

## SAFETY DATA SHEET

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

## 1.1 Product identifier

- Product Name: 20g / 200g Chlorine Tablets
- Datasheet Number: SDS 005
- Chemical Name: Symclosene
- Synonyms: 1,3,5-trichloro-1,3,5-triazinane-2,4,6-trione; trichloroisocyanuric acid
- CAS No.: 87-90-1
- EC No.: 201-782-8
- Index No.: 613-031-00-5
- UFI: CE00-E03H-H00W-Q1N4

## 1.2 Relevant identified uses of the substance or mixture and uses advised against

- Use of the substance/mixture: Pool / spa treatment; Biocide
- Use advised against: No information available

## 1.3 Details of the supplier of the safety data sheet

- Name of Supplier: Plastica Ltd
- Address of Supplier: Perimeter House  
Napier Road  
St Leonards-on-Sea  
East Sussex  
United Kingdom  
TN38 9NY
- Telephone: +44 (0) 1424 857857
- Email: info@plasticapools.net

## 1.4 Emergency telephone number

- Emergency Telephone: 0800 043 0891 (technical)  
0800 043 0892 (emergency)

**SECTION 2: Hazards identification**

## 2.1 Classification of the substance or mixture

- Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]: Ox. Sol. 2, H272; Acute Tox. 4, H302; Eye Irrit. 2, H319; STOT SE 3, H335; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; EUH031
- Additional information: For full text of Hazard and EU Hazard statements: see section 16

## 2.2 Label elements



Signal Word: Danger

## Hazard statements

- H272 - May intensify fire; oxidiser.
- H302 - Harmful if swallowed.
- H319 - Causes serious eye irritation.
- H335 - May cause respiratory irritation.
- H410 - Very toxic to aquatic life with long lasting effects.

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**SECTION 2: Hazards identification (....)**

## Precautionary statements

- P102 - Keep out of reach of children.  
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P271 - Use only outdoors or in a well-ventilated area.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313 - If eye irritation persists: Get medical advice/attention.  
P501 - Dispose of contents/container to an authorised waste collection point

## Supplemental Hazard information (EU)

- EUH031 - Contact with acids liberates toxic gas.

## 2.3 Other hazards

- Not a PBT according to REACH Annex XIII
- Not a vPvB according to REACH Annex XIII
- Has not been identified as having endocrine disrupting properties

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**SECTION 3: Composition/information on ingredients**

## 3.1 Substances

Chemical Name	Conc.	CAS No.	EC No.	Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]	SCL/ M-Factor/ ATE	REACH Registration Number	WEL/ OEL
Symclosene	100%	87-90-1	201-782-8	Ox. Sol. 2, H272 Acute Tox. 4, H302 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 EUH031	-	-	No

## 3.2 Mixtures

- Not applicable

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**SECTION 4: First aid measures**

## 4.1 Description of first aid measures

- Rescuers should put on approved personal protective equipment (PPE) before administering first aid
- Rescuers should take suitable precautions to avoid becoming casualties themselves

## Contact with skin

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water  
Contaminated clothing should be laundered before reuse  
Get immediate medical advice/attention.

## Contact with eyes

If substance has got into eyes, immediately wash out with plenty of water for at least 15 minutes  
Irrigate eyes thoroughly whilst lifting eyelids  
Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.

## Ingestion

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**SECTION 4: First aid measures (....)**

Rinse mouth with water (do not swallow)  
Give plenty of water to drink  
Do NOT induce vomiting.  
Get immediate medical advice/attention.

**Inhalation**

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
If exposed or concerned: Get medical advice/attention.

**4.2 Most important symptoms and effects, both acute and delayed****Contact with eyes**

Causes severe irritation  
Causes redness and swelling

**Contact with skin**

May cause redness and irritation

**Ingestion**

May cause nausea/vomiting  
May cause diarrhoea  
The ingestion of significant quantities may cause damage to digestive system

**Inhalation**

May cause delayed pulmonary oedema  
May cause respiratory tract irritation.  
May cause shortness of breath  
May cause coughing

**4.3 Indication of any immediate medical attention and special treatment needed**

- Treat symptomatically
- Use of a glucocorticoid inhalation spray may be needed

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**SECTION 5: Firefighting measures****5.1 Extinguishing media**

- Suitable extinguishing media: water spray; water fog
- Unsuitable extinguishing media: carbon dioxide; alcohol resistant foam; DO NOT USE dry extinguishers containing ammonium compounds such as dry powder.

**5.2 Special hazards arising from the substance or mixture**

- May intensify fire; oxidiser.
- Not combustible, but will contribute to the combustion of other materials. May cause violent, sometimes explosive reactions.
- In a fire or if heated, a pressure increase will occur and the container may burst
- Gives off irritating or toxic fumes (or gases) in a fire.
- Decomposition products may include oxygen, chlorine, nitrogen, nitrogen trichloride, cyanogen chloride, oxides of chlorine, phosgene

**5.3 Advice for firefighters**

- Evacuate the area and keep personnel upwind
- Keep container(s) exposed to fire cool, by spraying with water
- Collect contaminated fire extinguishing water separately. This MUST not be discharged into drains. Prevent fire extinguishing water from contaminating surface or ground water.

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**SECTION 5: Firefighting measures (....)**

- Special protective equipment: Wear self-contained breathing apparatus (SCBA). Wear full protective clothing including chemical protection suit.
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**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

- Rescuers should take suitable precautions to avoid becoming casualties themselves
- Only trained and authorised personnel should carry out emergency response
- Personal precautions for non-emergency personnel: Ensure adequate ventilation; Do not breathe dust; Wear protective clothing as per section 8; Wash thoroughly after handling.
- Personal precautions for emergency responders: Evacuate the area and keep personnel upwind; Wear self-contained breathing apparatus (SCBA); Wear suitable protective clothing, including eye/face protection and gloves (nitrile rubber are recommended)

**6.2 Environmental precautions**

- Avoid release to the environment.
- Do not allow to enter public sewers and watercourses
- If contamination of drainage systems or water courses is unavoidable, immediately inform appropriate authorities

**6.3 Methods and material for containment and cleaning up**

- Stop leak if safe to do so.
- Avoid formation of dust
- Do not mix with water
- If tablets are dry and uncontaminated: collect up into heavy duty plastic bag: where possible and suitable, use material as originally intended. Wash away any residues with plenty of water. If tablets are contaminated: they should be transferred to waste ground, spread thinly and covered with a thin layer of earth: a smell of chlorine will be noted until the material has degraded. Keep people, vehicles and animals away from the disposal area. If tablets become damp: they may decompose to give off chlorine fumes: transfer spillage to unsealed plastic bags avoiding any large masses of material within the bags and remove to waste ground for immediate treatment/disposal as above: avoid breathing fumes. Wash away residues with copious amounts of water. If the spillage of tablets is large: (more than 100kg) place into bins lined with polythene bags and eliminate in accordance with locally valid disposal regulations
- Seek expert advice for removal and disposal of all contaminated materials and wastes

**6.4 Reference to other sections**

- See section(s): 7, 8 & 13
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**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

- Use only in well ventilated areas
- Do not breathe dust
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Substance is hygroscopic
- Protect from moisture.
- Do not add water to the product, always add the product to large quantities of water.
- Do not mix with other chemicals
- Avoid contact with skin and eyes
- Wear protective clothing as per section 8
- Contaminated clothing should be laundered before reuse
- Use good personal hygiene practices
- Do not eat, drink or smoke when using this product.
- Wash thoroughly after handling.
- Ensure eyewash stations and safety showers are nearby

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**SECTION 7: Handling and storage (....)****7.2 Conditions for safe storage, including any incompatibilities**

- Store in a cool, dry well-ventilated place. Keep container tightly closed.
- Do not store above 25 °C
- Protect from moisture
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Keep away from food, drink and animal feedingstuffs
- Incompatible with acids, ammonia, bases, floor sweeping compounds, calcium hypochlorite, reducing agents, organic solvents and compounds

**7.3 Specific end use(s)**

- Pool / spa treatment
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**SECTION 8: Exposure controls/personal protection****8.1 Control parameters**

- If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.  
Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace exposure - Measurement of exposure by inhalation to chemical agents - Strategy for testing compliance with occupational exposure limit values). European Standard EN 14042 (Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents). European Standard EN 482 (Workplace exposure. General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- The UK HSE (EH40) recommends the following limits for dusts: 10 mg/m<sup>3</sup> (8hr TWA) total inhalable dust; 4 mg/m<sup>3</sup> (8hr TWA) total respirable dust

**Trichloroisocyanuric acid**

(EU) OELV (short term limit value) (as chlorine) 0.5 ppm 1.5 mg/m<sup>3</sup>  
WEL (short term limit value) (as chlorine) 0.5 ppm 1.5 mg/m<sup>3</sup> (UK)  
DNEL (inhalational) 8.04 mg/m<sup>3</sup> Industry, Long Term, Systemic Effects  
DNEL (dermal) 2.28 mg/kg bw/day Industry, Long Term, Systemic Effects  
DNEL (inhalational) 1.98 mg/m<sup>3</sup> Consumer, Long Term, Systemic Effects  
DNEL (dermal) 1.14 mg/kg bw/day Consumer, Long Term, Systemic Effects  
DNEL (oral) 1.14 mg/kg bw/day Consumer, Long Term, Systemic Effects  
PNEC aqua (freshwater) 170 - 12 100 000 ng/L  
PNEC aqua (intermittent releases, freshwater) 1.7 - 6 550 µg/L  
PNEC aqua (marine water) 1.52 mg/L  
PNEC (STP) 590 - 204 100 µg/L  
PNEC sediment (freshwater) 7.56 mg/kg  
PNEC sediment (marine water) 756 µg/kg  
PNEC terrestrial (soil) 756 µg/kg

**8.2 Exposure controls**

- Selection and use of personal protective equipment should be based on a risk assessment of exposure potential
- Engineering controls  
Engineering controls should be provided to prevent the need for ventilation  
Use local exhaust ventilation and/or enclosures.
- Respiratory protection  
In case of insufficient ventilation, wear suitable respiratory equipment  
Where a reusable half mask respirator is required, use EN 140 mask and EN 143 particle filter, or EN 1827  
Where a full face mask respirator is required, use EN 136, with particle filter EN 143

**SECTION 8: Exposure controls/personal protection (....)**

- Eye/face protection  
Wear goggles giving complete eye protection approved to standard EN 166.
- Skin protection  
Wear protective gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and standard EN 374.  
The selection of a suitable glove depends on work conditions and whether the product is present on its own or in combination with other substances. Breakthrough time is dependent on the characteristics of the brand of glove used and the supplier should be consulted.  
Glove material: Nitrile rubber  
Thickness: 0.11 mm  
Breakthrough time: 480 minutes  
Reference: Manufacturer  
Wear suitable protective clothing  
Contaminated work clothing should not be allowed out of the workplace.  
Contaminated clothing should be laundered before reuse
- Hygiene measures  
Do not eat, drink or smoke when using this product.  
Use good personal hygiene practices  
Wash thoroughly after handling.  
Ensure eyewash stations and safety showers are nearby
- Thermal hazards  
Not applicable
- Environmental exposure controls  
Do not empty into drains  
Do not allow to penetrate the ground/soil.

**SECTION 9: Physical and chemical properties**

## 9.1 Information on basic physical and chemical properties

- Physical state: Solid, tablets
- Colour: White
- Odour: Like chlorine, pungent.  
Odour threshold 1 - 3 ppm (value for chlorine)
- Melting point/freezing point: 246.8 - 440 °C
- Boiling point or initial boiling point and boiling range: Not applicable
- Flammability: Not combustible, but will contribute to the combustion of other materials. May cause violent, sometimes explosive reactions.
- Lower and upper explosion limit: Not applicable
- Flash point: Not applicable
- Auto-ignition temperature: Not applicable
- Decomposition temperature: 225 - 230 °C
- pH: 2.0 - 2.7 (10 g/L) @ 20 °C
- Kinematic viscosity: Not applicable
- Solubility: Solubility in water: < 0.1g/L decomposes slowly
- Partition coefficient n-octanol/water (log value): Log Pow: -1.31 - 0.94 @ 25 °C
- Vapour pressure: 0.001 - 0.002 Pa @ 20 - 25 °C
- Density and/or relative density: 2.07 @ 20 °C
- Relative vapour density: Not applicable

## SECTION 9: Physical and chemical properties (....)

- Particle characteristics: No information available

### 9.2 Other information

- Information with regard to physical hazard classes
  - Oxidising properties: Category 2 (oxidising solids) based on GHS criteria
  - Bulk Density: ~ 850 kg/m<sup>3</sup> at 20 °C
  - Molecular formula: C<sub>3</sub>Cl<sub>3</sub>N<sub>3</sub>O<sub>3</sub>
  - Molecular weight: 232.41

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

- May intensify fire; oxidizer
- Warning! Do not use with other products. May release dangerous gases (chlorine)

### 10.2 Chemical stability

- Stable under normal conditions
- May decompose on exposure to air and moisture

### 10.3 Possibility of hazardous reactions

- May intensify fire; oxidizer
- Heating may cause a fire or explosion.
- Do not get water inside container. Wet material may generate nitrogen trichloride, an explosion hazard
- Contact with acids liberates toxic gas.

### 10.4 Conditions to avoid

- Avoid formation of dust
- Avoid contact with moisture
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### 10.5 Incompatible materials

- Incompatible with acids, ammonia, bases, floor sweeping compounds, calcium hypochlorite, reducing agents, organic solvents and compounds

### 10.6 Hazardous decomposition products

- Decomposition products may include oxygen, chlorine, nitrogen, nitrogen trichloride, cyanogen chloride, oxides of carbon, phosgene

## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

- Acute Toxicity
  - Harmful if swallowed.

#### Substances

Chemical Name	LD <sub>50</sub> (oral, rat)	LC <sub>50</sub> (inhalation, rat)	LD <sub>50</sub> (dermal, rabbit)
Symclosene	787 - 5 000 mg/kg	(4 h) 90 - 5 250 mg/m <sup>3</sup>	5 000 mg/kg

- Skin corrosion/irritation
  - Based on available data, the classification criteria are not met

#### Substances

Chemical Name	Irritation/corrosion
Symclosene	Adverse effect observed (corrosive)

## SECTION 11: Toxicological information (....)

- Serious eye damage/irritation  
Causes serious eye irritation.

### Substances

Chemical Name	Irritation/corrosion
Symclosene	Adverse effect observed (irritating)

- Respiratory or skin sensitisation  
Based on available data, the classification criteria are not met

### Substances

Chemical Name	Skin sensitisation	Respiratory sensitisation
Symclosene	No adverse effect observed (not sensitising)	No study available

- Germ cell mutagenicity  
No evidence of mutagenic effects

### Substances

Chemical Name	Toxicity - In Vitro	Toxicity - In Vivo
Symclosene	No adverse effect observed (negative)	No adverse effect observed (negative)

- Carcinogenicity  
No evidence of carcinogenic effects

### Substances

Chemical Name	NOAEL (oral, rat)	NOAEC (inhalation, rat)	NOAEL (dermal, rat)
Symclosene	No data available	No data available	No data available

- Reproductive toxicity  
No evidence of reproductive effects

### Substances

Chemical Name	NOAEL (oral, rat)	NOAEC (inhalation, rat)	NOAEL (dermal, rat)
Symclosene	No data available	No data available	No data available

- Specific target organ toxicity (STOT) - single exposure  
May cause respiratory irritation.

### Substances

Chemical Name	Route	Remarks
Symclosene	Respiratory	No study available

- Specific target organ toxicity (STOT) - repeated exposure  
Based on available data, the classification criteria are not met

### Substances

Chemical Name	NOAEL oral, rat)	NOAEC (inhalation, rat)	NOAEL (dermal, rat)
Symclosene	114 - 914 mg/kg bw/day	31 mg/m <sup>3</sup>	No data available

- Aspiration hazard  
Based on available data, the classification criteria are not met



## SECTION 11: Toxicological information (....)

- Contact with eyes
  - Causes severe irritation
  - Causes redness and swelling
- Contact with skin
  - May cause redness and irritation
- Ingestion
  - May cause nausea/vomiting
  - May cause diarrhoea
  - The ingestion of significant quantities may cause damage to digestive system
- Inhalation
  - Causes delayed pulmonary oedema
  - May cause respiratory tract irritation.
  - May cause shortness of breath
  - May cause coughing

### 11.2 Information on other hazards

- Does not contain any substances with endocrine disrupting properties

## SECTION 12: Ecological information

### 12.1 Toxicity

- Very toxic to aquatic life with long lasting effects.

#### Substances

Chemical Name	LC <sub>50</sub> (fish)	EC <sub>50</sub> (aquatic invertebrates)	EC <sub>50</sub> (aquatic algae)
Symclosene	(4 days) 230 - 8 000 000 µg/L	(48 h) 170 µg/L	(72 h) 100 mg/L

### 12.2 Persistence and degradability

#### Substances

Chemical Name	Biodegradation
Symclosene	Inherently biodegradable in water (100%)

### 12.3 Bioaccumulative potential

#### Substances

Chemical Name	Bioconcentration Factor (BCF)	Log Kow
Symclosene	Low potential for bioaccumulation (Log Kow < 3)	-1.31 @ 25 °C

### 12.4 Mobility in soil

- Large volumes may penetrate soil and contaminate groundwater

#### Substances

Chemical Name	Adsorption/desorption	Mobility
Symclosene	Koc = 51 @ 20 °C	Cyanuric acid is weakly adsorbed and highly mobile in all soils

### 12.5 Results of PBT and vPvB assessment

- Not a PBT according to REACH Annex XIII
- Not a vPvB according to REACH Annex XIII

### 12.6 Endocrine disrupting properties

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**SECTION 12: Ecological information (....)**

- Has not been identified as having endocrine disrupting properties
- 12.7 Other adverse effects
- No information available
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**SECTION 13: Disposal considerations**

## 13.1 Waste treatment methods

- Disposal should be in accordance with local, state or national legislation
- Do not discharge into drains or the environment, dispose to an authorised waste collection point
- Do not reuse empty containers without commercial cleaning or reconditioning

## 13.2 Classification

- The waste must be identified according to the List of Wastes (2000/532/EC)
  - Hazardous Property Code(s): HP 2 Oxidising; HP 4 Irritant; HP 6 Acute Toxicity; HP 14 Ecotoxic
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**SECTION 14: Transport information**

## 14.1 UN number or ID number

- UN No.: 2468

## 14.2 UN proper shipping name

- Proper Shipping Name: TRICHLOROISOCYANURIC ACID, DRY

## 14.3 Transport hazard class(es)

- Hazard Class: 5.1

## 14.4 Packing group

- Packing Group: II

## 14.5 Environmental hazards

- MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS

## 14.6 Special precautions for user

- Keep away from heat and direct sunlight.
- Ensure adequate ventilation

## 14.7 Maritime transport in bulk according to IMO instruments

- Not applicable

## 14.8 Road/Rail (ADR/RID)

- ADR UN No.: 2468
- Proper Shipping Name: TRICHLOROISOCYANURIC ACID, DRY
- ADR Hazard Class: 5.1
- ADR Packing Group: II
- Tunnel Code: (E)

## 14.9 Sea (IMDG)

- IMDG UN No.: 2468
- Proper Shipping Name: TRICHLOROISOCYANURIC ACID, DRY

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**SECTION 14: Transport information (....)**

- IMDG Hazard Class: 5.1
- IMDG Packing Group: II

**14.10 Air (ICAO/IATA)**

- ICAO UN No.: 2468
  - Proper Shipping Name: TRICHLOROISOCYANURIC ACID, DRY
  - ICAO Hazard Class: 8
  - ICAO Packing Group: II
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**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

- This safety data sheet is provided in compliance with REACH Regulation (EC) No 1907/2006 (as amended by Regulation (EU) 2020/878) and UK REACH
- The GB Classification, Labelling and Packaging Regulation (GB CLP) applies in Great Britain
- Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) applies in Europe
- CAS 87-90-1 is listed in Annex III of REACH as # Suspected acutely toxic via the oral route: The Danish QSAR database contains information indicating that the substance is predicted as toxic via the oral route. # Harmonised classification for acute toxicity: The substance has the following harmonised classification in Annex VI of CLP: Acute Tox. 4 # Harmonised classification for aquatic toxicity: The substance has the following harmonised classification in Annex VI of CLP: Aquatic Acute 1; The substance has the following harmonised classification in Annex VI of CLP: Aquatic Chronic 1 # Harmonised classification for eye irritation: The substance has the following harmonised classification in Annex VI of CLP: Eye Irrit. 2 # Harmonised classification for specific target organ toxicity: The substance has the following harmonised classification in Annex VI of CLP: STOT SE 3 # Suspected hazardous to the aquatic environment: The Danish QSAR database contains information indicating that the substance has a 96h LC50 to fish of <1 mg/L; The Danish QSAR database contains information indicating that the substance has a 48h EC50 to Daphnia of <1 mg/L # Suspected persistent in the environment: The Danish QSAR database contains information indicating that the substance is predicted as non readily biodegradable # Suspected respiratory sensitiser: The Toolbox profiler 'Respiratory sensitisation' gives an alert for respiratory sensitisation # Suspected skin irritant: The Danish QSAR database contains information indicating that the substance is predicted as skin irritant
- This product is covered by the GB Biocidal Products Regulation (GB BPR)
- This product is covered by EU Directive 2012/18/EU (the Seveso III Directive)

**15.2 Chemical safety assessment**

- A REACH chemical safety assessment has not been carried out
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**SECTION 16: Other information**

This 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. Such information is, to the best of PLASTICA'S limited knowledge and belief, accurate, and reliable as of the date of authorisation of this safety data sheet. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to be satisfied as to the suitability and completeness of such information for the product as used.

Sources of data: Information from published literature and supplier safety data sheets

Revision No. 4.0.0. Revised June 2022.

Changes made: Updated to conform to latest version of REACH

**Training advice**

- Workers must be informed of the presence of hazardous ingredients and trained in the proper use and handling of this product as required under applicable regulations

Text not given with phrase codes where they are used elsewhere in this safety data sheet:

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**SECTION 16: Other information (....)**

- H272: May intensify fire; oxidizer
- H302: Harmful if swallowed
- H319: Causes serious eye irritation.
- H335: May cause respiratory irritation
- H400: Very toxic to aquatic life
- H410: Very toxic to aquatic life with long lasting effects
- EUH031: Contact with acids liberates toxic gas

**Acronyms**

- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstracts Service
- DNEL: Derived No-Effect Level
- EC: European Community
- EC<sub>50</sub>: Effective Concentration, 50%
- GHS: Globally Harmonised System
- LOAEC: Lowest observed adverse effect concentration
- LOAEL: Lowest Observed Adverse Effect Level
- LC<sub>50</sub>: Lethal Concentration, 50%
- LD<sub>50</sub>: Lethal Dose, 50%
- NOAEC: No observed adverse effect concentration
- NOAEL: No observed adverse effect level
- OEL: Occupational Exposure Limit
- PBT: Persistent, Bioaccumulative and Toxic
- PNEC: Predicted No-Effect Concentration
- REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
- SCL: Specific Concentration Limit
- SVHC: Substances of Very High Concern
- vPvB: very Persistent and very Bioaccumulative
- WEL: Workplace Exposure Limit

--- end of safety datasheet ---

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