

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

Printing date 16.07.2019

Rev. Index : 16

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

1.1 Product identifier

Trade name: hth™ ADVANCED

Article number: 11605 AUK 1

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

calcium hypochlorite

UFI M830-D0RK-2005-9GDV

**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:

ARCH CHEMICALS Ltd

Wheldon Road - Castleford - West Yorkshire WF10 2JT - ENGLAND

Telephone: + 44 (0) 1977 714 100

Fax: + 44 (0) 870 889 5277

1.4 Emergency telephone number:

Europe >>> NCEC - Tel. +44 (0)1235 239 670

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

(Contd. on page 2)

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Trade name: hth™ ADVANCED

(Contd. of page 1)

N.AMERICA
780 2970}

>>> ACEAN (Arch Chemicals Emergency Action Network) - Tel. +1 423

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.

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

2.2 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

calcium dihydroxide

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 carefully and follow all instructions.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

(Contd. on page 3)

Trade name: hth™ ADVANCED

(Contd. of page 2)

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.
P310	Immediately call a POISON CENTER/doctor.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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 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****3.2 Chemical characterisation: Mixtures****Description:** Mixture of substances listed below with nonhazardous additions.**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	50-<100%
CAS: 1305-62-0 EINECS: 215-137-3	calcium dihydroxide ⚠ Eye Dam. 1, H318	10-<25%
CAS: 10043-52-4 EINECS: 233-140-8 Reg.nr.: 01-2119494219-28-XXXX	calcium chloride ⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319	2.5-<10%
CAS: 10137-74-3 EINECS: 233-378-2	calcium chlorate ⚠ Ox. Sol. 2, H272	2.5-<10%

(Contd. on page 4)

Trade name: hth™ ADVANCED

Additional information For the wording of the listed hazard phrases refer to section 16. (Contd. of page 3)

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.

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.

(Contd. on page 5)

Trade name: hth™ ADVANCED

(Contd. of page 4)

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.

SECTION 8: Exposure controls/personal protection

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

(Contd. on page 6)

Trade name: hth™ ADVANCED

(Contd. of page 5)

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:
CAS: 1305-62-0 calcium dihydroxide
WEL Long-term value: 5 mg/m ³

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.

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. 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 trough 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

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(Contd. on page 7)

Trade name: hth™ ADVANCED

(Contd. of page 6)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:	Tablets
Colour:	Light blue
Odour:	Like chlorine
Odour threshold:	Not determined.
pH-value at 25 °C:	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) Not determined.

Decomposition temperature: 170 - 180 °C

Auto-ignition temperature: Product is not selfigniting.

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 ³
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.

Solvent content:

Water: 9.5 %

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.

(Contd. on page 8)

Trade name: hth™ ADVANCED

(Contd. of page 7)

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 ³ (rat)

CAS: 1305-62-0 calcium dihydroxide

Oral	LD50	7,340 mg/kg (rat)
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CAS: 10043-52-4 calcium chloride

Oral	LD50	1,000 mg/kg (rat)
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CAS: 7647-14-5 sodium chloride

Oral	LD50	3,000 mg/kg (rat)
Dermal	LD50	>10,000 mg/kg (rabbit)

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

Causes severe skin burns and eye damage.

Serious eye damage/irritation

Causes serious 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.**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.

(Contd. on page 9)

Trade name: hth™ ADVANCED

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

(Contd. of page 8)

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)

CAS: 7647-14-5 sodium chloride

Oral	LC50 - 96 hrs	9,675 mg/l (Iepornis macrochirus)
	CE10	577 mg/l (bac)
	CE50 - 24 hrs	6,175 mg/l (daphnia magna)
	CE50 - 48 hrs	4,135 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) (Self-assessment): 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

UN2880

(Contd. on page 10)

GB

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

Printing date 16.07.2019

Rev. Index : 16

Revision: 16.07.2019

Trade name: **hth™ ADVANCED**

(Contd. of page 9)

14.2 UN proper shipping name
ADR

2880 CALCIUM HYPOCHLORITE, HYDRATED
MIXTURE, ENVIRONMENTALLY
HAZARDOUS

IMDG

CALCIUM HYPOCHLORITE, HYDRATED
MIXTURE, MARINE POLLUTANT

14.3 Transport hazard class(es)**ADR**

Class
Label

5.1 (O2) Oxidising substances.
5.1

IMDG

Class
Label

5.1 Oxidising substances.
5.1

14.4 Packing group**ADR, IMDG**

III

14.5 Environmental hazards:
Marine pollutant:

Yes

Symbol (fish and tree)

Symbol (fish and tree)

Special marking (ADR):

Warning: Oxidising substances.

14.6 Special precautions for user**Danger code (Kemler):**

50

EMS Number:

F-H,S-Q

Segregation groups

Hypochlorites

Stowage Category

D

Stowage Code

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.

Segregation Code

SG35 Stow "separated from" acids.
SG38 Stow "separated from" ammonium
compounds.
SG49 Stow "separated from" cyanides
SG53 Stow "separated from" liquid organic
substances
SG60 Stow "separated from" 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):**

E2

(Contd. on page 11)

GB

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

Printing date 16.07.2019

Rev. Index : 16

Revision: 16.07.2019

Trade name: hth™ ADVANCED

(Contd. of page 10)

Limited quantities (LQ)
Excepted quantities (EQ)

5 kg
Code: E1
Maximum net quantity per inner packaging: 30 g
Maximum net quantity per outer packaging:
1000 g

Transport category
Tunnel restriction code

3
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, III,
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

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**Directive 2012/18/EU**

Named dangerous substances - ANNEX I None of the ingredients is 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

National regulations

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

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.

(Contd. on page 12)

GB

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

Printing date 16.07.2019

Rev. Index : 16

Revision: 16.07.2019

Trade name: hth™ ADVANCED

(Contd. of page 11)

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

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 – 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

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