

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 30.06.2011

Version number 1

Revision: 30.06.2011

1 Identification of the substance/mixture and of the company/undertaking

- **Date of issue:** 11.11.2010
- **Product identifier**
- **Trade name:** Melclorite 70/G
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation:**
Oxidizing agent
Disinfectant
Bleaching agent
- **Details of the supplier of the safety data sheet**
- **Manufacturer / Supplier:**
Melspring International B.V. Phone: +31 (0) 26 - 38420 - 00
Arnhemsestraatweg 8 Fax: +31 (0) 26 - 38420 - 11
NL-6881 NG Velp
- **E-mail address of the competent person responsible for the Safety Data Sheet:** *sdb@csb-online.de*
- **Informing department:** Sales / Technics
- **Emergency telephone number:**
National (Dutch) Toxic Information Center
Phone: ++31-302748888

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS03 flame over circle

Ox. Sol. 2 H272 May intensify fire; oxidiser.



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

STOT SE 3 H335 May cause respiratory irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



C; Corrosive

R34: Causes burns.



Xn; Harmful

R22: Harmful if swallowed.



Xi; Irritant

R37: Irritating to respiratory system.



O; Oxidising

R8: Contact with combustible material may cause fire.

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*N*; Dangerous for the environment*R50*: Very toxic to aquatic organisms.*R31*: Contact with acids liberates toxic gas.· **Information concerning particular hazards for human and environment:** void· **Classification system:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· **Label elements**· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**

GHS03

GHS05

GHS07

GHS09

· **Signal word** *Danger*· **Hazard-determining components of labelling:**

Calcium hypochlorite

· **Hazard statements***H272* May intensify fire; oxidiser.*H302+EUH031* Harmful if swallowed. Contact with acids liberates toxic gas.*H314* Causes severe skin burns and eye damage.*H335* May cause respiratory irritation.*H400* Very toxic to aquatic life.

Warning! Do not use together with other products. May release dangerous gases (chlorine).

· **Precautionary statements***P101* If medical advice is needed, have product container or label at hand.*P102* Keep out of reach of children.*P103* Read label before use.*P210* Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*P260* Do not breathe dust.*P220* Keep/Store away from clothing/combustible materials.*P280* Wear protective gloves/protective clothing/eye protection/face protection.*P273* Avoid release to the environment.*P270* Do not eat, drink or smoke when using this product.*P303+P361+P353* IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.*P305+P351+P338* IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*P309+P311* IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.*P304+P340* IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.*P301+P330+P331* IF SWALLOWED: rinse mouth. Do NOT induce vomiting.*P391* Collect spillage.*P401* Store in accordance with local/regional/national/international regulations.*P405* Store locked up.*P501* Dispose of contents/container in accordance with local/regional/national/international regulations.· **Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.

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· **vPvB:** Not applicable.

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3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Designation:**
7778-54-3 calcium hypochlorite
- **Identification number(s):**
- **EC number:** 231-908-7
- **Index number:** 017-012-00-7
- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.
- **Dangerous components:** Void
- **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing contaminated by the product.
Symptoms of poisoning may occur after several hours. Medical observation for at least 48 hours after the accident is recommended.
- **After inhalation:** Supply fresh air and call for doctor for safety reasons.
- **After skin contact:**
Consult a doctor for safety reasons.
Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.
- **After eye contact:**
Rinse opened eye for several minutes under running water.
Remove contact lenses, if present and easy to do. Continue rinsing.
Use eye protection.
Call a doctor immediately.
- **After swallowing:**
Drink copious amounts of water and provide fresh air. Instantly call for doctor.
Do not induce vomiting - Danger of perforation!
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents** Water
- **For safety reasons unsuitable extinguishing agents** All but water.
- **Special hazards arising from the substance or mixture**
Can be released in case of fire:
Hydrogen chloride (HCl)
Chlorine compounds
Carbon monoxide (CO) and Carbon dioxide (CO₂)
Oxidising by development of oxygen
Under certain fire conditions, traces of other toxic gases cannot be excluded.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.

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- **Additional information** Collect contaminated fire fighting water separately. It must not enter drains.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 - Ensure adequate ventilation.
 - Wear protective clothing and keep away unprotected persons.
 - Remove all ignition sources.
 - Avoid breathing dust.
 - Avoid contact with skin and eyes.
- **Environmental precautions:**
 - Do not allow product to reach sewage system or water bodies.
 - Inform respective authorities in case product reaches water or sewage system.
- **Methods and material for containment and cleaning up:**
 - Ensure adequate ventilation.
 - Use neutralizing agent.
 - Collect mechanically.
 - Dispose of the material collected according to regulations.
- **Reference to other sections**
 - See Section 8 for information on personal protection equipment.

7 Handling and storage

- **Handling**
- **Precautions for safe handling**
 - Thorough dedusting.
 - Ensure good ventilation/exhaustion at the workplace.
 - Prevent formation of dust.
 - Do not breathe dust.
 - Avoid skin and eye contact under any circumstances.
 - Make sure that all applicable workplace limits are observed.
 - Any deposit of dust which cannot be avoided must be removed regularly.
- **Information about protection against explosions and fires:** Substance/product is oxidizing when dry.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**
 - Observe all local and national regulations for storage of water polluting products.
- **Information about storage in one common storage facility:**
 - Store away from foodstuffs.
 - Store away from flammable substances.
 - Store away from reducing agents.
 - Do not store together with acids.
- **Further information about storage conditions:**
 - Keep container tightly sealed.
 - Store in cool, dry conditions in well sealed containers.
 - Store container in a well ventilated position.
 - Store in a locked cabinet or with access restricted to specifically instructed persons.
 - Protect from heat and direct sunlight.
 - Protect from contamination.
- **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 item 7.

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- **Control parameters**
- **Components with critical values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
Keep away from foodstuffs, beverages and food.
Do not eat, drink or smoke while working.
Instantly remove any contaminated garments.
Avoid contact with the eyes and skin.
Use skin protection cream for preventive skin protection.
Wash hands during breaks and at the end of the work.
- **Breathing equipment:**
Use breathing protection in case of dust formation.
If all workplace limits are observed and good ventilation is ensured, no special precautions necessary.
- **Protection of hands:**
Protective gloves
To avoid skin problems reduce the wearing of gloves to the required minimum.
Check the permeability prior to each renewed use of the glove.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
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**
Protective gloves should be replaced at first signs of wear.
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Tightly sealed safety glasses
- **Body protection:**
Protective work clothing
Protective clothing should be selected specifically for the working place.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Granulate
Colour:	white
Smell:	like chlorine
- **pH-value at 20°C:** 11.5
- **Change in condition**

Melting point/Melting range:	not determined
Boiling point/Boiling range:	not determined
- **Flash point:** not applicable

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· **Inflammability (solid, gaseous)** Contact with combustible material may cause fire.

· **Ignition temperature:** no data available

· **Decomposition temperature:** ≥ 180 °C

· **Self-inflammability:** no data available

· **Danger of explosion:** Product is not explosive.

· **Critical values for explosion:**

Oxidizing properties oxidising

· **Density:** ~ 2 g/cm³

· **Bulk density at 20°C:** ~ 1 g/cm³

· **Solubility in / Miscibility with**

Water at 20°C: 217 g/l

· **Other information** No further relevant information available.

10 Stability and reactivity

· **Reactivity**

· **Chemical stability**

· **Thermal decomposition / conditions to be avoided:**

To avoid thermal decomposition do not overheat.

Temperature over 180°C

Exothermic thermal decomposition

· **Possibility of hazardous reactions**

Reacts with acids releasing chlorine

Reacts with flammable substances

Reacts with fabric soaked in the product (e.g. cleaning wool)

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

· **Conditions to avoid** No further relevant information available.

· **Incompatible materials:**

Strong acids

Reducing agents

Flammable materials

Metals in powder form

Metal oxides

· **Hazardous decomposition products:**

Chlorine

Hydrogen chloride (HCl)

Carbon monoxide (CO) and Carbon dioxide (CO₂)

In certain fire conditions, traces of other toxic gases cannot be excluded.

Chlorine compounds

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

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

7778-54-3 Calcium hypochlorite

Oral	LD50	850 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rabbit)
Inhalative	LC50/1 h	10 mg/l (rat)

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- **Primary irritant effect:**
- **on the skin:** Corrosive to skin and mucous membranes.
- **on the eye:** Corrosive
- **Sensitization:** No sensitizing effect known.
- **Additional toxicological information:**
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12 Ecological information· **Toxicity**· **Aquatic toxicity:****7778-54-3 Calcium hypochlorite**

EC50/48 h	0.11 mg/l (water flea (daphnia magna))
IC50/72 h	2 mg/l (algae)
LC50/96 h	0.049 - 0.16 mg/l (bluegill (leporomis macrochirus))
	0.088 mg/l (Fathead minnow (Pimephales promelas))
	0.13 - 0.2 mg/l (rainbow trout (oncorhynchus mykiss))

- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish and aquatic organisms.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Disposal must be made according to official regulations.
- **Waste disposal key number:** According to local/national regulations.
- **European waste catalogue:**
Waste disposal key numbers from EWC have to be assigned depending on origin and processing.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **ADR, IMDG, IATA** UN3487

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<ul style="list-style-type: none"> · UN proper shipping name · ADR · IMDG, IATA 	<p>UN 3487 CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, CORROSIVE, ENVIRONMENTALLY HAZARDOUS CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, CORROSIVE</p>
<ul style="list-style-type: none"> · Transport hazard class(es) · ADR 	<p>5.1 (OC2) Oxidising substances. 5.1+8</p>
<ul style="list-style-type: none"> · Class · Label 	<p>5.1 (OC2) Oxidising substances. 5.1+8</p>
<ul style="list-style-type: none"> · IMDG 	<p>5.1 Oxidising substances. 5.1+8</p>
<ul style="list-style-type: none"> · Class · Label 	<p>5.1 Oxidising substances. 5.1+8</p>
<ul style="list-style-type: none"> · IATA 	<p>5.1 Oxidising substances. 5.1+8</p>
<ul style="list-style-type: none"> · Class · Label 	<p>5.1 Oxidising substances. 5.1+8</p>
<ul style="list-style-type: none"> · Packing group · ADR, IMDG, IATA 	<p>II</p>
<ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: · Special marking (ADR): 	<p>YES Symbol (fish and tree) Symbol (fish and tree)</p>
<ul style="list-style-type: none"> · Special precautions for user · Kemler Number: · EMS Number: 	<p>Warning: Oxidising substances. 58 F-H,S-Q</p>
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	<p>Not applicable.</p>
<ul style="list-style-type: none"> · Transport/Additional information: 	<p>During the course of carriage, this product shall be shaded from direct sunlight and all sources of heat and be placed in adequately ventilated areas. Transport by post may be prohibited or restricted.</p>
<ul style="list-style-type: none"> · ADR · Excepted quantities (EQ): · Limited quantities (LQ): · Transport category: · Tunnel restriction code: 	<p>E2 1 kg 2 E</p>

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· UN "Model Regulation": UN3487, CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, CORROSIVE, ENVIRONMENTALLY HAZARDOUS, 5.1 (8), II

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.
- Hazard pictograms



GHS03 GHS05 GHS07 GHS09

- Signal word *Danger*
- Hazard-determining components of labelling:
Calcium hypochlorite
- Hazard statements
 - H272 May intensify fire; oxidiser.
 - H302+EUH031 Harmful if swallowed. Contact with acids liberates toxic gas.
 - H314 Causes severe skin burns and eye damage.
 - H335 May cause respiratory irritation.
 - H400 Very toxic to aquatic life.

Warning! Do not use together with other products. May release dangerous gases (chlorine).
- Precautionary statements
 - P101 If medical advice is needed, have product container or label at hand.
 - P102 Keep out of reach of children.
 - P103 Read label before use.
 - P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 - P260 Do not breathe dust.
 - P220 Keep/Store away from clothing/combustible materials.
 - P280 Wear protective gloves/protective clothing/eye protection/face protection.
 - P273 Avoid release to the environment.
 - P270 Do no eat, drink or smoke when using this product.
 - P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P309+P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
 - P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 - P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 - P391 Collect spillage.
 - P401 Store in accordance with local/regional/national/international regulations.
 - P405 Store locked up.
 - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- National regulations
- Information about limitation of use: Employment restrictions concerning young persons must be observed.
- Decree to be applied in case of technical fault:
Quantity limits according to "EC Seveso directive" should be observed.

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

· **Other regulations, limitations and prohibitive regulations**

The substance / components are listed in:

EINECS / ELINCS (Europa)

Toxic Substance Control Act TSCA (USA)

Observe all regulations for storage of oxidizing substances.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Reasons for changes:**

The Material Safety Data Sheet has been revised. Changes in the respective chapters are characterized in the left side edge by *.

Changes in classification and labelling

Revised transport classification

· **Department issuing MSDS:**

C.S.B. GmbH

Phone: +49 - 2151 - 652086-0

Parkstraße 29

Fax: +49 - 2151 - 652086-9

D-47829 Krefeld

Germany

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

· *** Data compared to the previous version altered.**