

## ENGLISH

### SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifiers

Product name: Enterosystem 18R Reagent  
 Product Number: 80252

#### 1.2 Identified uses of the relevant substance or mixture and uses advised against

Identified uses relevant: Professional uses, Health services, scientific research and development

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

Manufacturer/Supplier: Liofilchem®  
 Address: Via Scozia, 64026 - Roseto degli Abruzzi (TE)  
 Telephone number: 085/8930745  
 Fax number: 085/8930330  
 E-mail address: liofilchem@liofilchem.com

#### 1.4 Emergency telephone number

+39 02-66101029 (Centro Antiveleni Niguarda Cà Granda - Milano).

### SECTION 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Flam. Liq. 2, Flammable liquids (Category 2); H225  
 Skin Corr. 1A, Skin corrosion (Category 1A); H314  
 Eye Dam. 1, Serious eye damage (Category 1); H318  
 STOT SE 3, Specific target organ toxicity - single exposure (Category 3); H335, H336  
 Aquatic Chronic 3 Chronic toxicity to the aquatic environment (Category 3); H412

#### 2.2 Label elements

##### Labelling according Regulation (EC) No 1272/2008 [CLP]

#### Pictogram



#### Signal word

Danger

#### Hazard statement(s)

H225	Highly flammable liquid and vapour.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.

#### Precautionary statement(s)

P210	Keep away from heat, hot surfaces, sparks, flames and other sources of ignition. No smoking.
P243	Take precautionary measures against static discharge.
P273	Avoid release to environment
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
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.
P310	Immediately call a POISON CENTER or doctor/physician

**Supplemental Hazard Statements** none

#### 2.3 Other hazards – none

### SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Refer to component MSDS

### SECTION 4. FIRST AID MEASURES

Refer to component MSDS

## SECTION 5. FIRE-FIGHTING MEASURES

Refer to component MSDS

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Refer to component MSDS

## SECTION 7. HANDLING AND STORAGE

Refer to component MSDS

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Refer to component MSDS

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Refer to component MSDS

## SECTION 10. STABILITY AND REACTIVITY

Refer to component MSDS

## SECTION 11. TOXICOLOGICAL INFORMATION

Refer to component MSDS

## SECTION 12. ECOLOGICAL INFORMATION

Refer to component MSDS

## SECTION 13. DISPOSAL CONSIDERATIONS

Refer to component MSDS.

## SECTION 14. TRANSPORT INFORMATION

Refer to component MSDS

## SECTION 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of European Parliament and of the Council Regulation (EC) No. 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) and Commission Regulation (EU) No. 453/2010 amending Commission Regulation (EC) No. 1907/2006.

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

The product is classified, coded and labeled in accordance with EU Regulation on Hazardous Materials.

### 15.2 Chemical Safety Assessment

This product has not been made a chemical safety assessment.

## SECTION 16. OTHER INFORMATION

### Kit Components

<b>\$080402</b>	NaOH 40% Reagent	Skin Corr. 1A, Skin corrosion (Category 1A)
<b>80411</b>	Vaseline Oil	Not Dangerous
<b>\$080401</b>	Kovac's Reagent	Flam. Liq. 3, Flammable liquids (Category 3); Skin Corr. 1B, Skin corrosion (Category 1B); Eye Dam. 1, Serious eye damage (Category 1); STOT SE 3, Specific target organ toxicity - single exposure (Category 3);
<b>\$080403</b>	Alpha Reagent	Naphtol Flam. Liq. 2, Flammable liquids (Category 2) Eye Dam. 1, Serious eye damage (Category 1) Aquatic Chronic 3 Chronic toxicity to the aquatic environment (Category 3)

## Abbreviations and acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

CLP: Regulation concerning the classification, labelling and packaging of substances and mixtures, Regulation (EC) No. 1272/2008.

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

IATA: International Air Transport Association

IMDG: International Maritime Code for Dangerous Goods

CL50: Middle lethal concentration of individuals in essay

DL50: The median lethal dose that causes death in 50% of individuals in essay

PBT: Persistent, bioaccumulative and toxic substance

REACH: Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), Regulation (EC) No. 1907/2006

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail

vPvB: Very persistent and very bioaccumulative substance

## Training advice

The product must be used by qualified personnel. It is recommended to provide basic training with regard to safety and health at work to ensure proper handling of the product.

## Further information

This sheet replaces any previous edition.

The information in this document is based on the present state of our knowledge. The user must ensure the accuracy and completeness of such information in relation to the specific use intended.

Liofilchem® shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.liofilchem.com](http://www.liofilchem.com) for additional terms and conditions of sale.

Previous date: 01.06.2015

Revision date: 02.01.2024

Revision Number: rev. 7

## ENGLISH

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifiers

Product name: NaOH 40% Reagent  
 Product Number: \$080402 – \$080430 – 87002B

#### 1.2 Identified uses of the relevant substance or mixture and uses advised against

Identified uses relevant: Professional uses, Health services, scientific research and development

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

Manufacturer/Supplier: Liofilchem®  
 Address: Via Scozia, 64026 - Roseto degli Abruzzi (TE)  
 Telephone number: 085/8930745  
 Fax number: 085/8930330  
 E-mail address: liofilchem@liofilchem.com

#### 1.4 Emergency telephone number

+39 02-66101029 (Centro Antiveneni Niguarda Cà Granda - Milano).

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]**

Skin Corr. 1A, Skin corrosion (Category 1A); H314

#### 2.2 Label elements

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

##### Pictogram



##### Signal word

Danger

##### Hazard statement(s)

H314 Causes severe skin burns and eye damage.

##### Precautionary statement(s)

P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
 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.  
 P310 Immediately call a POISON CENTER or doctor/physician

**Supplemental Hazard Statements** none

#### 2.3 Other hazards – none

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### 3.2 Mixtures

##### Hazardous substances

CAS n°	EC n°	Index n°	Registration number REACH	Concentration	Classification according Regulation (EC) No 1272/2008
<b>Sodium hydroxide</b>					
1310-73-2	215-185-5	011-002-00-6	-	40.0 %	Skin Corr. 1A; H314

#### Additional Information:

For the full text of H codes mentioned in this section, see section 16

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

**General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact:** immediately take off all contaminated clothing. Wash thoroughly with soap and water. Consult a doctor.

**In case of eye contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult a physician.

**If swallowed:** Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

no data available

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

no data available

## 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Oxides of Carbon.

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

## 6. ACCIDENTAL RELEASE MEASURES

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

Use personal protective equipment. Avoid breathing vapours, mist or gas. Remove all sources of ignition. Ensure adequate ventilation.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided

### 6.3 Metodi e materiali per il contenimento e per la bonifica

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For information on safe handling, see Chapter 7.

For information on personal protection equipment see Chapter 8.

For disposal information see Chapter 13.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. Do not eat or drink in work areas, wash hands after use; and remove contaminated clothing and protective equipment before entering areas where you eat.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature, see the product label.

### 7.3 Specific end uses

Apart from the uses described in section 1.2 are not covered other specific uses.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

**Components with workplace control parameters**

- Sodium hydroxide

Derived No Effect Level (DNEL)			
Application Area	Routes of exposure	Health effect	Value
Worker DNEL, longterm	inhalation	Long-term local effects	1 mg/m3
Consumer DNEL, longterm	inhalation	Long-term local effects	1 mg/m3

## 8.2 Exposure controls

### Exposure controls

Handle in accordance with good hygiene and safety practice. Wash hands before breaks and at the end of workday.

### Personal protective equipment

Eyes/Face Protection: It is advisable wear safety goggles

Skin protection: Handle with gloves

Body Protection: Use protective clothes in accordance with laboratory good practices.

Respiratory protection: It is advisable wear dust mask.

### Environmental exposure control

For information relating to environmental precautions, see chapter 6.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

#### Appearance

Form                                          Liquid  
Color                                          Yellow

#### Odour

No data available

#### Odour Threshold

No data available

#### pH

No data available

#### Melting point/ freezing point

No data available

#### Initial boiling point and boiling range

No data available

#### Flash point

No data available

#### Evaporation rate

No data available

#### Flammability (solid, gas)

No data available

#### Upper / lower flammability or explosive limits

No data available

#### Vapour pressure

No data available

#### Vapour density

No data available

#### Relative density

No data available

#### Water solubility

No data available

#### Partition coefficient: n-octanol/water

No data available

#### Autoignition temperature

No data available

#### Decomposition temperature

No data available

#### Viscosity

No data available

#### Explosive properties

No data available

#### Oxidizing properties

No data available

### 9.2 Other safety information

no data available

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

Heat, flames and sparks.

### 10.5 Incompatible materials

Alkali metals, Oxidizing agents, Peroxides.

### 10.6 Hazardous decomposition products

No decomposition when used for the intended uses.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Acute toxicity** No data available

**Skin corrosion/irritation** NaOH causes severe skin burns

**Serious eye damage/eye irritation** NaOH causes strong caustic effect

**Respiratory or skin sensitization** No data available

**Germ cell mutagenicity** : No data available

**Carcinogenicity** No data available

**Reproductive toxicity** No data available

**Specific target organ toxicity** - No data available

**Specific target organ toxicity - repeated exposure** No data available

**Aspiration hazard** No data available

**Additional information:** RTECS: no data available

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

no data available

### 12.4 Mobility in soil

no data available

### 12.5 Results of PBT and vPvB assessment

This mixture contains no substances evaluated PBT or vPvB

### 12.6 Endocrine disrupting properties

The mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### 12.7 Other adverse effects

no data available

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Not be disposed of with household waste. Do not discharge into sewers.

The product must be specially treated adhering to official regulations administrative. Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product.

## 14. INFORMAZIONI SUL TRASPORTO

### 14.1 UN number

ADR/RID: UN 1824

IMDG: UN 1824

IATA: UN 1824

### 14.2 UN proper shipping name

ADR/RID: SODIUM HYDROXIDE SOLUTION

IMDG: SODIUM HYDROXIDE SOLUTION

IATA: SODIUM HYDROXIDE SOLUTION

#### 14.3 Transport hazard class(es)

ADR/RID: 8                      IMDG: 8                      IATA: 8

#### 14.4 Packaging group

ADR/RID: II                      IMDG: II                      IATA: II

#### 14.5 Environmental hazards

ADR/RID: no                      IMDG: no                      IATA: no

#### 14.6 Special precautions for user

no data available

#### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

no data available

### 15. REGULATORY INFORMATION

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

The product is classified, coded and labeled in accordance with EU Regulation on Hazardous Materials.

#### 15.2 Chemical Safety Assessment

This product has not been made a chemical safety assessment.

### 16. OTHER INFORMATION

#### Text of H code(s)

##### mentioned in Section 3

Skin Corr. 1A, Skin corrosion (Category 1A);

H314 Causes severe skin burns and eye damage

#### Abbreviations and acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

CLP: Regulation concerning the classification, labelling and packaging of substances and mixtures, Regulation (EC) No. 1272/2008.

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

IATA: International Air Transport Association

IMDG: International Maritime Code for Dangerous Goods

CL50: Middle lethal concentration of individuals in essay

DL50: The median lethal dose that causes death in 50% of individuals in essay

PBT: Persistent, bioaccumulative and toxic substance

REACH: Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), Regulation (EC) No. 1907/2006

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail

vPvB: Very persistent and very bioaccumulative substance

#### Training advice

The product must be used by qualified personnel. It is recommended to provide basic training with regard to safety and health at work to ensure proper handling of the product.

#### Further information

This sheet replaces any previous edition.

The information in this document is based on the present state of our knowledge. The user must ensure the accuracy and completeness of such information in relation to the specific use intended.

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Previous date: 01.06.2015

Revision date: 17.04.2023

Revision Number: rev. 5



**Code Number (REF):** \$080426-\$080427-\$080437-\$080278-\$080408-\$080409

**Description:** Vaseline oil

**Date of revision:** Rev. 0 of 17.04.2023

Liofilchem® certifies that the above-mentioned product is not classified hazardous and does not contains hazardous ingredients, substances with Community workplaces exposure limits or substances of very high concern above their disclosure limits according to the criteria described in Regulation (EC) No. 1272/2008. concerning the classification, labelling and packaging of substances and mixtures and its revisions. Consequently, a Material Safety Data Sheet is not provided for this product. (Regulation EC No. 1907/2006 – REACH and Regulation 2020/878).

The product must be used by qualified personnel.

Remind that the waste of the product must be carried out according to legislation in force and in conformity with local regulations

**Matteo Nallira**  
Regulatory Affairs  
(signature on file)

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[www.liofilchem.com](http://www.liofilchem.com)

## ENGLISH

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifiers

Product name: Kovac's Reagent

Product Number: 80271-87001-\$080401-\$080413-\$080415-\$080435

#### 1.2 Identified uses of the relevant substance or mixture and uses advised against

Identified uses relevant: Professional uses, Health services, scientific research and development

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

Manufacturer/Supplier: Liofilchem®

Address: Via Scozia, 64026 - Roseto degli Abruzzi (TE)

Telephone number: 085/8930745

Fax number: 085/8930330

E-mail address: liofilchem@liofilchem.com

#### 1.4 Emergency telephone number

+39 02-66101029 (Centro Antiveleni Niguarda Cà Granda - Milano).

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Flam. Liq. 3, Flammable liquids (Category 3); H226

Skin Corr. 1B, Skin corrosion (Category 1B); H314

Eye Dam. 1, Serious eye damage (Category 1); H318

STOT SE 3, Specific target organ toxicity - single exposure (Category 3); H335, H336

#### 2.2 Label elements

##### Labelling according Regulation (EC) No 1272/2008 [CLP]

#### Pictogram



#### Signal word

Danger

#### Hazard statement(s)

H226 Flammable liquid and vapour.  
 H314 Causes severe skin burns and eye damage.  
 H318 Causes serious eye damage.  
 H335 May cause respiratory irritation.  
 H336 May cause drowsiness or dizziness.

#### Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, flames and other sources of ignition. No smoking.  
 P243 Take precautionary measures against static discharge.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
 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.  
 P310 Immediately call a POISON CENTER or doctor/physician

**Supplemental Hazard Statements** none

#### 2.3 Other hazards – none

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### 3.2 Mixtures

##### Hazardous substances

CAS n°	EC n°	Index n°	Registration number REACH	Concentration	Classification according Regulation (EC) No 1272/2008
<b>Isobutyl alcohol</b>					
78-83-1	201-148-0	603-108-00-1	-	75.0%	Flam. Liq. 3; Skin Irrit. 2; Eye Dam. 1; STOT SE 3; H226, H315, H318, H335, H336
<b>Chloridric acid 37%</b>					
7647-01 -0	231-595-7	-	-	25.0%	Met. Corr. 1; Skin Corr. 1B; STOT SE 3; H290, H314, H318 H335
<b>4-Dimethylaminobenzaldehyde</b>					
100-10-7	202-819-0			0,5 g/l	Skin Sens. 1B; H317

##### Additional Information:

For the full text of H codes and R phrases mentioned in this section, see section 16

### 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

**General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact:** Wash with plenty of soap and water. Consult a physician.

**In case of eye contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult a physician.

**If swallowed:** Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

no data available

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

no data available

### 5. FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Oxides of Carbon.

#### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### 6. ACCIDENTAL RELEASE MEASURES

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

Use personal protective equipment. Avoid breathing vapours, mist or gas. Remove all sources of ignition. Ensure adequate ventilation.

#### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided

#### 6.3 Metodi e materiali per il contenimento e per la bonifica

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

#### 6.4 Reference to other sections

For information on safe handling, see Chapter 7.

For information on personal protection equipment see Chapter 8.

For disposal information see Chapter 13.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. Do not eat or drink in work areas, wash hands after use; and remove contaminated clothing and protective equipment before entering areas where you eat.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.  
 Recommended storage temperature, see the product label.

### 7.3 Specific end uses

Apart from the uses described in section 1.2 are not covered other specific uses.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

- Isobutyl alcohol

Derived No Effect Level (DNEL)			
Application Area	Routes of exposure	Health effect	Value
Worker DNEL, longterm	inhalation	Long-term local effects	310 mg/m3
Consumer DNEL, longterm	Oral	Long-term systemic effects	
Consumer DNEL, longterm	inhalation	Long-term local effects	mg/m3
Predicted No Effect Concentration (PNEC)			
Fresh water		0,4 mg/l	
Sea water		0,04 mg/l	
Aquatic intermittent release		11 mg/l	
Fresh water sediment		1,52 mg/kg	
Sea sediment		0,152 mg/kg	
Soil		0,07 mg/kg	
Sewage treatment plant		10 mg/l	

- Chloridric acid 37 %

IOLEV (UE)	Short-term value: 15 mg/m3, 10 ppm Long-term value: 8 mg/m3, 5 ppm
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### 8.2 Exposure controls

#### Exposure controls

Handle in accordance with good hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

Eyes/Face Protection: It is advisable wear safety goggles

Skin protection: Handle with gloves

Body Protection: Use protective clothes in accordance with laboratory good practices.

Respiratory protection: It is advisable wear dust mask.

#### Environmental exposure control

For information relating to environmental precautions, see chapter 6.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

#### Appearance

Form Liquid  
 Color Yellow

#### Odour

No data available

#### Odour Threshold

No data available

#### pH

No data available

#### Melting point/ freezing point

No data available

#### Initial boiling point and boiling range

> 35°C

#### Flash point

> 23°C - < 60°C

#### Evaporation rate

No data available

#### Flammability (solid, gas)

No data available

<b>Upper / lower flammability or explosive limits</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Vapour density</b>	No data available
<b>Relative density</b>	No data available
<b>Water solubility</b>	soluble
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Autoignition temperature</b>	Product not selfigniting
<b>Decomposition temperature</b>	No data available
<b>Viscosity</b>	No data available
<b>Explosive properties</b>	No data available
<b>Oxidizing properties</b>	No data available

**9.2 Other safety information**  
 no data available

## 10. STABILITY AND REACTIVITY

**10.1 Reactivity**  
 no data available

**10.2 Chemical stability**  
 Stable under recommended storage conditions

**10.3 Possibility of hazardous reactions**  
 no data available

**10.4 Conditions to avoid**  
 Heat, flames and sparks.

**10.5 Incompatible materials**  
 Alkali metals, Oxidizing agents, Peroxides.

**10.6 Hazardous decomposition products**  
 No decomposition when used for the intended uses.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

- **Isobutyl alcohol (CAS NO. 78-83-1)**

**Acute toxicity**

LD50 Oral - Rat - female - 3.350 mg/kg  
 LC50 Inhalation - Rat - male and female - 4 h - 24,6 mg/l – vapor  
 LD50 Dermal - Rabbit - female - 2.460 mg/kg

**Skin corrosion/irritation**

Skin – Rabbit  
 Result: Irritating to skin. - 24 h

**Serious eye damage/eye irritation**

Eyes - Rabbit  
 Result: Corrosive - 24 h

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity** : negative

**Carcinogenicity** No data available

**Reproductive toxicity** No data available

**Specific target organ toxicity** - May cause respiratory irritation. - Respiratory Tract  
 May cause drowsiness or dizziness. - Central nervous system

**Specific target organ toxicity - repeated exposure** No data available

**Aspiration hazard** No data available

- **Chloridric acid 37% (CAS NO. 7647-01 -0)**

**Acute toxicity** No data available

**Skin corrosion/irritation**

Causes severe skin burns and eye damage.

**Serious eye damage/eye irritation**

Strong caustic effect.  
 Strong irritant with the danger of severe eye injury.  
 Causes serious eye damage.

**Inhalation:**

Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.  
 Harmful if inhaled. May cause respiratory tract irritation.

May cause respiratory irritation  
**Respiratory or skin sensitization** No data available  
**Germ cell mutagenicity** : No data available  
**Carcinogenicity** No data available  
**Reproductive toxicity** No data available  
**Specific target organ toxicity** - May cause respiratory irritation. - Respiratory Tract  
**Specific target organ toxicity - repeated exposure** No data available  
**Aspiration hazard** No data available

**Additional information:** RTECS: no data available

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

1-Naphthol effects are: Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 4,1 - 4,7 mg/l - 96 h

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

no data available

### 12.4 Mobility in soil

no data available

### 12.5 Results of PBT and vPvB assessment

This mixture contains no substances evaluated PBT or vPvB

### 12.6 Endocrine disrupting properties

The mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### 12.7 Other adverse effects

no data available

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Not be disposed of with household waste. Do not discharge into sewers.

The product must be specially treated adhering to official regulations administrative. Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product.

## 14. INFORMAZIONI SUL TRASPORTO

### 14.1 UN number

ADR/RID: UN 2924                      IMDG: UN 2924                      IATA: UN 2924

### 14.2 UN proper shipping name

ADR/RID: FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Isobutyl alcohol - Chloridric acid)

IMDG: FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Isobutyl alcohol - Chloridric acid)

IATA: FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Isobutyl alcohol - Chloridric acid)

### 14.3 Transport hazard class(es)

ADR/RID: 3 (8)                              IMDG: 3 (8)                              IATA: 3 (8)

### 14.4 Packaging group

ADR/RID: III                                      IMDG: III                                      IATA: III

### 14.5 Environmental hazards

ADR/RID: no                                      IMDG: no                                      IATA: no

### 14.6 Special precautions for user

no data available

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

no data available

## 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of European Parliament and of the Council Regulation (EC) No. 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) and Commission Regulation (EU) No. 453/2010 amending Commission Regulation (EC) No. 1907/2006.

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

The product is classified, coded and labeled in accordance with EU Regulation on Hazardous Materials.

### 15.2 Chemical Safety Assessment

This product has not been made a chemical safety assessment.

## 16. OTHER INFORMATION

### Text of H code(s) and R-phrases mentioned in Section 3

Flam. Liq. 3, Flammable liquids (Category 3);  
Skin Corr. 1B, Skin corrosion (Category 1B);  
Eye Dam. 1, Serious eye damage (Category 1);  
STOT SE 3, Specific target organ toxicity - single exposure (Category 3);  
H226 Flammable liquid and vapour  
H290 May be corrosive to metals  
H314 Causes severe skin burns and eye damage  
H315 Causes skin irritation  
H318 Causes serious eye damage  
H335 May cause respiratory irritation  
H336 May cause drowsiness or dizziness

### Abbreviations and acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road  
CLP: Regulation concerning the classification, labelling and packaging of substances and mixtures, Regulation (EC) No. 1272/2008.  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
IATA: International Air Transport Association  
IMDG: International Maritime Code for Dangerous Goods  
CL50: Middle lethal concentration of individuals in essay  
DL50: The median lethal dose that causes death in 50% of individuals in essay  
PBT: Persistent, bioaccumulative and toxic substance  
REACH: Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), Regulation (EC) No. 1907/2006  
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail  
vPvB: Very persistent and very bioaccumulative substance

### Training advice

The product must be used by qualified personnel. It is recommended to provide basic training with regard to safety and health at work to ensure proper handling of the product.

### Further information

This sheet replaces any previous edition.  
The information in this document is based on the present state of our knowledge. The user must ensure the accuracy and completeness of such information in relation to the specific use intended.  
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Previous date: 01.06.2015

Revision date: 17.04.2023

Revision Number: rev. 4

## ENGLISH

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifiers

Product name: Alpha Naphtol Reagent  
 Product Number: \$080403 - \$080431 - \$088035A - \$87002B - \$87007B

#### 1.2 Identified uses of the relevant substance or mixture and uses advised against

Identified uses relevant: Professional uses, Health services, scientific research and development

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

Manufacturer/Supplier: Liofilchem®  
 Address: Via Scozia, 64026 - Roseto degli Abruzzi (TE)  
 Telephone number: 085/8930745  
 Fax number: 085/8930330  
 E-mail address: liofilchem@liofilchem.com

#### 1.4 Emergency telephone number

+39 02-66101029 (Centro Antiveleni Niguarda Cà Granda - Milano).

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Flam. Liq. 2, Flammable liquids (Category 3); H225  
 Eye Dam. 1, Serious eye damage (Category 1); H318  
 Aquatic Chronic 3, Chronic toxicity to the aquatic environment (Category 3); H412

#### 2.2 Label elements

##### Labelling according Regulation (EC) No 1272/2008 [CLP]

##### Pictogram



##### Signal word

Danger

##### Hazard statement(s)

H225 Highly flammable liquid and vapour.  
 H318 Causes serious eye damage.  
 H412 Harmful to aquatic life with long lasting effects

##### Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, flames and other sources of ignition. No smoking.  
 P243 Take precautionary measures against static discharge.  
 P273 Avoid release to the environment  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 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 or doctor/physician

**Supplemental Hazard Statements** none

#### 2.3 Other hazards – none

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### 3.2 Mixtures

##### Hazardous substances

CAS n°	EC n°	Index n°	Registration number REACH	Concentration	Classification according Regulation (EC) No 1272/2008
<b>Ethylic alcohol</b>					
64-17-5	200-578-6	603-002-00-5	-	<= 100%	Flam. Liq. 2; H225
<b>14-Naphtol</b>					
90-15-3	201-969-4	604-029-00-5	-	6.0%	Acute Tox. 4; Acute Tox.3; Skin Irrit. 2; Eye Dam.1; Skin Sens. 1A; STOT SE 2; STOT SE 3; Aquatic Acute 1; Aquatic Chronic 3; H302, H311, H315,H318,

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					H317, H371, H335, H400, H411 M-Factor - Aquatic Acute: 1
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**Additional Information:**

For the full text of H codes mentioned in this section, see section 16

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

**General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact:** Wash with plenty of soap and water. Consult a physician.

**In case of eye contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult a physician.

**If swallowed:** Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

no data available

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

no data available

## 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Oxides of Carbon.

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

## 6. ACCIDENTAL RELEASE MEASURES

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

Use personal protective equipment. Avoid breathing vapours, mist or gas. Remove all sources of ignition. Ensure adequate ventilation.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided

### 6.3 Metodi e materiali per il contenimento e per la bonifica

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For information on safe handling, see Chapter 7.

For information on personal protection equipment see Chapter 8.

For disposal information see Chapter 13.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. Do not eat or drink in work areas, wash hands after use; and remove contaminated clothing and protective equipment before entering areas where you eat.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature, see the product label.

### 7.3 Specific end uses

Apart from the uses described in section 1.2 are not covered other specific uses.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

It does not contain substances with occupational exposure limit values

### 8.2 Exposure controls

#### Exposure controls

Handle in accordance with good hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

Eyes/Face Protection: It is advisable wear safety goggles

Skin protection: Handle with gloves

Body Protection: Use protective clothes in accordance with laboratory good practices.

Respiratory protection: It is advisable wear dust mask.

#### Environmental exposure control

For information relating to environmental precautions, see chapter 6.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

#### Appearance

Form Liquid  
 Color Yellow

#### Odour

No data available

#### Odour Threshold

No data available

#### pH

No data available

#### Melting point/ freezing point

No data available

#### Initial boiling point and boiling range

> 35°C

#### Flash point

< 23°C

#### Evaporation rate

No data available

#### Flammability (solid, gas)

No data available

#### Upper / lower flammability or explosive limits

No data available

#### Vapour pressure

No data available

#### Vapour density

No data available

#### Relative density

No data available

#### Water solubility

soluble

#### Partition coefficient: n-octanol/water

No data available

#### Autoignition temperature

Product not selfigniting

#### Decomposition temperature

No data available

#### Viscosity

No data available

#### Explosive properties

No data available

#### Oxidizing properties

No data available

### 9.2 Other safety information

no data available

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

Heat, flames and sparks.

### 10.5 Incompatible materials

Alkali metals, Oxidizing agents, Peroxides.

### 10.6 Hazardous decomposition products

No decomposition when used for the intended uses.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

- **1-Naphtol: 90-15-3**

LD50 Oral - Rat – 1000-2000 mg/kg

LC50 Skin - Rabbit - > 880 mg/kg

**Skin corrosion/irritation** 1-Naphtol causes skin irritation

**Serious eye damage/eye irritation**

- **1-Naphtol: 90-15-3**  
 Eyes - Hen  
 Result: Corrosive

**Respiratory or skin sensitization**

- **1-Naphtol: 90-15-3**  
 LLNA – Mouse - Positive

**Germ cell mutagenicity** : no data available

**Carcinogenicity** No data available

**Reproductive toxicity** No data available

**Specific target organ toxicity** No data available

**Specific target organ toxicity - repeated exposure** No data available

**Aspiration hazard** No data available

**Additional information:** RTECS: no data available

## 12. ECOLOGICAL INFORMATION

**12.1 Toxicity**

1-Naphthol effects are: Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 4,1 - 4,7 mg/l - 96 h

**12.2 Persistence and degradability**

no data available

**12.3 Bioaccumulative potential**

no data available

**12.4 Mobility in soil**

no data available

**12.5 Results of PBT and vPvB assessment**

This mixture contains no substances evaluated PBT or vPvB

**12.6 Endocrine disrupting properties**

The mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**12.7 Other adverse effects**

no data available

## 13. DISPOSAL CONSIDERATIONS

**13.1 Waste treatment methods**

**Product**

Not be disposed of with household waste. Do not discharge into sewers.

The product must be specially treated adhering to official regulations administrative. Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

## 14. INFORMAZIONI SUL TRASPORTO

**14.1 UN number**

ADR/RID: UN 1170                      IMDG: UN 1170                      IATA: UN 1170

**14.2 UN proper shipping name**

ADR/RID: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)  
 IMDG: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)  
 IATA: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

**14.3 Transport hazard class(es)**

ADR/RID: 3                                      IMDG: 3                                      IATA: 3



## **Training advice**

The product must be used by qualified personnel. It is recommended to provide basic training with regard to safety and health at work to ensure proper handling of the product.

## **Further information**

This sheet replaces any previous edition.

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