



**Safety Data Sheet dated 25/11/2020, version 8**

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

1.1. Product identifier

Mixture identification:

Trade name: SMART eNAT  
Collection and Preservation System for Nucleic Acids  
Trade code: 70U001N

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

Recommended use:

eNAT PRESERVATION MEDIUM FOR NUCLEIC ACIDS

1.3. Details of the supplier of the safety data sheet

Company:  
COPAN ITALIA SPA  
VIA PEROTTI, 10 – 25125 BRESCIA  
Phone : +39 0302687211

Competent person responsible for the safety data sheet:

msds@copangroup.com

Legal Manufacturer:

Copan Italia SpA - Italia  
Phone : +39 0302687211

1.4. Emergency telephone number

City Hospital, Birmingham B187QH, United Kingdom Phone: +44 121 507 4123  
Phone: +39-055-6120735 ( technical Support Hours : 9:00-13:00, 14:00-18:00 GMT+1:00)

**SECTION 2: Hazards identification**

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

- ⚠ Warning, Acute Tox. 4, Harmful if swallowed.
- ⚠ Danger, Skin Corr. 1C, Causes severe skin burns and eye damage.
- ⚠ Danger, Eye Dam. 1, Causes serious eye damage.

Aquatic Chronic 3, Harmful to aquatic life with long lasting effects.

EUH032 Contact with acids liberates very toxic gas.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P264 Wash ... Thoroughly after handling.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...  
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303+P361+P353+P310 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Immediately call a POISON CENTER/doctor/...

**Safety Data Sheet**  
**70U001N**

P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor/...

**Special Provisions:**

EUH032 Contact with acids liberates very toxic gas.

**Contains**

Guanidine Thiocyanate

**Special provisions according to Annex XVII of REACH and subsequent amendments:**

None

**2.3. Other hazards**

vPvB Substances: None - PBT Substances: None

**Other Hazards:**

No other hazards

---

**SECTION 3: Composition/information on ingredients**
**3.1. Substances**

N.A.

**3.2. Mixtures**

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
43.4 %	Guanidine Thiocyanate	CAS: 593-84-0 EC: 209-812-1	⚠ 3.1/4/Oral Acute Tox. 4 H302 ⚠ 3.1/4/Inhal Acute Tox. 4 H332 ⚠ 3.1/4/Dermal Acute Tox. 4 H312 ⚠ 3.2/1C Skin Corr. 1C H314 ⚠ 3.3/1 Eye Dam. 1 H318 4.1/C3 Aquatic Chronic 3 H412 EUH032
0.229 %	N-Lauroylsarcosine	CAS: 97-78-9 EC: 202-608-3	⚠ 3.1/2/Inhal Acute Tox. 2 H330 ⚠ 3.2/2 Skin Irrit. 2 H315 ⚠ 3.3/1 Eye Dam. 1 H318

---

**SECTION 4: First aid measures**
**4.1. Description of first aid measures**
**In case of skin contact:**

Immediately take off all contaminated clothing.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

**In case of eyes contact:**

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

**In case of Ingestion:**

Do NOT induce vomiting.

Give nothing to eat or drink.

**In case of Inhalation:**

Remove casualty to fresh air and keep warm and at rest.

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

None

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

**Safety Data Sheet**  
**70U001N**

None

---

**SECTION 5: Firefighting measures**

- 5.1. Extinguishing media
  - Suitable extinguishing media:
    - Water.
    - Carbon dioxide (CO<sub>2</sub>).
  - Extinguishing media which must not be used for safety reasons:
    - None in particular.
- 5.2. Special hazards arising from the substance or mixture
  - Do not inhale explosion and combustion gases.
  - Burning produces heavy smoke.
- 5.3. Advice for firefighters
  - Use suitable breathing apparatus .
  - Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
  - Move undamaged containers from immediate hazard area if it can be done safely.

---

**SECTION 6: Accidental release measures**

- 6.1. Personal precautions, protective equipment and emergency procedures
  - Wear personal protection equipment.
  - Remove persons to safety.
  - See protective measures under point 7 and 8.
- 6.2. Environmental precautions
  - Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
  - Retain contaminated washing water and dispose it.
  - In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
  - Suitable material for taking up: absorbing material, organic, sand
- 6.3. Methods and material for containment and cleaning up
  - Wash with plenty of water.
- 6.4. Reference to other sections
  - See also section 8 and 13

---

**SECTION 7: Handling and storage**

- 7.1. Precautions for safe handling
  - Avoid contact with skin and eyes, inhalation of vapours and mists.
  - Don't use empty container before they have been cleaned.
  - Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
  - See also section 8 for recommended protective equipment.
  - Advice on general occupational hygiene:
    - Contaminated clothing should be changed before entering eating areas.
    - Do not eat or drink while working.
- 7.2. Conditions for safe storage, including any incompatibilities
  - Keep away from food, drink and feed.
  - Incompatible materials:
    - Keep away from acids.
  - Instructions as regards storage premises:
    - Adequately ventilated premises.
- 7.3. Specific end use(s)
  - Product Pack Insert may be available, ask to legal manufacturer

---

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

- 8.1. Control parameters
  - No occupational exposure limit available
  - DNEL Exposure Limit Values
    - N.A.

**Safety Data Sheet**  
**70U001N**

## PNEC Exposure Limit Values

N-Lauroylsarcosine - CAS: 97-78-9

Target: Fresh Water - Value: 29.7 µg/L

Target: Rilasci saltuari - Value: 297 µg/L

Target: Marine water - Value: 2.97 µg/L

## 8.2. Exposure controls

## Eye protection:

Use close fitting safety goggles, don't use eye lens.

## Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

## Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

## Respiratory protection:

Not needed for normal use.

## Thermal Hazards:

None

## Environmental exposure controls:

None

## Appropriate engineering controls:

None

**SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes
Color:	white	--	--
Appearance:	liquid		
	--	--	
Odour:	N.A.	--	--
Odour threshold:	N.A.	--	--
pH:	7.20 +/- 0.60	--	--
Melting point / freezing point:	N.A.	--	--
Initial boiling point and boiling range:	N.A.	--	--
Flash point:	N.A.	--	--
Evaporation rate:	N.A.	--	--
Solid/gas flammability:	N.A.	--	--
Upper/lower flammability or explosive limits:	N.A.	--	--
Vapour pressure:	N.A.	--	--
Vapour density:	N.A.	--	--
Relative density:	N.A.	--	--

**Safety Data Sheet**  
**70U001N**

Solubility in water:	N.A.	--	--
Solubility in oil:	N.A.	--	--
Partition coefficient (n-octanol/water):	N.A.	--	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	N.A.	--	--
Viscosity:	N.A.	--	--
Explosive properties:	N.A.	--	--
Oxidizing properties:	N.A.	--	--

## 9.2. Other information

Properties	Value	Method:	Notes
Miscibility:	N.A.	--	--
Fat Solubility:	N.A.	--	--
Conductivity:	N.A.	--	--
Substance Groups relevant properties	N.A.	--	--

**SECTION 10: Stability and reactivity**

- 10.1. Reactivity  
Stable under normal conditions
- 10.2. Chemical stability  
Stable under normal conditions
- 10.3. Possibility of hazardous reactions  
None
- 10.4. Conditions to avoid  
Stable under normal conditions.
- 10.5. Incompatible materials  
None in particular.
- 10.6. Hazardous decomposition products  
None.

**SECTION 11: Toxicological information**

- 11.1. Information on toxicological effects  
Toxicological information of the product:  
SMART eNAT  
Collection and Preservation System for Nucleic Acids
- a) acute toxicity  
The product is classified: Acute Tox. 4 H302  
ATEmix - Oral 1367,2 mg/kg bw
- b) skin corrosion/irritation  
The product is classified: Skin Corr. 1C H314
- c) serious eye damage/irritation  
The product is classified: Eye Dam. 1 H318

**Safety Data Sheet**  
**70U001N**

- d) respiratory or skin sensitisation  
Not classified  
Based on available data, the classification criteria are not met
- e) germ cell mutagenicity  
Not classified  
Based on available data, the classification criteria are not met
- f) carcinogenicity  
Not classified  
Based on available data, the classification criteria are not met
- g) reproductive toxicity  
Not classified  
Based on available data, the classification criteria are not met
- h) STOT-single exposure  
Not classified  
Based on available data, the classification criteria are not met
- i) STOT-repeated exposure  
Not classified  
Based on available data, the classification criteria are not met
- j) aspiration hazard  
Not classified  
Based on available data, the classification criteria are not met

Toxicological information of the main substances found in the product:

Guanidine Thiocyanate - CAS: 593-84-0

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 593 mg/kg

Test: LD50 - Route: 1 - Species: Mouse = 300 mg/kg

N-Lauroylsarcosine - CAS: 97-78-9

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 5000-9200 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat = mg/m<sup>3</sup>

Test: LD50 - Route: DERMAL - Species: Rat = 2000 mg/kg

---

## **SECTION 12: Ecological information**

### 12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

SMART eNAT

Collection and Preservation System for Nucleic Acids

The product is classified: Aquatic Chronic 3 - H412

Guanidine Thiocyanate - CAS: 593-84-0

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia = 42.4 mg/l - Duration h: 48

Endpoint: LC50 - Species: Fish = 89.1 mg/l - Duration h: 96

c) Bacteria toxicity:

Endpoint: EC50 - Species: *Ptychocheilus lucius* > 185 mg/l - Duration h: 28

N-Lauroylsarcosine - CAS: 97-78-9

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 107 mg/l - Duration h: 96

Endpoint: NOEC - Species: Fish = 50 mg/l - Duration h: 96

e) Plant toxicity:

Endpoint: EC50 - Species: Algae = 39-79 mg/l - Duration h: 72

Endpoint: NOEC - Species: Algae = 9.2 mg/l - Duration h: 72

Endpoint: LOEC - Species: Algae = 29 mg/l - Duration h: 72

### 12.2. Persistence and degradability

N.A.

### 12.3. Bioaccumulative potential

N.A.

### 12.4. Mobility in soil

N.A.

**Safety Data Sheet**  
**70U001N**

- 12.5. Results of PBT and vPvB assessment  
vPvB Substances: None - PBT Substances: None
- 12.6. Other adverse effects  
None

**SECTION 13: Disposal considerations**

- 13.1. Waste treatment methods  
Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

**SECTION 14: Transport information**



- 14.1. UN number  
ADR-UN Number: 1760  
IATA-UN Number: 1760  
IMDG-UN Number: 1760
- 14.2. UN proper shipping name  
ADR-Shipping Name: CORROSIVE LIQUID, N.O.S.  
IATA-Shipping Name: CORROSIVE LIQUID, N.O.S.  
IMDG-Shipping Name: CORROSIVE LIQUID, N.O.S.
- 14.3. Transport hazard class(es)  
ADR-Class: 8  
ADR - Hazard identification number: 80  
IATA-Class: 8  
IATA-Label: 8  
IMDG-Class: 8
- 14.4. Packing group  
ADR-Packing Group: III  
IATA-Packing group: III  
IMDG-Packing group: III
- 14.5. Environmental hazards  
ADR-Environmental Pollutant: No  
IMDG-Marine pollutant: No
- 14.6. Special precautions for user  
ADR-Subsidiary hazards: -  
ADR-S.P.: 274  
ADR-Transport category (Tunnel restriction code): 3 (E)  
IATA-Passenger Aircraft: 852  
IATA-Subsidiary hazards: -  
IATA-Cargo Aircraft: 856  
IATA-S.P.: A3 A803  
IATA-ERG: 8L  
IMDG-EmS: F-A , S-B  
IMDG-Subsidiary hazards: -  
IMDG-Stowage and handling: Category A SW2  
IMDG-Segregation: -
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code  
N.A.

**SECTION 15: Regulatory information**

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture  
Dir. 98/24/EC (Risks related to chemical agents at work)  
Dir. 2000/39/EC (Occupational exposure limit values)  
Regulation (EC) n. 1907/2006 (REACH)

**Safety Data Sheet**  
**70U001N**

Regulation (EC) n. 1272/2008 (CLP)  
 Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013  
 Regulation (EU) 2015/830  
 Regulation (EU) n. 286/2011 (ATP 2 CLP)  
 Regulation (EU) n. 618/2012 (ATP 3 CLP)  
 Regulation (EU) n. 487/2013 (ATP 4 CLP)  
 Regulation (EU) n. 944/2013 (ATP 5 CLP)  
 Regulation (EU) n. 605/2014 (ATP 6 CLP)  
 Regulation (EU) n. 2015/1221 (ATP 7 CLP)  
 Regulation (EU) n. 2016/918 (ATP 8 CLP)  
 Regulation (EU) n. 2016/1179 (ATP 9 CLP)  
 Regulation (EU) n. 2017/776 (ATP 10 CLP)  
 Regulation (EU) n. 2018/669 (ATP 11 CLP)  
 Regulation (EU) n. 2018/1480 (ATP 13 CLP)  
 Regulation (EU) n. 2019/521 (ATP 12 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3

Restrictions related to the substances contained:

No restriction.

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)  
 Regulation (EC) nr 648/2004 (detergents).  
 Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1  
 None

#### 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

Substances for which a Chemical Safety Assessment has been carried out:

None

---

### SECTION 16: Other information

Full text of phrases referred to in Section 3:

H302 Harmful if swallowed.  
 H332 Harmful if inhaled.  
 H312 Harmful in contact with skin.  
 H314 Causes severe skin burns and eye damage.  
 H318 Causes serious eye damage.  
 H412 Harmful to aquatic life with long lasting effects.  
 EUH032 Contact with acids liberates very toxic gas.  
 H330 Fatal if inhaled.  
 H315 Causes skin irritation.

Hazard class and hazard category	Code	Description
Acute Tox. 2	3.1/2/Inhal	Acute toxicity (inhalation), Category 2
Acute Tox. 4	3.1/4/Dermal	Acute toxicity (dermal), Category 4
Acute Tox. 4	3.1/4/Inhal	Acute toxicity (inhalation), Category 4
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Corr. 1C	3.2/1C	Skin corrosion, Category 1C



**Safety Data Sheet**  
**70U001N**

Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

<b>Classification according to Regulation (EC) Nr. 1272/2008</b>	<b>Classification procedure</b>
Acute Tox. 4, H302	Calculation method
Skin Corr. 1C, H314	Calculation method
Eye Dam. 1, H318	Calculation method
Aquatic Chronic 3, H412	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,  
Commission of the European Communities  
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van  
Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.

**Safety Data Sheet**  
**70U001N**

STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.