

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:** 30.06.2011
- **Product identifier**
- **Trade name:** Melclorite N.X
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation:** Chemicals for various applications
- **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:** As above or next toxicological information centre

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.



N; Dangerous for the environment

R50: Very toxic to aquatic organisms.

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R31: Contact with acids liberates toxic gas.

- **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 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.

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Description:** Mixture of the substances listed below with nonhazardous additions.

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· Dangerous components:

CAS: 7778-54-3 EINECS: 231-908-7 Index number: 017-012-00-7	Calcium hypochlorite  C R34;  Xn R22;  O R8;  N R50 R31 -----  Ox. Sol. 2, H272  Met. Corr.1, H290; Skin Corr. 1B, H314  Aquatic Acute 1, H400  Acute Tox. 4, H302	50-100%
CAS: 10043-52-4 EINECS: 233-140-8 Index number: 017-013-00-2	Calcium chloride  Xi R36  Eye Irrit. 2, H319	2.5-10%
CAS: 1305-62-0 EINECS: 215-137-3	Calcium dihydroxide  Xi R38-41  Eye Dam. 1, H318  Skin Irrit. 2, H315	2.5-10%
CAS: 10137-74-3 EINECS: 233-378-2	calcium chlorate  O R9  Ox. Sol. 1, H271	2.5-10%

· 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: In case of unconsciousness bring patient into stable side position for transport.**· After skin contact:**

Instantly wash with water and soap and rinse thoroughly.

Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.

· After swallowing:

Drink copious amounts of water and provide fresh air. Instantly call for doctor.

Rinse out mouth and then drink plenty of water.

Do not induce vomiting - Danger of perforation!

Call a doctor immediately.

· 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**Carbon dioxide (CO₂), extinguishing powder or water spray/fog. Fight larger fires with water spray/fog or alcohol-resistant foam.**· For safety reasons unsuitable extinguishing agents** Water with a full water jet.**· Special hazards arising from the substance or mixture**

Hydrogen chloride (HCl)

Oxidising by development of oxygen

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- **Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Put on breathing apparatus.
Ensure adequate ventilation.
- **Environmental precautions:**
Do not allow to enter drainage system, surface or ground water.
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.
Send for recovery or disposal in suitable containers.
Dispose of the material collected according to regulations.
- **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 information on disposal.

7 Handling and storage

- **Handling**
- **Precautions for safe handling**
Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **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:** Do not store together with acids.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
Store container in a well ventilated position.
Store in a locked cabinet and out of the reach of children.
- **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.
- **Control parameters**
- **Components with critical values that require monitoring at the workplace:**
Observe all workplace limits for dust.

1305-62-0 Calcium dihydroxide

WEL (Great Britain)	Long-term value: 5 mg/m ³
IOELV (European Union)	Long-term value: 5 mg/m ³

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· Additional Occupational Exposure Limit Values for possible hazards during processing:

7782-50-5 Chlorine

WEL (Great Britain) Short-term value: 1.5 mg/m³, 0.5 ppm

IOELV (European Union) Short-term value: 1.5 mg/m³, 0.5 ppm

· **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.

Instantly remove any contaminated garments.

Wash hands during breaks and at the end of the work.

Use skin protection cream for preventive skin protection.

Avoid contact with the eyes and skin.

Do not eat, drink or smoke while working.

· **Breathing equipment:**

In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

Use breathing protection in case of dust formation.

· **Protection of hands:**

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

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

Check the permeability prior to each renewed use of the glove.

To avoid skin problems reduce the wearing of gloves to the required minimum.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

· **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.

Penetration time: ≥ 8 hours

· **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: Tablets

Colour: white

· **Smell:** chlorine-like

· **Odour threshold:** not determined

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/Melting range: not determined

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Boiling point/Boiling range:	100°C
· Flash point:	not applicable
· Inflammability (solid, gaseous)	Contact with combustible material may cause fire.
· Ignition temperature:	
Decomposition temperature:	Not determined.
· Self-inflammability:	Product is not selfigniting.
· Danger of explosion:	Not determined.
· Critical values for explosion:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure at 20°C:	23 hPa
· Density at 20°C:	2.195 g/cm ³
· Relative density	Not determined.
· Vapour density (AIR = 1):	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with	
Water:	insoluble
· Segregation coefficient (n-octanol/water):	Not determined.
· Viscosity:	
dynamic:	Not applicable.
kinematic:	Not applicable.
Organic solvents:	0.0 %
Water:	11.0 %
Solids content:	100.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Strong oxidizing agents
- **Hazardous decomposition products:** Hydrogen chloride (HCl)

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.
Dust particles may mechanically irritate the skin.
- **on the eye:**
Corrosive
Dust particles may mechanically irritate the eye.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Harmful
Corrosive
Irritant
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 (<i>daphnia magna</i>))
IC50/72 h	2 mg/l (algae)
LC50/96 h	0.049 - 0.16 mg/l (bluegill (<i>leporomis macrochirus</i>)) 0.088 mg/l (Fathead minnow (<i>Pimephales promelas</i>)) 0.13 - 0.2 mg/l (rainbow trout (<i>oncorhynchus mykiss</i>))

- **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
Must not reach sewage water or drainage ditch undiluted or unneutralized.
- **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** 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.

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14 Transport information

· UN-Number · ADR, IMDG, IATA	UN3487
· UN proper shipping name · ADR · IMDG, IATA	UN 3487 CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, CORROSIVE, ENVIRONMENTALLY HAZARDOUS CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, CORROSIVE
· Transport hazard class(es) · ADR	
	
· Class · Label	5.1 Oxidising substances. 5.1+8
· IMDG	
	
· Class · Label	5.1 Oxidising substances. 5.1+8
· IATA	
	
· Class · Label	5.1 Oxidising substances. 5.1+8
· Packing group · ADR, IMDG, IATA	III
· Environmental hazards: · Marine pollutant:	YES Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· Special precautions for user · Kemler Number: · EMS Number:	Warning: Oxidising substances. 58 F-H,S-Q
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	Transport by post may be prohibited or restricted.
· ADR · Excepted quantities (EQ): · Limited quantities (LQ): · Transport category: · Tunnel restriction code:	E1 5 kg 3 E

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

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**
Observe restrictions on the marketing and use according to Annex XVII of Regulation (EC) No 1907/2006.
- **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.

- **Relevant phrases**

The(se) R- resp. H-phrase(s) are those of the ingredient(s) and do(es) not necessarily represent the classification of the preparation.

H271 May cause fire or explosion; strong oxidiser.

H272 May intensify fire; oxidiser.

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

R22 Harmful if swallowed.

R31 Contact with acids liberates toxic gas.

R34 Causes burns.

R36 Irritating to eyes.

R38 Irritating to skin.

R41 Risk of serious damage to eyes.

R50 Very toxic to aquatic organisms.

R8 Contact with combustible material may cause fire.

R9 Explosive when mixed with combustible material.

- **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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

- **Sources:** These data are based on information submitted by pre-suppliers.