

ENGLISH

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifiers**

Product name: GRAM COLOR KIT
Product Number: 80293

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, zona industriale, 64026 - Roseto degli Abruzzi (TE)
Telephone number: 085/8930745
Fax number: 085/8930330
E-mail address: liofilchem@liofilchem.net

1.4 Emergency telephone number

Centri antiveneni (24/24h): Pavia - +39 0382/24444; Milano - +39 02/66101029; Bergamo - 800/83300; Firenze - +39 055/7947819; Roma - Gemelli +39 06/3054343; Roma - Umberto I +39 06/49978000; Roma - Bambino Gesù +39 06/68593726; Napoli - +39 081/7472870; Foggia - +39 0881/732326.

This is a summary MSDS for a kit, for the full MSDS for each of the components refer to section 16.

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 Sens. 1, Skin sensitization (Category 1); H317
Eye Irrit. 2, Eye irritation (Category 2); H319
Resp. Sens. 1, Respiratory sensitization (Category 1); H334
Carc. 2, Carcinogenicity (Category 2); H351
STOT SE 3, Specific target organ toxicity - Single exposure (Category 3); H336
STOT RE 2, Specific target organ toxicity — repeated exposure (Category 2); H373
Aquatic Chronic 3, Chronic toxicity to the aquatic environment (Category 3); H412

2.2 Label elements**Labeling according Regulation (EC) No 1272/2008 [CLP]****Pictogram****Signal word**

Danger

Hazard statement(s)

H225 Highly Flammable liquid and vapour.
H317 May cause an allergic skin reaction.
H319 Causes skin irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H351 Suspected of causing cancer.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P201 Obtain special instructions before use.
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P233 Keep container tightly closed.
P273 Avoid release to the environment.
P261 Avoid breathing dust/fume/gas/mist/vapours/ spray
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P341 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P305 + P351 + P338 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P309 + P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

Supplemental Hazard Statements none

2.3 Other hazards - none

3. COMPOSITION / INFORMATION ON INGREDIENTS

Refer to component MSDS

4. FIRST AID MEASURES

Refer to component MSDS

5. FIRE-FIGHTING MEASURES

Refer to component MSDS

6. ACCIDENTAL RELEASE MEASURES

Refer to component MSDS

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 - Not smoking. Take preventive measures to avoid 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 a cool, well-ventilated place. Keep container tightly closed.
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

Refer to component MSDS

9. PHYSICAL AND CHEMICAL PROPERTIES

Refer to component MSDS

10. STABILITY AND REACTIVITY

Refer to component MSDS

11. TOXICOLOGICAL INFORMATION

Refer to component MSDS

12. ECOLOGICAL INFORMATION

Refer to component MSDS

13. DISPOSAL CONSIDERATIONS

Refer to component MSDS

14. INFORMAZIONI SUL TRASPORTO

14.1 UN number

ADR/RID: UN 3316 IMDG: UN 3316 IATA: UN 3316

14.2 UN proper shipping name

ADR/RID: CHEMICAL KIT
IMDG: CHEMICAL KIT
IATA: CHEMICAL KIT

14.3 Transport hazard class(es)

ADR/RID: 9 IMDG: 9 IATA: 9

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

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

Kit Components:

80293A Bottle 1	Crystal Violet Solution	Flam. Liq. 3, Flammable liquids (Category 3); H226 Eye Irrit. 2, Eye irritation (Category 2); H319 Carc. 2, Carcinogenicity (Category 2); H351 STOT RE 2, Specific target organ toxicity — repeated exposure (Category 2); H373 Aquatic Chronic 3, Chronic toxicity to the aquatic environment (Category 3); H412
80293B Bottle 2	Lugol PVP Solution	Skin Sens. 1, Skin sensitization (Category 1); H317 Resp. Sens. 1, Respiratory sensitization (Category 1); H334
80293C Bottle 3	Decolourizing Solution	Flam. Liq. 2, Flammable liquids (Category 2); H225 Eye Irrit. 2, Eye irritation (Category 2); H319 STOT SE 3, Specific target organ toxicity - Single exposure (Category 3); H336
80293D Bottle 4	Safranin Solution	Not dangerous

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.net for additional terms and conditions of sale.

Previous date: 09.05.2017

Revision date: 02.11.2017

Revision Number: rev. 9

ENGLISH

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

1.1 Product identifiers

Product name: Crystal Violet Solution
Product Number: 80293A (Bottle 1)

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, zona industriale, 64026 - Roseto degli Abruzzi (TE)
Telephone number: 085/8930745
Fax number: 085/8930330
E-mail address: liofilchem@liofilchem.net

1.4 Emergency telephone number

Centri antiveneni (24/24h): Pavia - +39 0382/24444; Milano - +39 02/66101029; Bergamo - 800/83300; Firenze - +39 055/7947819; Roma - Gemelli +39 06/3054343; Roma - Umberto I +39 06/49978000; Roma - Bambino Gesù +39 06/68593726; Napoli - +39 081/7472870; Foggia - +39 0881/732326

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
Eye Irrit. 2, Eye irritation (Category 2); H319
Carc. 2, Carcinogenicity (Category 2); H351
STOT RE 2, Specific target organ toxicity — repeated exposure (Category 2); H373
Aquatic Chronic 3, Chronic toxicity to the aquatic environment (Category 3); H412

2.2 Label elements

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

Pictogram



Signal word

Danger

Hazard statement(s)

H226 Flammable liquid and vapour.
H319 Causes skin irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P201 Obtain special instructions before use.
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P233 Keep container tightly closed.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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
Ethylene glycol					
107-21-1	203-473-3	603-027-00-1	01-2119456816-28-XXXX	20 - 25 %	Acute Tox. 4; STOT RE 2; H302, H373
Ethyl alcol					
64-17-5	200-578-6	603-002-00-5	01-2119457610-43-XXXX	12 - 15 %	Flam. Liq. 2; Eye Irrit. 2 H319, H225
Crystal violet					
548-62-9	208-953-6	612-204-00-2	-	1 - 2.5 %	Acute Tox. 4; Skin Irrit. 2; Carc. 2; Aquatic Acute 1 (M=1); Aquatic Chronic 1 (M=1); H302, H315, H351, H400, H410

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: Remove contaminated clothing. Immediately take the shower. Consult a physician.

In case of eye contact: Remove contact lenses, if present and easy to do. Wash immediately and abundantly with water for at least 30/60 minutes, opening well eyelids. If eye irritation persists: Get medical advice/attention.

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: CO₂, foam, chemical powder for flammable liquids.

Unsuitable extinguishing media: Do not use water jets. Water is not effective in extinguishing the fire however it can be used to cool the closed containers exposed to the flame by preventing bursts and explosions.

5.2 Special hazards arising from the substance or mixture

Overpressure can be created in the containers exposed to fire with danger of explosion. Avoid breathing combustion products.

5.3 Advice for firefighters

General information: Cool containers with water jets to avoid product decomposition and the development of substances potentially hazardous to health. Wear always complete fire protection equipment. Collect extinguishing water that should not be discharged into drains. Dispose of contaminated water used for fire extinguishing and residues according to applicable regulations.

Equipment: Fire fighting equipment such as an open air compressor (EN 137), full flame retardant (EN469), flame retardant gloves (EN 659) and boots for firefighters (HO A29 or A30).

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Block the loss if there is no danger. Keep away unprotected persons. Eliminate any source of ignition (cigarettes, flames, sparks, etc.) or heat from the area where the leak occurred.

Wear suitable protective equipment to prevent skin, eye and personal contamination. These instructions are valid for both workmen and emergency workers.

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

Aspirate the spilled product in a suitable container. Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. Ensure sufficient ventilation of the affected area.

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 - Not smoking. Take preventive measures to avoid 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 a cool, well-ventilated place. Keep container tightly closed.

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

Ethylene glycol: 107-21-1

VLEP (ITA)	TWA/8h	STEL/15min
	20 ppm	40 ppm
TLV-ACGIH	52 mg/m ³	104 mg/m ³
	TWA/8h	STEL/15min
	-	100 mg/m ³

Ethyl alcohol: 64-17-5

VLEP (GBR)	TWA/8h	STEL/15min
	1000 ppm	-
TLV-ACGIH	1920 mg/m ³	
	TWA/8h	STEL/15min
	-	1000 ppm
		1884 mg/m ³

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. For the final choice of work glove material must be considered: compatibility, degradation, breakage times and permeation.

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

Respiratory protection: It is advisable to use the mask. The use of respiratory protection means is necessary if the technical measures taken are not sufficient to limit the exposure of the worker to the threshold values of the substance or one or more of the substances present in the product.

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	Violet

Odour

Characteristic

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	38°C
Evaporation rate	No data available
Flammability (solid, gas)	Not applicable
Upper / lower flammability or explosive limits	Not applicable
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	Product is not explosive
Oxidizing properties	Not applicable

9.2 Other safety information

no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

There are no particular dangers of reaction with other substances under normal conditions of use

10.2 Chemical stability

The product is stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions

No hazardous reactions known if handled and stored in accordance with the regulations.

10.4 Conditions to avoid

Avoid overheating. Avoid accumulation of electrostatic charges. Avoid any source of ignition.

10.5 Incompatible materials

Strong acids, Strong bases, Strong oxidizing agents.

10.6 Hazardous decomposition products

Thermal decomposition or fire may liberate gases and vapors that are potentially harmful to health.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity: LD50 (Oral) of the mixture: 23212.389 mg / kg

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: Causes serious eye irritation

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity: Suspected of causing cancer.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: It can cause damage to organs.

Aspiration hazard: no data available

Additional information: RTECS: no data available

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Ethylene glycol effects are:

Toxicity to fish LC50 - Pimepales promelas, 72860 mg/l/96h

Toxicity to daphnia and other aquatic invertebrates EC50 – Daphnia magna > 100 mg/l/48h

NOEC Chronic fish 15830 mg/l Pimephales promelas (7 gg)

Ethyl alcohol effects are:

Toxicity to daphnia and other aquatic invertebrates CE50 – Daphnia magna > 10 mg/l/48h

Toxicity to algae EC50 - Algae / Aquatic Plants > 10 mg/l/72h

EC10 - Algae / Aquatic Plants > 11 mg/l/72h

NOEC Chronic fish 12,34 mg/l

NOEC Chronic Algae / Aquatic Plants > 3 mg/l

Crystal violet effects are:

Toxicity to fish LC50 – Pimepales promelas, 72860 mg/l/96h

Toxicity to daphnia and other aquatic invertebrates CE50 – Daphnia magna 0,24 mg/l/48h (0,24-5 mg/l)

Toxicity to algae CE50 - Pseudokirchneriella subcapitata 0,025 mg/l/72h (0,025-0.8 mg/l)

12.2 Persistence and degradability

Ethylene glycol effects are: Biodegradation to the ground. In biodegradable water both aerobically and anaerobically. Photodegradation in the air

Ethyl alcohol effects are: BOD20 (biological oxygen demand) = 84%. Rapidly biodegradable.

12.3 Bioaccumulative potential

Ethyl alcohol effects are: An estimated BCF of 3 suggests low bioconcentration potential in aquatic organisms (HSDB, 2015).

12.4 Mobility in soil

Ethylene glycol effects are: High mobility on the ground. Volatility from wet surfaces and water is not significant; Does not adsorb sediment and suspended solids. In the atmosphere there is in steam phase.

Ethyl alcohol effects are: Ethanol is not persistent in the environment.

12.5 Results of PBT and vPvB assessment

This mixture contains no substances evaluated PBT or vPvB

12.6 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

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. 2, Flammable liquids (Category 2)

Acute Tox. 4 Acute toxicity (Category 4)

Skin Irrit. 2 Skin irritation (Category 2)

Aquatic Acute 1 Acute aquatic toxicity (Category 1)

Aquatic Chronic 1 Chronic aquatic toxicity (Category 1)

H225 Highly Flammable liquid and vapour.

H302 Harmful if swallowed

H319 Causes serious eye irritation

H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects

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.net for additional terms and conditions of sale.

Previous date: 01.06.2015

Revision date: 09.05.2017

Revision Number: rev. 8

ENGLISH

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

1.1 Product identifiers

Product name: Lugol PVP Solution
Product Number: 80293B (Bottle 2)

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, zona industriale, 64026 - Roseto degli Abruzzi (TE)
Telephone number: 085/8930745
Fax number: 085/8930330
E-mail address: liofilchem@liofilchem.net

1.4 Emergency telephone number

Centri antiveneni (24/24h): Pavia - +39 0382/24444; Milano - +39 02/66101029; Bergamo - 800/83300; Firenze - +39 055/7947819; Roma - Gemelli +39 06/3054343; Roma - Umberto I +39 06/49978000; Roma - Bambino Gesù +39 06/68593726; Napoli - +39 081/7472870; Foggia - +39 0881/732326.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Skin Sens. 1, Skin sensitization (Category 1); H317
Resp. Sens. 1, Respiratory sensitization (Category 1); H334

2.2 Label elements

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

Pictogram



Signal word Danger

Hazard statement(s)

H317 May cause an allergic skin reaction.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statement(s)

P280 Wear protective gloves.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P342 + P311 If experiencing respiratory symptoms: 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
Potassium iodide					
7681-11-0	231-659-4	-	-	2 - 5 %	Skin Irrit. 2; Skin Sens. 1; Eye Irrit. 2; Resp. Sens. 1; H315, H317, H319, H334

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: Remove contaminated clothing. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Remove any contact lenses. Wash immediately and abundantly with water for at least 15 minutes, opening your eyelids well. Consult a physician if the problem persists.

If swallowed: 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: Carbon dioxide, foam, powder and water spray.

5.2 Special hazards arising from the substance or mixture

Avoid breathing combustion products. Do not inhale gases from explosion and combustion. Combustion produces heavy smoke

5.3 Advice for firefighters

General information: Cool with water jets containers to avoid product decomposition and the development of substances potentially hazardous to health. Always wear complete fire protection equipment. Collect the extinguishing water that should not be discharged into drains. Dispose of contaminated water used for fire extinguishing and residues according to applicable regulations.

Equipment: Fire fighting equipment such as an open air compressor (EN 137), full flame retardant (EN469), flame retardant gloves (EN 659) and boots for firefighters (HO A29 or A30).

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Block the loss if there is no danger. Keep away unprotected persons. Eliminate any source of ignition (cigarettes, flames, sparks, etc.) or heat from the area where the leak occurred.

Wear suitable protective equipment to prevent skin, eye and personal contamination. These instructions are valid for both workmen and emergency workers.

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

Aspirate the spilled product in a suitable container. Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. Ensure sufficient ventilation of the affected area.

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

Do not eat, drink or smoke 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 a cool, well-ventilated place. Keep container tightly closed.

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

Potassium Iodide: 7681-11-0

TLV-ACGIH	TWA/8h	STEL/15min
	0,01 ppm	-

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. For the final choice of work glove material must be considered: compatibility, degradation, breakage times and permeation.

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

Respiratory protection: It is advisable to use the mask. The use of respiratory protection means is necessary if the technical measures taken are not sufficient to limit the exposure of the worker to the threshold values of the substance or one or more of the substances present in the product.

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	Red-Brown

Odour

No data available

Odour Threshold

No data available

pH

2-4

Melting point/ freezing point

No data available

Initial boiling point and boiling range

110°C

Flash point

No data available

Evaporation rate

No data available

Flammability (solid, gas)

Not applicable

Upper / lower flammability or explosive limits

Not applicable

Vapour pressure

No data available

Vapour density

No data available

Relative density

1,08

Water solubility

No data available

Partition coefficient: n-octanol/water

No data available

Autoignition temperature

Product not selfigniting

Decomposition temperature

No data available

Viscosity

No data available

Explosive properties

Product is not explosive

Oxidizing properties

Not applicable

9.2 Other safety information

no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

There are no particular dangers of reaction with other substances under normal conditions of use

10.2 Chemical stability

The product is stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions

No hazardous reactions known if handled and stored in accordance with the regulations.

10.4 Conditions to avoid

None in particular. However, be aware of the usual caution to chemicals.

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

No decomposition when used for the intended uses.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

Potassium Iodide effects are: LD50 (Oral). 2779 mg / kg rat
LD50 (Cutanea). 3160 mg / kg rabbit

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen by IARC or expected.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: 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

Potassium iodide effects are:

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia 7,5 mg/l/48h

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 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: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

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

Skin Irrit. 2 Skin irritation (Category 2)

Eye Irrit. 2 Eye irritation (Category 2)

H315 Causes skin irritation.

H319 Causes serious eye irritation.

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.net for additional terms and conditions of sale.

Previous date: 01.06.2015

Revision date: 09.05.2017

Revision Number: rev. 6

ITALIANO

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifiers**

Product name: Decolourizing Solution

Product Number: 80293C (Bottle 3)

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, zona industriale, 64026 - Roseto degli Abruzzi (TE)

Telephone number: 085/8930745

Fax number: 085/8930330

E-mail address: liofilchem@liofilchem.net

1.4 Emergency telephone number

Centri antiveneni (24/24h): Pavia - +39 0382/24444; Milano - +39 02/66101029; Bergamo - 800/83300; Firenze - +39 055/7947819; Roma - Gemelli +39 06/3054343; Roma - Umberto I +39 06/49978000; Roma - Bambino Gesù +39 06/68593726; Napoli - +39 081/7472870; Foggia - +39 0881/732326.

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

Eye Irrit. 2, Eye irritation (Category 2); H319

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

2.2 Label elements**Labeling according Regulation (EC) No 1272/2008 [CLP]****Pictogram****Signal word**

Danger

Hazard statement(s)

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P233 Keep container tightly closed.

P261 Avoid breathing dust/fume/gas/mist/vapours/ spray.

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

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

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
Acetone					
67-64-1	200-662-2	606-001-00-8	01-2119471330-49-XXXX	48 - 52 %	Flam. Liq. 2; Eye Irrit. 2; STOT SE 3; H225, H319, H336, EUH066
Ethanol					
64-17-5	200-578-6	603-002-00-5	01-2119457610-43-XXXX	48 - 52 %	Flam. Liq. 2; Eye Irrit. 2; H225, H319
Propan-2-olo					
67-63-0	200-661-7	603-117-00-0	01-2119457610-43-XXXX	2 - 4 %	Flam. Liq. 2; Eye Irrit. 2; STOT SE 3; H225, H319, H336

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: Remove contaminated clothing. Wash immediately and abundantly with water. If irritation persists, consult a physician. Wash contaminated clothing before re-use.

In case of eye contact: Remove any contact lenses. Wash immediately and abundantly with water for at least 15 minutes, opening your eyelids well. Consult a physician if the problem persists.

If swallowed: Consult a physician. Do not induce vomiting. Never give anything by mouth to an unconscious person if not authorized by the 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: Carbon dioxide, foam, chemical powder for flammable liquids.

Unsuitable extinguishing media: Do not use water jets. Water is not effective in extinguishing the fire however it can be used to cool the closed containers exposed to the flame by preventing bursts and explosions.

5.2 Special hazards arising from the substance or mixture

Acetone: Vapors may cause dizziness, fainting or choking.

Fire-fighting operations must take into account the risk of explosion; Fire-fighting personnel must therefore act in a protected location. Containers may explode if exposed to fire.

5.3 Advice for firefighters

Water may not be effective in extinguishing the fire, however it should be used to cool flammable containers and prevent bursts and explosions. For leakages and spills that have not burned, water spray can be used to disperse flammable vapors and protect people committed to stop the loss. It is not advisable to use direct water jets.

Equipment: wear complete equipment with visor helmet and neck protector, self-contained breathing apparatus or demand, fire jacket and trousers with bands around your arms, legs and waist.

6. ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures**

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures. Send away individuals who are not suitably equipped. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

6.2 Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water..

6.3 Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. If the product is flammable, use explosion-proof equipment. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

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

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

7.2 Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

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

Acetone: 67-64-1

Type	Country	TWA/8h		STEL/15min		
		mg/m ³	ppm	mg/m ³	ppm	
VLEP	ITA	1210	500			
OEL	EU	1210	500			
TLV-ACGIH		1187	500	1781	750	irrt oclr e TRS, ssnc, sng

Ethanol: 64-17-5

Type	Country	TWA/8h		STEL/15min		
		mg/m ³	ppm	mg/m ³	ppm	
VLA	ESP	1910	1000			
WEL	GBR	1910	1000			
TLV-ACGIH				1884	1000	irrt TRS

Propan-2-olo: 67-63-0

Type	Country	TWA/8h		STEL/15min		
		mg/m ³	ppm	mg/m ³	ppm	
VLA	ESP		400		500	
WEL	GBR		400		500	
TLV-ACGIH			200		400	irrt TRS

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. For the final choice of work glove material must be considered: compatibility, degradation, breakage times and permeation.

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

Skin corrosion/irritation: Repeated exposure may cause skin dryness and cracking. It does not meet the classification criteria for this class of danger.

Acetone: Skin application may result in erythema and slight edema. The liquid has degreasing properties of the skin. Repeated skin contact can cause dryness and cracking.

Propan-2-olo: The substance is not irritating.

Serious eye damage/eye irritation: Causes serious eye irritation

Acetone: It has irritating power. Contact with the eye causes burning to regress quickly after washing. In the literature there is a case of permanent corneal injury..

Ethanol: Moderately irritant (OECD, 2004). In man, direct contact with ethanol causes pain, tearing, corneal epithelial lesions and conjunctival hyperemia; the sensation of a foreign body in the eye may last 1 or 2 days, but in general, healing is spontaneous, rapid and complete (INRS, 2011; OECD, 2004).

Rabbit eye pure ethanolate causes moderate ocular irritation which is manifested with a slight opacity of the cornea and a moderate to severe conjunctivitis. These effects are reversible in less than 14 days [OECD TG 405] (INRS, 2011; OECD, 2004).

Propan-2-olo: It has irritating power

Respiratory or skin sensitization:

Does not meet the classification criteria for this hazard class

Germ cell mutagenicity: Does not meet the classification criteria for this hazard class

Carcinogenicity: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity: Does not meet the classification criteria for this hazard class

Specific target organ toxicity - single exposure: May cause drowsiness or dizziness

Acetone: It has irritating power for the respiratory system for exposures of 500 ppm. Exposure at high concentrations can lead to attenuation of the watch.

Ethanol: In man, in cases of acute intoxication by ingestion, manifestations are essentially neuropsychic (intellectual and psychic excitement with cerebellar motor incoordination, then more or less profound and possible paralysis of respiratory centers) (INRS, 2011).

Propan-2-olo: It is irritating to the respiratory system. Strong concentrations cause SNC depression with narcosis

Specific target organ toxicity - repeated exposure: Does not meet the classification criteria for this hazard class

Acetone: In addition to ocular and respiratory irritation phenomena, sometimes subjective, mild and transient neurological signs (asthenia, drowsiness, dizziness) have been observed for inhaled exposure.No oral studies are available. Repeated skin exposure may result in irritation from dermatitis.

Ethanol: L'esposizione ripetuta per ingestione determina tossicità a carico del sistema nervoso (polinevrite, atrofia cerebellare, disturbi della memoria), dell'apparato digerente (steatosi e cirrosi epatica, gastrite cronica, pancreatite) dell'apparato cardiovascolare (miocardiopatia, ipertensione arteriosa) (INRS, 2011).

Propan-2-olo: Il liquido ha caratteristiche sgrassanti la cute. Nei ratti, l'esposizione di lungo termine per via inalatoria e/o digestiva causa essenzialmente depressione del SNC e lesioni renali..

Aspiration hazard: Does not meet the classification criteria for this hazard class

Additional information: RTECS: no data available

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Acetone: LC50 - Fish 5540 mg/l/96h
EC50 - Crustaceans 8800 mg/l/48h

Ethanol:

Short-term effects

Fish (*Pimephales promelas*) CL50-96 ore > 100 mg/l (OECD, 2004);
Crustaceans (*Artemia salina*) CL50-24 ore: 1833 mg/l (OECD, 2004);
Crustaceans (*Paramecium caudatum*) CL50-4 ore: 5980 mg/l (OECD, 2004);
Algae (*Chlorella vulgaris*) CE50-96 ore: 1000 mg/l (growth inhibition) (OECD, 2004).
EC50 - Crustaceans > 10 mg/l/48h
EC50 - Algae / Aquatic Plants > 10 mg/l/72h
EC10 Algae / Aquatic Plants > 11 mg/l/72h
NOEC Chronic Fish 12,34 mg/l
NOEC Chronic Algae / Aquatic Plants > 3 mg/l

Long-term effects

Crustaceans (*Ceriodaphnia* sp.) NOEC-10 giorni: 9,6 mg/l (effects on reproduction) (OECD, 2004)
Algae (*Lemna gibba*) NOEC-7 days: 280 mg/l (OECD, 2004).

Propan-2-olo:

LC50 - Fish 9640 mg/l/96h
EC50 - Crustaceans 13299 mg/l/48h
EC50 - Algae / Aquatic Plants > 1000 mg/l/72h
LC10 Fish 1500 mg/l/96h

12.2 Persistence and degradability

Acetone: It is expected to biodegrade.

Ethanol: Rapidly degradable.

Propan-2-olo: It is expected to biodegrade. The vapor phase degrades photochemically in the atmosphere.

12.3 Bioaccumulative potential

Acetone: Bioconcentrates are not expected in aquatic organisms.

Ethanol: An estimated BCF of 3 suggests low bioconcentration potential in aquatic organisms (HSDB, 2015).

12.4 Mobility in soil

Acetone: It is not expected to adsorb to sediments. High soil mobility.

Ethanol: Ethanol is not persistent in the environment.

Propan-2-olo: High mobility on the ground. Volatile from wet surfaces. Does not adsorb sediment and suspended solids. In the atmosphere there is a vapor phase.

12.5 Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6 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 1993 IMDG: UN 1993 IATA: UN 1993

14.2 UN proper shipping name

ADR/RID: LIQUIDO INFIAMMABILE, N.A.S. (ACETONE, ETHANOL)
IMDG: FLAMMABLE LIQUID, N.O.S. (ACETONE, ETHANOL)
IATA: FLAMMABLE LIQUID, N.O.S. (ACETONE, ETHANOL)

14.3 Transport hazard class(es)

ADR/RID: 3 IMDG: 3 IATA: 3

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

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

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.net for additional terms and conditions of sale.

Previous date: 09.05.2017

Revision date: 02.11.2017

Revision Number: rev. 6

ENGLISH

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifiers**

Product name: Safranin Solution

Product Number: 80293D (Bottle 4)

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, zona industriale, 64026 - Roseto degli Abruzzi (TE)

Telephone number: 085/8930745

Fax number: 085/8930330

E-mail address: liofilchem@liofilchem.net

1.4 Emergency telephone number

Centri antiveleni (24/24h): Pavia - +39 0382/24444; Milano - +39 02/66101029; Bergamo - 800/83300; Firenze - +39 055/7947819; Roma - Gemelli +39 06/3054343; Roma - Umberto I +39 06/49978000; Roma - Bambino Gesù +39 06/68593726; Napoli - +39 081/7472870; Foggia - +39 0881/732326.

2. HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture**

This product does not meet the criteria for classification in any hazard class in accordance to Regulation (EC) No. 1272/2008. concerning the classification, labelling and packaging of substances and mixtures.

2.2 Label elements

The product does not need to be labeled in accordance with EC directives or respective national laws.

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
Ethyl alcol					
64-17-5	200-578-6	603-002-00-5	01-2119457610-43-XXXX	5 - 10 %	Flam. Liq. 2; H225
Ethylene glycol					
107-21-1	203-473-3	603-027-00-1	01-2119456816-28-XXXX	1 - 5 %	Acute Tox. 4; STOT RE 2; H302, H373

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:** Remove contaminated clothing. Immediately take the shower. Consult a physician.**In case of eye contact:** Remove contact lenses. Wash immediately and abundantly with water, opening well eyelids. If eye irritation persists Get medical advice/attention.**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: CO₂, foam, chemical powder for flammable liquids.

5.2 Special hazards arising from the substance or mixture

no data available

5.3 Advice for firefighters

Equipment: wear complete equipment with visor helmet and neck protector, self-contained breathing apparatus or pressure pad, jacket and Fireproof pants, with bands around your arms, legs and waist.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Block the loss if there is no danger. Wear suitable protective equipment to prevent skin, eye and personal contamination. These instructions are valid for both workmen and emergency workers.

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

Aspirate the spilled product in a suitable container. Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. Ensure sufficient ventilation of the affected area.

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. 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

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

Ethylene glycol: 107-21-1

OEL	TWA/8h	STEL/15min
	20 ppm	40 ppm
TLV	52 mg/m ³	104 mg/m ³
	TWA/8h	STEL/15min
	20 ppm	40 ppm
	52 mg/m ³	104 mg/m ³

Ethyl alcohol: 64-17-5

TLV-ACGIH	TWA/8h	STEL/15min
	-	1000 ppm
		1884 mg/m ³

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. For the final choice of work glove material must be considered: compatibility, degradation, breakage times and permeation.

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

Respiratory protection: It is advisable to use the mask. The use of respiratory protection means is necessary if the technical measures taken are not sufficient to limit the exposure of the worker to the threshold values of the substance or one or more of the substances present in the product.

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 Red

Odour

Characteristic

Odour Threshold

No data available

pH

No data available

Melting point/ freezing point

No data available

Initial boiling point and boiling range

92°C

Flash point

> 60°C

Evaporation rate

No data available

Flammability (solid, gas)

Not applicable

Upper / lower flammability or explosive limits

3,5 % (V/V) – 15 % (V/V)

Vapour pressure

No data available

Vapour density

No data available

Relative density

0,990 kg/l

Water solubility

soluble

Partition coefficient: n-octanol/water

No data available

Autoignition temperature

425°C

Decomposition temperature

No data available

Viscosity

No data available

Explosive properties

Not applicable

Oxidizing properties

Not applicable

9.2 Other safety information

no data available

10. STABILITY AND REACTIVITY**10.1 Reactivity**

There are no particular dangers of reaction with other substances under normal conditions of use

10.2 Chemical stability

The product is stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions

No hazardous reactions known if handled and stored in accordance with the regulations.

10.4 Conditions to avoid

None in particular. However, be aware of the usual caution to chemicals.

10.5 Incompatible materials

Strong oxidizing agents, strong bases

10.6 Hazardous decomposition products

No decomposition when used for the intended uses.

11. TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects**

Acute toxicity: Ethylene glycol effects are: LD50 (Oral). 7712 mg / kg rat
LD50 (Dermal). > 3500 mg / kg mouse
LC50 (Inhalation). > 2.5 mg / l / 6h rat (aerosol)

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity: no data available**Specific target organ toxicity - single exposure:** 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***Ethylene glycol effects are:*

Toxicity to fish LC50 - Pimepales promelas, 72860 mg/l/96h

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna > 100 mg/l/48h

NOEC Chronic fish 15830 mg/l Pimephales promelas (7 gg)

Ethyl alcohol effects are:

Toxicity to daphnia and other aquatic invertebrates CE50 - Daphnia magna > 10 mg/l/48h

Toxicity to algae EC50 - Algae / Aquatic Plants > 10 mg/l/72h

EC10 - Algae / Aquatic Plants > 11 mg/l/72h

NOEC Chronic fish 12,34 mg/l

NOEC Chronic Algae / Aquatic Plants > 3 mg/l

12.2 Persistence and degradability*Ethylene glycol effects are:* Biodegradation to the ground. In biodegradable water both aerobically and anaerobically.

Photodegradation in the air

Ethyl alcohol effects are: BOD20 (biological oxygen demand) = 84%. Rapidly biodegradable.**12.3 Bioaccumulative potential**

no data available

12.4 Mobility in soil*Ethylene glycol effects are:* High mobility on the ground. Volatility from wet surfaces and water is not significant; Does not adsorb sediment and suspended solids. In the atmosphere there is In steam phase.*Ethyl alcohol effects are:* Ethanol is not persistent in the environment.**12.5 Results of PBT and vPvB assessment**

This mixture contains no substances evaluated PBT or vPvB

12.6 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: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

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

STOT RE 2, Specific target organ toxicity — repeated exposure (Category 2)

Acute Tox. 4 Acute toxicity (Category 4)

Flam. Liq. 2 Flammable liquids (Category 2)

H225 Flammable liquid and vapour

H302 Harmful if swallowed

H373 May cause damage to organs through prolonged or repeated exposure.

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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