# Safety Data Sheet

**Cat. # DG050**

## CHAPS (3-(3-Cholamidopropyl)dimethylammonio)-1-propanesulfonate)

Size: 5g

# 3((3-cholamidopropyl)dimethylammonio)1-propanesulfonate,dihydrate

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Revision date: 5/11/2017 Version: 1.1

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

### 1.1. Product identifier

| | |
|---|---|
| Product form | : Substance |
| Substance name | : 3((3-cholamidopropyl)dimethylammonio)1-propanesulfonate,dihydrate |
| Chemical name | : CHAPS |
| CAS-No. | : 75621-03-3 |
| Product code | : 163C |
| Type of product | : Pure substance |
| Formula | : C32H58N2O7S |
| Synonyms | : 1-propanaminium, N,N-dimethyl-3-sulfo-N-(3-(((3alpha,5beta,7alpha,12alpha)-3,7,12-trihydroxy-24-oxocholan-24-yl)amino)propyl)-,hydroxide,inner salt |
| Product group | : Raw material |
| BIG No | : 19945 |

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

No additional information available

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
63132-1429 Saint Louis - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

### 1.4. Emergency telephone number

Emergency number : Chemtrec **1-800-424-9300** (USA/Canada), **+1-703-527-3887** (Intl)

| Country | Organisation/Company | Address | Emergency number | Comment |
|---|---|---|---|---|
| United Kingdom | National Poisons Information Service (Belfast Centre) Royal Victoria Hospital | Grosvenor Road BT12 6BA Belfast | 0344 892 0111 | |
| United Kingdom | National Poisons Information Service (Birmingham Centre) City Hospital | Dudley Road B18 7QH Birmingham | 0344 892 0111 | |
| United Kingdom | National Poisons Information Service (Cardiff Centre) Gwenwyn Ward, Llandough Hospital | Penarth CF64 2XX Cardiff | 0344 892 0111 | |
| United Kingdom | National Poisons Information Service Edinburgh Royal Infirmary of Edinburgh | Little France Crescent EH16 4SA Edinburgh | 0344 892 0111 | |
| United Kingdom | Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust | Avonley Road SE14 5ER London | +44 20 7188 7188 | |
| United Kingdom | National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit | Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle | 0344 892 0111 | |

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

| | |
|---|---|
| Skin corrosion/irritation, Category 2 | H315 |
| Serious eye damage/eye irritation, Category 2 | H319 |

| | |
|---|---|
| Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation | H335 |

Full text of H statements : see section 16

**Adverse physicochemical, human health and environmental effects**

May cause respiratory irritation. Causes skin irritation. Causes serious eye irritation.

## 2.2. Label elements

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :

GHS07

CLP Signal word : Warning

Hazard statements (CLP) : H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.

Precautionary statements (CLP) : P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 - IF ON SKIN: Wash with plenty of water.
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.
P312 - Call a POISON CENTRE or doctor if you feel unwell.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

## 2.3. Other hazards

No additional information available

# SECTION 3: Composition/information on ingredients

## 3.1. Substances

Substance type : Mono-constituent

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|---|---|
| 3((3-cholamidopropyl)dimethylammonio)1-propanesulfonate,dihydrate | (CAS-No.) 75621-03-3 | 100 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>STOT SE 3, H335 |

Full text of H-statements: see section 16

## 3.2. Mixtures

Not applicable

# SECTION 4: First aid measures

## 4.1. Description of first aid measures

First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Call a poison center or a doctor if you feel unwell.

| | |
|---|---|
| First-aid measures after skin contact | : Wash immediately with lots of water. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention. |
| First-aid measures after eye contact | : Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| First-aid measures after ingestion | : Rinse mouth with water. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Call a poison center or a doctor if you feel unwell. |

### 4.2. Most important symptoms and effects, both acute and delayed

| | |
|---|---|
| Symptoms/effects after inhalation | : Irritation of the respiratory tract. Irritation of the nasal mucous membranes. FOLLOWING SYMPTOMS MAY APPEAR LATER: Possible laryngeal spasm/oedema. May cause respiratory irritation. |
| Symptoms/effects after skin contact | : Tingling/irritation of the skin. Irritation. |
| Symptoms/effects after eye contact | : Irritation of the eye tissue. Eye irritation. |

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

| | |
|---|---|
| Suitable extinguishing media | : Water spray. Alcohol-resistant foam. Polymer foam. ABC powder. Carbon dioxide. Water spray. Dry powder. Foam. |
| Unsuitable extinguishing media | : Quick-acting BC powder extinguisher. Quick-acting CO2 extinguisher. |

### 5.2. Special hazards arising from the substance or mixture

| | |
|---|---|
| Hazardous decomposition products in case of fire | : Toxic fumes may be released. |

### 5.3. Advice for firefighters

| | |
|---|---|
| Precautionary measures fire | : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows. |
| Firefighting instructions | : Dilute toxic gases with water spray. |
| Protection during firefighting | : Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

| | |
|---|---|
| Protective equipment | : Gloves. Face-shield. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Dust cloud production: dust-tight suit. |
| Emergency procedures | : Ventilate spillage area. Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. |
| Measures in case of dust release | : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows. |

#### 6.1.2. For emergency responders

| | |
|---|---|
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

| | |
|---|---|
| For containment | : Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. |
| Methods for cleaning up | : Mechanically recover the product. Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling. |
| Other information | : Dispose of materials or solid residues at an authorized site. |

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

| | |
|---|---|
| Precautions for safe handling | : Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Avoid raising dust. Keep away from naked flames/heat. Reduce/avoid exposure and/or contact. Keep container tightly closed. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. Wear personal protective equipment. |
| Hygiene measures | : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. |

### 7.2. Conditions for safe storage, including any incompatibilities

| | |
|---|---|
| Storage conditions | : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool. |
| Heat and ignition sources | : KEEP SUBSTANCE AWAY FROM: heat sources. |
| Information on mixed storage | : KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. (strong) bases. |
| Storage area | : Store in a dry area. Meet the legal requirements. |
| Special rules on packaging | : SPECIAL REQUIREMENTS: closing. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers. |

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

**Appropriate engineering controls:**

Ensure good ventilation of the work station.

| **Hand protection:** |
|---|
| Gloves |

| **Eye protection:** |
|---|
| Face shield. In case of dust production: protective goggles. Safety glasses |

| **Skin and body protection:** |
|---|
| Protective clothing. In case of dust production: head/neck protection. In case of dust production: dustproof clothing |

| **Respiratory protection:** |
|---|
| Dust production: dust mask with filter type P2 |

**Environmental exposure controls:**

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Physical state | : Solid |
| Appearance | : Solid. |
| Molecular mass | : 650.92 g/mol |
| Colour | : No data available |
| Odour | : No data available |
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : 157 °C |
| Freezing point | : Not applicable |
| Boiling point | : No data available |
| Flash point | : Not applicable |
| Auto-ignition temperature | : Not applicable |
| Decomposition temperature | : 157 °C |
| Flammability (solid, gas) | : Non flammable. |
| Vapour pressure | : No data available |

| | |
|---|---|
| Relative vapour density at 20 °C | : Not applicable |
| Relative density | : Not applicable |
| Solubility | : No data available |
| Log Pow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : Not applicable |

### 9.2. Other information

VOC content : 0 %

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Hazardous decomposition products.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

| | |
|---|---|
| Acute toxicity (oral) | : Not classified |
| Acute toxicity (dermal) | : Not classified |
| Acute toxicity (inhalation) | : Not classified |
| Skin corrosion/irritation | : Causes skin irritation. |
| Serious eye damage/irritation | : Causes serious eye irritation. |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : May cause respiratory irritation. |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |
| Potential adverse human health effects and symptoms | : Causes skin irritation. May cause respiratory irritation. Causes serious eye irritation. |

## SECTION 12: Ecological information

### 12.1. Toxicity

| | |
|---|---|
| Ecology - general | : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. |
| Ecology - air | : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). |
| Ecology - water | : No data available on ecotoxicity. |
| Acute aquatic toxicity | : Not classified |
| Chronic aquatic toxicity | : Not classified |

### 12.2. Persistence and degradability

| 3((3-cholamidopropyl)dimethylammonio)1-propanesulfonate,dihydrate (75621-03-3) | |
|---|---|
| Persistence and degradability | Biodegradability in water: no data available. |

### 12.3. Bioaccumulative potential

| 3((3-cholamidopropyl)dimethylammonio)1-propanesulfonate,dihydrate (75621-03-3) | |
|---|---|
| Bioaccumulative potential | No bioaccumulation data available. |

### 12.4. Mobility in soil
No additional information available

### 12.5. Results of PBT and vPvB assessment
No additional information available

### 12.6. Other adverse effects
No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

| | |
|---|---|
| Waste treatment methods | : Waste treatment methods. |
| Product/Packaging disposal recommendations | : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. Dissolve or mix with a combustible solvent. |
| Additional information | : Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997. |
| European List of Waste (LoW) code | : 15 01 10* - packaging containing residues of or contaminated by dangerous substances<br>16 03 05* - organic wastes containing dangerous substances |

## SECTION 14: Transport information
In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

| | |
|---|---|
| UN-No. (ADR) | : Not regulated |
| UN-No. (IMDG) | : Not regulated |
| UN-No. (IATA) | : Not regulated |
| UN-No. (ADN) | : Not regulated |
| UN-No. (RID) | : Not regulated |

### 14.2. UN proper shipping name

| | |
|---|---|
| Proper Shipping Name (ADR) | : Not regulated |
| Proper Shipping Name (IMDG) | : Not regulated |
| Proper Shipping Name (IATA) | : Not regulated |
| Proper Shipping Name (ADN) | : Not regulated |
| Proper Shipping Name (RID) | : Not regulated |

### 14.3. Transport hazard class(es)

**ADR**

Transport hazard class(es) (ADR) : Not regulated

**IMDG**

Transport hazard class(es) (IMDG) : Not regulated

**IATA**

Transport hazard class(es) (IATA) : Not regulated

**ADN**

Transport hazard class(es) (ADN) : Not regulated

**RID**

Transport hazard class(es) (RID) : Not regulated

### 14.4. Packing group

| | |
|---|---|
| Packing group (ADR) | : Not regulated |
| Packing group (IMDG) | : Not regulated |
| Packing group (IATA) | : Not regulated |
| Packing group (ADN) | : Not regulated |
| Packing group (RID) | : Not regulated |

### 14.5. Environmental hazards

| | |
|---|---|
| Dangerous for the environment | : No |
| Marine pollutant | : No |
| Other information | : No supplementary information available |

### 14.6. Special precautions for user

**Overland transport**

Not regulated

**Transport by sea**

Not regulated

**Air transport**

Not regulated

**Inland waterway transport**

Not regulated

**Rail transport**

Not regulated

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

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

3((3-cholamidopropyl)dimethylammonio)1-propanesulfonate,dihydrate is not on the REACH Candidate List

3((3-cholamidopropyl)dimethylammonio)1-propanesulfonate,dihydrate is not on the REACH Annex XIV List

3((3-cholamidopropyl)dimethylammonio)1-propanesulfonate,dihydrate is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

3((3-cholamidopropyl)dimethylammonio)1-propanesulfonate,dihydrate is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

VOC content : 0 %

#### 15.1.2. National regulations

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

| Full text of H- and EUH-statements: | |
|---|---|
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |

Safety Data Sheet applicable for regions : GB - United Kingdom

SDS EU (REACH Annex II)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*