

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: clear
Odour	: ammoniacal, strong
Odour Threshold	: Not applicable
pH	: ca. 10.6
Melting point/freezing point	: 9 °F / -13 °C
Boiling point/boiling range	: 180 °F / 82 °C
Flash point	: does not flash
Evaporation rate	: 0.160
Flammability (solid, gas)	: No data available
Burning rate	: Not applicable
Self-ignition	: not auto-flammable
Upper explosion limit / Upper flammability limit	: Not applicable
Lower explosion limit / Lower flammability limit	: Not applicable
Vapour pressure	: 127 hPa (75.4 °F / 24.1 °C) Method: ASTM D 2879-86
Relative vapour density	: 0.6 (77 °F / 25 °C)
Relative density	: 1 (77 °F / 25 °C)
Density	: 1.156 g/cm <sup>3</sup> (77 °F / 25 °C)
Bulk density	: 1.156 g/cm <sup>3</sup>
Solubility(ies)	
Water solubility	: completely soluble
Solubility in other solvents	: soluble Solvent: Alcohol
Partition coefficient: n-octanol/water	: No data available

		Page: 6
<b>SAFETY DATA SHEET</b>		Revision Date: 02/17/2020
		Print Date: 02/19/2020
		SDS Number: 000000266527
Biosperse™ CX3195 CHLORINE STABILIZER ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 853757		Version: 1.1

Decomposition temperature : Not applicable

Viscosity  
 Viscosity, dynamic : 5.13 cps (77 °F / 25 °C)  
 Method: Brookfield

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : Not applicable

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#### SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : Heat

Incompatible materials : Acids  
 Bases  
 nitrites  
 sodium nitrate

Hazardous decomposition products : Ammonia  
 Carbon monoxide  
 Carbon dioxide (CO2)

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#### SECTION 11. TOXICOLOGICAL INFORMATION

##### Acute toxicity

Not classified based on available information.

##### Product:

Acute oral toxicity : LD 50 (Rat): 3,400 mg/kg  
 Method: OECD Test Guideline 425

Acute inhalation toxicity : LC 50 (Rat): > 1.9 mg/l  
 Exposure time: 4 h  
 Test atmosphere: dust/mist  
 Method: OECD Test Guideline 403  
 Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

Acute dermal toxicity : LD 50 (Rat): > 5,000 mg/kg

	Page: 7
<b>SAFETY DATA SHEET</b>	Revision Date: 02/17/2020
	Print Date: 02/19/2020
	SDS Number: 000000266527
Biosperse™ CX3195 CHLORINE STABILIZER ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 853757	Version: 1.1

Method: OECD Test Guideline 402

**Components:**

**Ammonium carbamate:**

Acute oral toxicity : LD 50 (Rat): 1,080 mg/kg  
 Method: OECD Test Guideline 425

Acute dermal toxicity : LD 50 (Rat): > 5,000 mg/kg  
 Method: OECD Test Guideline 402

**Skin corrosion/irritation**

Not classified based on available information.

**Product:**

Species : Rabbit  
 Method : OECD Test Guideline 404  
 Result : Not irritating to skin

**Components:**

**Ammonium carbamate:**

Species : Rabbit  
 Result : Not irritating to skin

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Product:**

Species : Rabbit  
 Result : Corrosive to eyes  
 Method : OECD Test Guideline 405

Remarks : May cause irreversible eye damage.

**Components:**

**Ammonium carbamate:**

Species : Rabbit  
 Result : Corrosive to eyes

**Respiratory or skin sensitisation**

**Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.

		Page: 8
<b>SAFETY DATA SHEET</b>		Revision Date: 02/17/2020
		Print Date: 02/19/2020
		SDS Number: 000000266527
Biosperse™ CX3195 CHLORINE STABILIZER ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 853757		Version: 1.1

**Components:**

**Ammonium carbamate:**

Species : Mouse  
Method : Local lymph node assay

**Germ cell mutagenicity**

Not classified based on available information.

**Carcinogenicity**

Not classified based on available information.

**IARC** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity**

Not classified based on available information.

**STOT - single exposure**

Not classified based on available information.

**STOT - repeated exposure**

Not classified based on available information.

**Aspiration toxicity**

Not classified based on available information.

**Product:**

No aspiration toxicity classification

**Further information**

**Product:**

Remarks : No data available

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Product:**

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 296 mg/l  
Exposure time: 24 h  
Test Type: static test  
Test substance: An aqueous solution was tested.  
Method: OECD Test Guideline 202

	Page: 9
<b>SAFETY DATA SHEET</b>	Revision Date: 02/17/2020
	Print Date: 02/19/2020
	SDS Number: 000000266527
Biosperse™ CX3195 CHLORINE STABILIZER ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 853757	Version: 1.1

GLP: no

EC50 (Daphnia magna (Water flea)): 280 mg/l  
 Exposure time: 48 h  
 Test Type: static test  
 Test substance: An aqueous solution was tested.  
 Method: OECD Test Guideline 202  
 GLP: no

NOEC (Daphnia magna (Water flea)): 109 mg/l  
 Exposure time: 48 h  
 Test Type: static test  
 Test substance: An aqueous solution was tested.  
 Method: OECD Test Guideline 202  
 GLP: no

**Ecotoxicology Assessment**

- Acute aquatic toxicity : Not classified based on available information.
- Chronic aquatic toxicity : Not classified based on available information.

**Components:**

**Ammonium carbamate:**

- Toxicity to fish : LC 50 (Oncorhynchus mykiss (rainbow trout)): 21 mg/l  
 Exposure time: 96 h  
 Test Type: static test  
 Method: OECD Test Guideline 203
- LC 50 (Lepomis macrochirus (Bluegill sunfish)): 35 mg/l  
 Exposure time: 96 h  
 Test Type: static test  
 Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC 50 (Water flea (Daphnia magna)): 42 mg/l  
 Exposure time: 48 h  
 Test Type: static test  
 Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : EC 50 (Green algae): 129.13 mg/l  
 Exposure time: 72 h
- Toxicity to microorganisms : EC20 (activated sludge): 1,000 mg/l  
 Exposure time: 0.5 h  
 Method: OECD Test Guideline 209
- EC 50 (Bacteria): 1,180 mg/l  
 Exposure time: 17 h  
 Method: DIN 38412

		Page: 10
<b>SAFETY DATA SHEET</b>		Revision Date: 02/17/2020
		Print Date: 02/19/2020
		SDS Number: 000000266527
Biosperse™ CX3195 CHLORINE STABILIZER ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 853757		Version: 1.1

### Persistence and degradability

#### Product:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

### Bioaccumulative potential

#### Components:

#### **Ammonium carbamate:**

Partition coefficient: n-octanol/water : log Pow: -0.47 (77 °F / 25 °C)

### Mobility in soil

No data available

### Other adverse effects

#### Product:

Results of PBT and vPvB assessment : This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT). This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

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## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Dispose of in accordance with all applicable local, state and federal regulations.

Do not dispose of waste into sewer.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Do not re-use empty containers.

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## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### **IATA-DGR**

Not regulated as a dangerous good

		Page: 11
<b>SAFETY DATA SHEET</b>		Revision Date: 02/17/2020
		Print Date: 02/19/2020
		SDS Number: 000000266527
Biosperse™ CX3195 CHLORINE STABILIZER ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 853757		Version: 1.1

**IMDG-Code**

Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**National Regulations**

**49 CFR**

Not regulated as a dangerous good

**Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

**SECTION 15. REGULATORY INFORMATION**

**EPCRA - Emergency Planning and Community Right-to-Know Act**

**CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Ammonium carbamate	1111-78-0	5000	25641

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Serious eye damage or eye irritation

**SARA 313** : 2.18% of ammonium carbamate (CASRN 1111-78-0) is calculated as ammonia for reporting purposes; see EPA SARA 313 guidance on reporting "dissociable ammonium salt".

Ammonium carbamate	1111-78-0	19.5 %
Ammonium hydroxide	1336-21-6	0.1275 %

The following components are subject to reporting levels established by SARA Title III, Section 313:

Ammonium carbamate	1111-78-0	>= 10 - < 20 %
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**California Prop. 65**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

		Page: 12
<b>SAFETY DATA SHEET</b>		Revision Date: 02/17/2020
		Print Date: 02/19/2020
		SDS Number: 000000266527
Biosperse™ CX3195 CHLORINE STABILIZER ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 853757		Version: 1.1

**The components of this product are reported in the following inventories:**

- DSL : All components of this product are on the Canadian DSL
- AICS : On the inventory, or in compliance with the inventory
- ENCS : On the inventory, or in compliance with the inventory
- KECI : On the inventory, or in compliance with the inventory
- PICCS : On the inventory, or in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory
- TCSI : On the inventory, or in compliance with the inventory
- TSCA : All substances listed as active on the TSCA inventory

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

**Biocides**

EPA Reg. # 74655-34

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Danger, Corrosive., Causes irreversible eye damage., Harmful if swallowed., Do not get in eyes, on skin or on clothing.

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**SECTION 16. OTHER INFORMATION**

**Further information**

Revision Date : 02/17/2020

**Full text of H-Statements**

- H302 : Harmful if swallowed.
- H318 : Causes serious eye damage.

**Full text of other abbreviations**

- Acute Tox. : Acute toxicity
- Eye Dam. : Serious eye damage

	Page: 13
<b>SAFETY DATA SHEET</b>	Revision Date: 02/17/2020
	Print Date: 02/19/2020
	SDS Number: 000000266527
Biosperse™ CX3195 CHLORINE STABILIZER ™ Trademark, Solenis or its subsidiaries or affiliates, registered in various countries 853757	Version: 1.1

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

#### Sources of key data used to compile the Safety Data Sheet

Key literature references and sources of data

SOLENIS Internal data

SOLENIS internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This SDS has been prepared by the Solenis Environmental Health and Safety Department.

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