

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

Printing date 05.06.2020

Rev. Index : 95.6

Revision: 04.05.2020

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**Trade name: **hth™ GRANULAR**

Article number: 11600 hth

**REGULATION (EC) No 1272/2008 - ANNEX VI - International Chemical Identification** calcium hypochlorite

CAS Number:

7778-54-3

EC number:

231-908-7

Index number:

017-012-00-7

**1.2 Relevant identified uses of the substance or mixture and uses advised against****Sector of Use**

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU21 Consumer uses: Private households / general public / consumers

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

**Product category**

PC8 Biocidal products

PC37 Water treatment chemicals

**Application of the substance / the mixture** Water treatment - Solid Chlorinating agent**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Innovative Water Care, LLC

1400 Bluegrass Lakes Pkwy, Alpharetta,

GA 30004 - U.S.A.

1200 Lower river Road, P.O. Box 800

Charleston, Tennessee 37310-0800 - U.S.A.

INNOVATIVE WATER CARE Ltd

The Studios - Colorado Way - Castleford - West Yorkshire -

WF10 4TA - UNITED KINGDOM

Telephone: +44 (0) 1924 792909

eu.sds@sigurawater.com

INNOVATIVE WATER CARE EUROPE

BP 219 - 37402 Amboise Cedex - FRANCE

phone : +33 (0)2 47 23 43 00

fax : +33 (0)2 47 23 12 21

eu.sds@sigurawater.com

**1.4 Emergency telephone number:**

Europe &gt;&gt;&gt; NCEC - Tel. +44 (0)1235 239 670

Africa &amp; Middle East &gt;&gt;&gt; NCEC - Tel. +44 (0)1235 239 671

N.AMERICA &gt;&gt;&gt; ACEAN (Arch Chemicals Emergency Action Network) - Tel. +1 423 780 2970}

**SECTION 2: Hazards identification****2.1 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.

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GHS07

Acute Tox. 4 H302 Harmful if swallowed.

**2.2 Label elements**
**Labelling according to Regulation (EC) No 1272/2008** The substance 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 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H400 Very toxic to aquatic life.

**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, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P220 Keep away from clothing and other combustible materials.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P363 Wash contaminated clothing before reuse.

P370+P378 In case of fire: Use for extinction: Water.

P391 Collect spillage.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container to special treatment scheme according to official regulations.

**Additional information:**

EUH031 Contact with acids liberates toxic gas.

EUH206 EUH206 Warning! Do not use together with other products. May release dangerous gases (chlorine).

**2.3 Other hazards** The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

**Results of PBT and vPvB assessment**
**PBT:** Not applicable.

**vPvB:** Not applicable.

**SECTION 3: Composition/information on ingredients**
**3.1 Chemical characterisation: Substances**
**CAS No. Description:**

7778-54-3 calcium hypochlorite

**Identification number(s):**
**EC number:** 231-908-7

**Index number:** 017-012-00-7

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**Impurities and stabilising additives:**

CAS: 471-34-1 EINECS: 207-439-9 Reg.nr.: 01-2119486795-18-XXXX	calcium carbonate	
CAS: 10043-52-4 EINECS: 233-140-8 Reg.nr.: 01-2119494219-28-XXXX	calcium chloride	⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319
CAS: 1305-62-0 EINECS: 215-137-3	calcium dihydroxide	⚠ Eye Dam. 1, H318
CAS: 10137-74-3 EINECS: 233-378-2	calcium chlorate	⚠ Ox. Sol. 2, H272
CAS: 7647-14-5 EINECS: 231-598-3 Reg.nr.: 01-2119485491-33-XXXX	sodium chloride	

**Dangerous components:**

CAS: 7778-54-3 EINECS: 231-908-7	calcium hypochlorite ⚠ Ox. Sol. 2, H272; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400 (M=10); ⚠ Acute Tox. 4, H302 Specific concentration limits: Skin Corr. 1B; H314: C ≥ 5 % Skin Irrit. 2; H315: 1 % ≤ C < 5 % Eye Dam. 1; H318: C ≥ 3 % Eye Irrit. 2; H319: 0.5 % ≤ C < 3 %	50-<100%
CAS: 10043-52-4 EINECS: 233-140-8 Reg.nr.: 01-2119494219-28-XXXX	calcium chloride ⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319	< 2%
CAS: 1305-62-0 EINECS: 215-137-3	calcium dihydroxide ⚠ Eye Dam. 1, H318	< 3%
CAS: 10137-74-3 EINECS: 233-378-2	calcium chlorate ⚠ Ox. Sol. 2, H272	< 2%

**SECTION 4: First aid measures**
**4.1 Description of first aid measures**
**General information**

Take affected persons out into the fresh air.

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

**After inhalation** In case of unconsciousness place patient stably in side position for transportation.

**After skin contact**

Rinse with warm water.

Immediately wash with water and soap and rinse thoroughly.

Immediately rinse with water.

**After eye contact** Rinse opened eye for several minutes (15) under running water. Then consult a doctor.

**After swallowing**

Rinse out mouth and then drink plenty of water.

Call for a doctor immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

**4.2 Most important symptoms and effects, both acute and delayed**

Breathing difficulty

Coughing

Nausea

Gastric or intestinal disorders.

**4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

**SECTION 5: Firefighting measures**
**5.1 Extinguishing media**
**Suitable extinguishing agents**

Water spray

Use fire extinguishing methods suitable to surrounding conditions.

**For safety reasons unsuitable extinguishing agents** Extinguishing powder.

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

Carbon monoxide (CO)  
Hydrogen chloride (HCl)  
During heating or in case of fire poisonous gases are produced.

**5.3 Advice for firefighters****Protective equipment:**

Wear fully protective suit.  
Wear self-contained respiratory protective device.  
Mount respiratory protective device.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Use respiratory protective device against the effects of fumes/dust/aerosol.  
Mount respiratory protective device.  
Wear protective equipment. Keep unprotected persons away.

**6.2 Environmental precautions:**

Keep contaminated washing water and dispose of appropriately.  
Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.

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

Use neutralising agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.

**6.4 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.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Store in cool, dry place in tightly closed receptacles.  
Thorough dedusting.  
Ensure good ventilation/exhaustion at the workplace.

**Handling**

DO NOT MIX WITH OTHER PRODUCTS  
DO NOT DISSOLVE BEFORE USE

**Information about fire - and explosion protection:**

Substance/product is oxidising when dry.  
Keep respiratory protective device available.

**7.2 Conditions for safe storage, including any incompatibilities****Storage****Requirements to be met by storerooms and receptacles:**

Store only in unopened original receptacles.  
Do not store product where the average daily temperature exceeds 35°C. Storage above this temperature may result in rapid decomposition, evolution of chlorine gas and heat sufficient to ignite combustible products

**Information about storage in one common storage facility:**

Store away from flammable substances.  
Store away from reducing agents.  
Do not store together with acids.

**Further information about storage conditions:** Keep receptacle tightly sealed.

**7.3 Specific end use(s)** No further relevant information available.

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**SECTION 8: Exposure controls/personal protection**

**Additional information about design of technical facilities:** No further data; see item 7.

**8.1 Control parameters**

**Ingredients with limit values that require monitoring at the workplace:** Not required.

**Additional information:** The lists valid during the making were used as basis.

**8.2 Exposure controls**

**Personal protective equipment**

**General protective and hygienic measures**

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.

**Respiratory protection:**

Use suitable respiratory protective device only when aerosol or mist is formed.  
 Use suitable respiratory protective device when high concentrations are present.  
 Filter P2.

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

**Protection of hands:**



Protective gloves.

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**

Chloroprene rubber, CR

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.

**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:**



Tightly sealed goggles.

**Body protection:**

Apron  
 Boots

**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

**General Information**

**Appearance:**

**Form:** Granulate  
**Colour:** White  
**Odour:** Like chlorine  
**Odour threshold:** Not determined.

**pH-value:** 11.5

**Change in condition**

**Melting point/freezing point:** 100 °C (decomp.)  
**Initial boiling point and boiling range:** undetermined

**Flash point:** Not applicable

**Flammability (solid, gaseous)** Product is not flammable.

**Decomposition temperature:** 170 - 180 °C

**Auto-ignition temperature:** Not determined.

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**Explosive properties:** Product does not present an explosion hazard.

**Explosion limits:**
**Lower:** Not determined.

**Upper:** Not determined.

**Vapour pressure:** Not applicable.

**Density at 20 °C:** 0.9 g/cm<sup>3</sup>
**Relative density** Not determined.

**Vapour density** Not applicable.

**Evaporation rate** Not applicable.

**Solubility in / Miscibility with**
**Water at 20 °C:** 217 g/l

**Partition coefficient: n-octanol/water:** Not determined.

**Viscosity:**
**dynamic:** Not applicable.

**kinematic:** Not applicable.

**Solids content:** 100.0 %

**9.2 Other information**

No further relevant information available.

**SECTION 10: Stability and reactivity**
**10.1 Reactivity** No further relevant information available.

**10.2 Chemical stability**
**Thermal decomposition / conditions to be avoided:**

Do not store product where the average daily temperature exceeds 35°C.

Storage above this temperature may result in rapid decomposition, evolution of chlorine gas and heat sufficient to ignite combustible products

**10.3 Possibility of hazardous reactions**
**NEVER MIX THIS PRODUCT WITH ORGANIC CHLORINE (TRICHLOR or DICHLOR) WITHIN THE SAME CONTAINER**

Reacts with strong oxidizing agents

Reacts with alcohols, amines, aqueous acids and alkalis

Reacts with flammable substances

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

**10.5 Incompatible materials:** Warning! Do not use together with other products. May release dangerous gases (chlorine).

**10.6 Hazardous decomposition products:**

Poisonous gases/vapours

Chlorine

**SECTION 11: Toxicological information**
**11.1 Information on toxicological effects**
**Acute toxicity**

Harmful if swallowed.

**LD/LC50 values relevant for classification:**
**CAS: 7778-54-3 calcium hypochlorite**

Oral	LD50	850 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LD50	1,300 mg/cm <sup>3</sup> (rat)

**Primary irritant effect:**
**Skin corrosion/irritation**

Causes severe skin burns and eye damage.

**Serious eye damage/irritation**

Causes severe skin burns and eye damage.

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

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

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**STOT-single exposure** Based on available data, the classification criteria are not met.  
**STOT-repeated exposure** Based on available data, the classification criteria are not met.  
**Aspiration hazard** Based on available data, the classification criteria are not met.

**SECTION 12: Ecological information**
**12.1 Toxicity**
**Aquatic toxicity:**
**CAS: 7778-54-3 calcium hypochlorite**

Oral	LC50 - 96 hrs	0.088 mg/l (bluegill sunfish)
		0.16 mg/l (rainbow trout)
	LC50 - 48 hrs	0.11 mg/l (daphnia magna)

**12.2 Persistence and degradability** Anorganic product, is not eliminable from water by means of biological cleaning processes.

**12.3 Bioaccumulative potential** No further relevant information available.

**12.4 Mobility in soil** No further relevant information available.

**Ecotoxicological effects:**
**Remark:** Very toxic for fish

**Additional ecological information:**
**General notes:**

Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water.

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

Must not reach sewage water or drainage ditch undiluted or unneutralised.

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

Very toxic for aquatic organisms

**12.5 Results of PBT and vPvB assessment**
**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6 Other adverse effects** No further relevant information available.

**SECTION 13: Disposal considerations**
**13.1 Waste treatment methods**
**Recommendation**

Must be specially treated adhering to official regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packaging:**
**Recommendation:** Disposal must be made according to official regulations.

**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

**SECTION 14: Transport information**
**14.1 UN-Number**

ADR, IMDG, IATA

UN2880

**14.2 UN proper shipping name**

ADR

 2880 CALCIUM HYPOCHLORITE, HYDRATED MIXTURE,  
 ENVIRONMENTALLY HAZARDOUS  
 CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, MARINE  
 POLLUTANT

IMDG

CALCIUM HYPOCHLORITE, HYDRATED MIXTURE

IATA

**14.3 Transport hazard class(es)**

ADR


**Class**

5.1 (O2) Oxidising substances.

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**Label**

5.1

**IMDG**

**Class  
Label**

 5.1 Oxidising substances.  
 5.1

**IATA**

**Class  
Label**

 5.1 Oxidising substances.  
 5.1

**14.4 Packing group**

ADR, IMDG, IATA

**14.5 Environmental hazards:**

Marine pollutant:

**Special marking (ADR):**
**14.6 Special precautions for user**
**Danger code (Kemler):**
**EMS Number:**
**Segregation groups**
**Stowage Category**
**Stowage Code**
**Segregation Code**

II

Yes

Symbol (fish and tree)

Symbol (fish and tree)

Warning: Oxidising substances.

50

F-H,S-Q

Hypochlorites

D

SW1 Protected from sources of heat.

SW11 Cargo transport units shall be shaded from direct sunlight.

Packages in cargo transport units shall be stowed so as to allow for adequate air circulation throughout the cargo.

SG35 Stow "separated from" SGG1-acids

SG38 Stow "separated from" SGG2-ammonium compounds.

SG49 Stow "separated from" SGG6-cyanides

SG53 Stow "separated from" liquid organic substances

SG60 Stow "separated from" SGG16-peroxides

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

**Transport/Additional information:**
**ADR**
**Excepted quantities (EQ):**
**Limited quantities (LQ)**
**Excepted quantities (EQ)**
**Transport category**
**Tunnel restriction code**

E2

1 kg

Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

2

E

**IMDG**
**Limited quantities (LQ)**
**Excepted quantities (EQ)**

1 kg

Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

**UN "Model Regulation":**

UN 2880 CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, 5.1, II, ENVIRONMENTALLY HAZARDOUS

**SECTION 15: Regulatory information**
**REGULATION (EU) No 528/2012**

Best before : see date on packaging

Providing this container when empty is thoroughly rinsed out in the pool, it may be disposed of via the recycling scheme

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**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Directive 2012/18/EU****Named dangerous substances - ANNEX I** Substance is not listed.**Seveso category**

P8 OXIDISING LIQUIDS AND SOLIDS

E1 Hazardous to the Aquatic Environment

**Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t**Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Relevant phrases**

H272 May intensify fire; oxidiser.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

**Abbreviations and acronyms:**

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

ICAO: International Civil Aviation Organisation

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Ox. Sol. 2: Oxidizing solids – Category 2

Acute Tox. 4: Acute toxicity - oral – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

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