

ENGLISH

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

1.1 Product identifiers

Product name: Kit Color Albert
Product Number: 80294

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

Identified uses relevant: Professional uses, 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.com

1.4 Emergency telephone number

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

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

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 - Refer to component MSDS

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

Refer to component MSDS

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: - IMDG: - IATA: -

Refer to component MSDS

14.2 UN proper shipping name

ADR/RID: Refer to component MSDS

IMDG: Refer to component MSDS

IATA: Refer to component MSDS

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

Refer to component MSDS

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

Refer to component MSDS

14.5 Environmental hazards

ADR/RID: - IMDG: - IATA: -

Refer to component MSDS

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.

The product does not contain any restricted substances – Article XIV & Article XVIII REACH

15.2 Chemical Safety Assessment

This product has not been made a chemical safety assessment.

16. OTHER INFORMATION

Kit Components:

80294A Toluidin/Malachite Solution Not Dangerous

80294B Lugol 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.com. for additional terms and conditions of sale.

Previous date: 01.06.2015

Revision date: 19.03.2025

Revision Number: rev. 5

ENGLISH

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

1.1 Product identifiers

Product name: Toluidin/Malachite Solution
Product Number: 80294A (Bottle 1)

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

Identified uses relevant: Professional uses, 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@lioilchem.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

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

This substance/mixture does not contain components considered to be both persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at concentrations of 0.1% or higher.

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

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
Acetic acid					
64-19-7	200-580-7	607-002-00-6	01-2119475328-30-XXXX	1,0%	Flam. Liq. 3; Skin Corr. 1A; Eye Dam. 1. H226, H314, H318
Malachite green oxalate					
2437-29-8	219-441-7	602-096-00-5	-	0,2%	Acute Tox. 3; Eye Dam. 1; Repr. 2; Aquatic Acute 1; Aquatic Chronic 1; H301, H318, H361fd, H400, H410

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 off with soap and plenty of water. Consult a physician.

In case of eye contact: Flush eyes with water as a precaution.

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

The mixture is non-flammable and does not pose a fire hazard

5.2 Special hazards arising from the substance or mixture

The product is stable under normal conditions.

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

Avoid reagent contamination. Use personal protection equipment (see section 8 of the safety data sheet). use protective nitrile gloves and protective goggles. Wash your hands after cleaning up the spillage

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 Methods and materials for containment and cleaning up

Contain and collect the spill. Transfer to chemical waste container for disposal according to section 13 of the SDS. Wash off with plenty of water and detergents. Do not allow to dry out and form dust.

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

Follow the rules of laboratory work. Observe the precautions for handling laboratory reagents. Do not pipette by mouth. Contact of the diagnostic reagent with the skin and especially with the mucous membranes should be avoided. Wash hands after handling reagents. Do not use together with copper and lead. Avoid breathing vapors or mist. Do not consume. Avoid contact with skin and eyes. Good general ventilation should be sufficient to control airborne contaminants. Handle and open the container with care. Wear suitable protective clothing, gloves and eye/face protection. Do not eat, drink or smoke while using the product

7.2 Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a cold room at a temperature of 4-8°C. Keep away from incompatible materials. Opened containers must be resealed and kept upright to prevent leakage. Avoid long storage periods

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

Copper and lead

10.6 Hazardous decomposition products

No decomposition when used for the intended uses.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

- **Acetic acid (CAS no. 64-19-7)**
LD50 Oral – Rat – 3.310 mg/kg
LC50 Inhalation – Mouse – 4 h – 2.819 mg/l – steam

- **Malachite green oxalate (CAS no.2437-29-8)**
LD50 Oral – Rat – 275 mg/kg

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: no data available

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

11.2 Other informations

Endocrine disrupting properties: The substance/mixture does not contain components considered to have endocrine disrupting properties in accordance with Article 57(f) of REACH or Commission Delegated Regulation (EU) 2017/2100 or Regulation (EU) 2018/605 of the Commission at levels of 0.1% or higher

12. ECOLOGICAL INFORMATION

12.1 Toxicity

- **Acetic acid (CAS no. 64-19-7)**
semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 1.000 mg/l - 96 h
static test EC50 - Daphnia magna (Water flea) - > 1.000 mg/l - 48 h
static test EC50 - Skeletonema costatum - > 1.000 mg/l - 72 h
EC5 - Pseudomonas putida - 2.850 mg/l - 16 h
microtox test EC50 - Photobacterium phosphoreum - 11 mg/l - 15 min

- **Malachite green oxalate (CAS no.2437-29-8)**
EC50 - Daphnia magna (Water flea) - 0,29 mg/l - 48 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

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

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. for additional terms and conditions of sale.

Previous date 01.06.2015

Revision date: 19.03.2025

Revision Number: rev. 5

ENGLISH

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

1.1 Product identifiers

Product name: Lugol Solution
 Product Number: 80294B (Bottle 2)

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

Identified uses relevant: Professional uses, 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

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

This substance/mixture does not contain components considered to be both persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at concentrations of 0.1% or higher.

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

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	-	-	0,99%	STOT RE 1, H372
Iodine					
7553-56-2	231-442-4	053-001-00-3	01-2119485285-30-XXXX	0,67%	Acute Tox.4 H302 Acute Tox. 4 H312 Acute Tox. 4 H332 Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE 3 H335 STOT RE 1 H372 Aquatic Acute 1 H400

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 off with soap and plenty of water. Consult a physician.

In case of eye contact: Flush eyes with water as a precaution.

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

The mixture is non-flammable and does not pose a fire hazard

5.2 Special hazards arising from the substance or mixture

The product is stable under normal conditions.

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

Avoid reagent contamination. Use personal protection equipment (see section 8 of the safety data sheet). use protective nitrile gloves and protective goggles. Wash your hands after cleaning up the spillage

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 Methods and materials for containment and cleaning up

Contain and collect the spill. Transfer to chemical waste container for disposal according to section 13 of the SDS. Wash off with plenty of water and detergents. Do not allow to dry out and form dust.

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

Follow the rules of laboratory work. Observe the precautions for handling laboratory reagents. Do not pipette by mouth. Contact of the diagnostic reagent with the skin and especially with the mucous membranes should be avoided. Wash hands after handling reagents. Do not use together with copper and lead. Avoid breathing vapors or mist. Do not consume. Avoid contact with skin and eyes. Good general ventilation should be sufficient to control airborne contaminants. Handle and open the container with care. Wear suitable protective clothing, gloves and eye/face protection. Do not eat, drink or smoke while using the product

7.2 Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a cold room at a temperature of 4-8oC. Keep away from incompatible materials. Opened containers must be resealed and kept upright to prevent leakage. Avoid long storage periods

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

Stable under recommended storage conditions

10.3 Possibility of hazardous reactions

Explosive azides may form in reaction with copper and lead

10.4 Conditions to avoid

Stable under recommended storage conditions

10.5 Incompatible materials

Copper and lead

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 (CAS no. 7681-11-0)**
LD50 Oral – Rat – 3118 mg/kg
- **Iodine (CAS 7553-56-2)**
LD50 Oral - Rat - 315 mg/kg
LD50 Dermal – Rabbit – 1425 mg/kg
LC50/4 h Inhalative 1.5 mg/l (ATE)

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: no data available

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

11.2 Other informations

Endocrine disrupting properties: The substance/mixture does not contain components considered to have endocrine disrupting properties in accordance with Article 57(f) of REACH or Commission Delegated Regulation (EU) 2017/2100 or Regulation (EU) 2018/605 of the Commission at levels of 0.1% or higher

12. ECOLOGICAL INFORMATION

12.1 Toxicity

- **Potassium iodide (CAS no. 7681-11-0)**
LC50 (96h) → Fish 2190 mg/L
- **Iodine (CAS 7553-56-2)**
EC50 (72h) → Aquatic plants 0.13 mg/L
EC50 (48h) → Daphnia magna 0.55 mg/L
LC50 (96h) → Fish 1.67 mg/l

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

H332 Harmful if inhaled
H315 Causes skin irritation
H319 Causes serious eye irritation
H335 May cause respiratory irritation
H372 Causes damage thyroid through prolonged or repeated exposure if swallowed
H400 Very toxic to aquatic life

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

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. for additional terms and conditions of sale.

Previous date 01.06.2015
Revision date: 19.03.2025
Revision Number: rev. 5