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## **1 Identification**

- · Product identifier
- · Trade name:
- Article number: 6772
- $\cdot$  Application of the substance / the mixture  $Water \ treatment$
- · Uses advised against

Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).

Any use involving aerosol formation or vapour release in excess of the assigned WEL where workers are exposed without suitable RPE.

Processes involving extreme heat use advised against.

Processes involving the use of incompatible substances - refer to section 10.

The product is intended exclusively for industrial and professional use.

- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:
- Information department: Product safety department.
- · Emergency telephone number:

CHEMTREC: 800-424-9300 (Domestic North America) OR 703-527-3887 (International, collect calls accepted).

## 2 Hazard(s) identification

· Classification of the	substance or mixture	_
GHS03 Flat	me over circle	
Oxidizing Solids 3	H272 May intensify fire; oxidizer.	
GHS05 Cor	rosion	
Skin Corrosion 1B	H314 Causes severe skin burns and eye damage.	
Eye Damage 1	H318 Causes serious eye damage.	
•	<ul><li>4 H302 Harmful if swallowed.</li><li>H317 May cause an allergic skin reaction.</li></ul>	_
	ed and labeled according to the Globally Harmonized System (GHS). GHS03, GHS05, GHS07	
	dizer.	2)
		2) US -

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Causes severe skin burns and eye damage.	(Contd. of page 1)
May cause an allergic skin reaction.	
· Precautionary statements	
Take any precaution to avoid mixing with combustibles.	
Do not breathe dust.	
Do not eat, drink or smoke when using this product.	
Wear protective gloves/protective clothing/eye protection/face protection.	4 / <b>1</b>
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with wa If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if	
Continue rinsing.	present and easy to do.
· Classification system:	
· NFPA ratings (scale 0 - 4)	
3 Health = 3	
3 $0$ Fire = 3	
$\mathbf{V}_{OX}$ Reactivity = 0	
The substance possesses oxidizing properties.	
· HMIS-ratings (scale 0 - 4)	
HEALTH *3 Health = $*3$	
FIRE 3 Fire = 3	
<b>REACTIVITY</b> [0] Reactivity = $0$	
• Other hazards • Results of PBT and vPvB assessment	
• <b>PBT:</b> Not applicable.	
• <b>vPvB:</b> Not applicable.	
11	
3 Composition/information on ingredients	
· Chemical characterization: Mixtures	
• Description: Mixture of the substances listed below with nonhazardous additions.	
· Dangerous components:	
32718-18-6 Bromochloro-5,5-dimethylimidazolidine-2,4-dione	50-100%
118-52-5 1,3-dichloro-5,5-dimethylhydantoin	25-50%
4 First-aid measures	
<ul> <li>Description of first aid measures</li> <li>General information:</li> </ul>	
Immediately remove any clothing soiled by the product.	
Symptoms of poisoning may even occur after several hours; therefore medical observat	ion for at least 48 hours
after the accident.	ion for at loast to nours
• After inhalation: Supply fresh air; consult doctor in case of complaints.	
After skin contact:	
Immediately wash with water and soap and rinse thoroughly.	
If skin irritation continues, consult a doctor.	
· After eye contact:	
Check for and remove any contact lenses.	
Rinse opened eye for several minutes under running water. Then consult a doctor.	
Rinse opened eye for several minutes under running water. Then consult a doctor. • After swallowing:	
Rinse opened eye for several minutes under running water. Then consult a doctor. • After swallowing: Wash mouth out with water	
<ul><li>Rinse opened eye for several minutes under running water. Then consult a doctor.</li><li>After swallowing:</li><li>Wash mouth out with water</li><li>Do not induce vomiting; call for medical help immediately.</li></ul>	
<ul> <li>Rinse opened eye for several minutes under running water. Then consult a doctor.</li> <li>After swallowing:</li> <li>Wash mouth out with water</li> <li>Do not induce vomiting; call for medical help immediately.</li> <li>If vomiting occurs spontaneously, keep head below hips to prevent aspiration.</li> </ul>	
<ul><li>Rinse opened eye for several minutes under running water. Then consult a doctor.</li><li>After swallowing:</li><li>Wash mouth out with water</li><li>Do not induce vomiting; call for medical help immediately.</li></ul>	nformation available.

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## • Indication of any immediate medical attention and special treatment needed

No further relevant information available.

## **5** Fire-fighting measures

- · Extinguishing media
- $\cdot$  Suitable extinguishing agents:
- CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Use fire fighting measures that suit the environment.
- · For safety reasons unsuitable extinguishing agents: Water with full jet
- $\cdot$  Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

Strong oxidiser. Contact with combustible or flammable substances may cause fire.

- · Advice for firefighters
- · Protective equipment:
- Do not inhale explosion gases or combustion gases.

Wear self-contained respiratory protective device.

Wear fully protective suit.

## **6** Accidental release measures

· Personal precautions, protective equipment and emergency procedures Avoid formation of dust. Ensure adequate ventilation Mount respiratory protective device. Wear protective equipment. Keep unprotected persons away. · Environmental precautions: Do not allow to penetrate the ground/soil. Do not allow to enter sewers/ surface or ground water. • Methods and material for containment and cleaning up: Pick up mechanically. Send for recovery or disposal in suitable receptacles. Ensure adequate ventilation. Do not use combustible materials such as paper towels to clean up spills. · Reference to other sections See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

• Protective Action Criteria for Chemicals

### · PAC-1:

None of the ingredients is listed.

### · PAC-2:

None of the ingredients is listed.

· PAC-3:

None of the ingredients is listed.

## 7 Handling and storage

· Handling:

#### · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of dust.

Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.

The product must only be handled by authorised, trained and experienced professionals under strictly controlled conditions.

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(Contd. of page 3	6)
Rinse contaminated clothing with plenty of water (Fire hazard)	
· Information about protection against explosions and fires: Keep respiratory protective device available.	
· Conditions for safe storage, including any incompatibilities	
· Storage:	
· Requirements to be met by storerooms and receptacles:	
Do not store on combustible materials such as wooden floors or wooden pallets.	
Prevent any seepage into the ground.	
· Information about storage in one common storage facility:	
Store away from oxidizing agents.	
Store away from foodstuffs.	
Do not store together with acids.	
Store away from reducing agents.	
Store away from flammable substances.	
Store away from combustible materials.	
· Further information about storage conditions:	
Protect from heat and direct sunlight.	
Protect from humidity and water.	
Store in cool, dry conditions in well sealed receptacles.	
Store in a bunded area.	
· Storage class: 5.1 B	
• Specific end use(s) No further relevant information available.	

## 8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

#### · Control parameters

### · Components with limit values that require monitoring at the workplace:

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

## 118-52-5 1,3-dichloro-5,5-dimethylhydantoin

PEL Long-term value: 0.2 mg/m<sup>3</sup>

- REL Short-term value: 0.4 mg/m<sup>3</sup>
- Long-term value: 0.2 mg/m<sup>3</sup>
- TLV Short-term value: 0.4 mg/m<sup>3</sup>
- Long-term value: 0.2 mg/m<sup>3</sup>

• Additional information: The lists that were valid during the creation were used as basis.

#### · Exposure controls

#### · Personal protective equipment:

Select PPE appropriate for the operations taking place taking into account the product properties.

· General protective and hygienic measures:

Take note of assigned Workplace Exposure Limits.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Do not eat, drink, smoke or sniff while working.

Do not breathe dust

A safe system of work must be formulated and followed to ensure safe working with this product. Relevant workers must receive suitable and sufficient training and supervision.

Ensure that eyewash stations and safety showers are close to the workstation location.

Depending on the degree of exposure, periodic medical examination is suggested.

Contaminated clothes are a fire hazard. Rinse with plenty of water.

· Breathing equipment: Use suitable respiratory protective device in case of insufficient ventilation.

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#### · Protection of hands:



Protective gloves conforming to EN374.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation • Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

### · Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Safety glasses with side-shields conforming to EN166.

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

## · Body protection:



Protective work clothing

Body protection must be chosen depending on product properties, activity and possible exposure.

Information on basic physical and	chemical properties	
General Information Appearance:		
Form:	Granulate	
Color:	White	
Odor:	Pungent	
Odor threshold:	Not determined.	
· pH-value at 20 °C (68 °F):	3–4 (1%)	
• Change in condition		
Melting point/Melting range:	>100 °C (>212 °F)	
<b>Boiling point/Boiling range:</b>	Decomp.	
· Flash point:	Not applicable.	
Flammability (solid, gaseous):	Not determined.	
Decomposition temperature:	Not determined.	
Ignition temperature:	Product is not selfigniting.	
Danger of explosion:	Explosive when mixed with combustible material.	
• Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
· Vapor pressure:	Not applicable.	
· Density at 20 °C (68 °F):	1.6 g/cm <sup>3</sup> (13.352 lbs/gal)	
· Relative density	Not determined.	
· Vapor density	Not applicable.	

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	(Contd. of page 5)
· Evaporation rate	Not applicable.
<ul> <li>Solubility in / Miscibility with Water at 20 °C (68 °F):</li> </ul>	5.4* g/l
· Partition coefficient (n-octanol/wa	ter): -3 log POW
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· Solvent content:	
VOC content:	0.00~%
• Other information	NOTE: The physical data presented above are typical values and should not be construed as a specification. *Hydrolyses in water

## **10 Stability and reactivity**

· Reactivity No further relevant information available.

- · Chemical stability
- · Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

The product itself does not burn, but in contact with combustible substances it increases the risk of fire and can fuel any existing fire substantially.

Possibility of hazardous reactions

Acts as an oxidizing agent on organic materials such as wood, paper and fats.

 $\cdot$  Conditions to avoid No further relevant information available.

- Incompatible materials:
   Strong acids and oxidising agents
   Strong bases.
   Reducing agents.
   Flammable materials
   Combustible materials.
- Hazardous decomposition products: Carbon monoxide and carbon dioxide Nitrogen oxides (NOx) Chlorine Bromine compounds

## **11 Toxicological information**

- · Information on toxicological effects
- · Acute toxicity:

#### · LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

Oral LD50 552 mg/kg

### 32718-18-6 Bromochloro-5,5-dimethylimidazolidine-2,4-dione

Oral LD50 578 mg/kg (rat) Dermal LD50 >2,000 mg/kg (rabbit)

· Primary irritant effect:

• on the skin: Causes severe skin burns and eye damage.

• on the eye: Strong irritant with the danger of severe eye injury.

· Sensitization: Sensitization possible through skin contact.

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#### · Additional toxicological information:

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of oesophagus and stomach.

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful Corrosive

Irritant

mman

#### · Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

## · NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

## **12 Ecological information**

#### · Toxicity

· Aquatic toxicity:

### 32718-18-6 Bromochloro-5,5-dimethylimidazolidine-2,4-dione

EC50 (96 h) 0.46 mg/l (Bacteria)

- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential Product is not expected to bioaccumulate.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:

#### · General notes:

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

#### · Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

## **13 Disposal considerations**

#### · Waste treatment methods

- · Recommendation:
- Recommended Hierarchy of Controls:
- Minimize waste;
- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Contact waste processors for recycling information.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

#### · Uncleaned packagings:

· Recommendation:

Disposal must be made according to official regulations.

Container remains hazardous when empty. Continue to observe all precautions.

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Containers, even those that are "empty," may contain residues that can develop hazardous gases and vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Do not mix with other waste streams.

• Recommended cleansing agent: Water, if necessary with cleansing agents.

Transport information	
UN-Number DOT, ADR/RID/ADN, IMDG, IATA	UN3085
· UN proper shipping name · DOT	Oxidizing solid, corrosive, n.o.s. (1,3-dichloro-5, dimethylhydantoin)
· ADR/RID/ADN	UN3085 OXIDIZING SOLID, CORROSIVE, N.O.S. (1, dichloro-5,5-dimethylhydantoin), ENVIRONMENTALI
·IMDG	HAZARDOUS OXIDIZING SOLID, CORROSIVE, N.O.S. (1,3-dichlor 5,5-dimethylhydantoin, Bromochloro-5,
·IATA	dimethylimidazolidine-2,4-dione), MARINE POLLUTAN OXIDIZING SOLID, CORROSIVE, N.O.S. (1,3-dichlor 5,5-dimethylhydantoin)
· Transport hazard class(es)	
· DOT	
· Class · Label	5.1 Oxidizing substances 5.1, 8
· ADR/RID/ADN	
Class	5.1 Oxidizing substances
· Label	5.1+8
· Class	5.1 Oxidizing substances
·Label	5.1/8
· Class	5.1 Oxidizing substances
· Label	5.1 (8)
· Packing group · DOT, ADR/RID/ADN, IMDG, IATA	III

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	(Contd. of page
Environmental hazards:	Product contains environmentally hazardous substance
	Bromochloro-5,5-dimethylimidazolidine-2,4-dione
Marine pollutant:	Yes (DOT)
	Symbol (fish and tree)
Special marking (ADR/RID/ADN):	Symbol (fish and tree)
Special precautions for user	Warning: Oxidizing substances
Hazard identification number (Kemler code	): 58
EMS Number:	F-A,S-Q
Stowage Category	В
Handling Code	H1 Keep as dry as reasonably practicable
Segregation Code	SG35 Stow "separated from" SGG1-acids
Transport in bulk according to Annex II of	
MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
DOT	
Remarks:	Special marking with the symbol (fish and tree).
ADR/RID/ADN	
Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 1000 g
IMDG	
Limited quantities (LQ)	5 kg
Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 1000 g
UN "Model Regulation":	UN 3085 OXIDIZING SOLID, CORROSIVE, N.O.S. (1,
	DICHLORO-5,5-DIMETHYLHYDANTOIN), 5.1 (8), I
	ENVIRONMENTALLY HAZARDOUS

## **15 Regulatory information**

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

<sup>·</sup> Sara · Section 355 (extremely hazardous substances): None of the ingredient is listed. · Section 313 (Specific toxic chemical listings): None of the ingredients is listed. · TSCA (Toxic Substances Control Act): All components have the value ACTIVE. · Hazardous Air Pollutants None of the ingredients is listed. · Proposition 65 · Chemicals known to cause cancer: None of the ingredients is listed. · Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed. · Chemicals known to cause reproductive toxicity for males: None of the ingredients is listed. (Contd. on page 10) US

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· Chemicals known to cause developmental toxicity:	
None of the ingredients is listed.	
· Cancerogenity categories	
· EPA (Environmental Protection Agency)	
None of the ingredients is listed.	
· TLV (Threshold Limit Value)	
None of the ingredients is listed.	
· NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients is listed.	
<ul> <li>• GHS label elements         The product is classified and labeled according to the Globally Harmonized Sy         • Hazard pictograms GHS03, GHS05, GHS07         • Signal word Danger     </li> </ul>	vstem (GHS).
<ul> <li>Hazard-determining components of labeling: Bromochloro-5,5-dimethylimidazolidine-2,4-dione 1,3-dichloro-5,5-dimethylhydantoin</li> <li>Hazard statements</li> </ul>	
May intensify fire; oxidizer. Harmful if swallowed. Causes severe skin burns and eye damage.	
May cause an allergic skin reaction. • <b>Precautionary statements</b> Take any precaution to avoid mixing with combustibles.	
Do not breathe dust. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.	
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin If in eyes: Rinse cautiously with water for several minutes. Remove contact le Continue rinsing.	
• Chemical safety assessment: A Chemical Safety Assessment has not been car	ried out.
6 Other information	
This information is based on our present knowledge. However, this shall no specific product features and shall not establish a legally valid contractual relat	
· Contact:	
Date of preparation / last revision 06/26/2023     Abbreviations and acronyms:	
ADR: Accord relatif au transport international des marchandises dangereuses par route (	European Agreement Concerning
International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods	
DOT: US Department of Transportation IATA: International Air Transport Association	
EINECS: European Inventory of Existing Commercial Chemical Substances	
ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society)	
NFPA: National Fire Protection Association (USA)	
HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU)	
LC50: Lethal concentration, 50 percent	
LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic	
vPvB: very Persistent and very Bioaccumulative	
NIOSH: National Institute for Occupational Safety	

- NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Oxidizing Solids 3: Oxidizing solids Category 3 Acute Toxicity Oral 4: Acute toxicity Category 4 Skin Corrosion 1B: Skin corrosion/irritation Category 1B

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Eye Damage 1: Serious eye damage/eye irritation – Category 1 Sensitization - Skin 1: Skin sensitisation – Category 1 (Contd. of page 10)

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