Material Safety Data Sheet

Version 3.1 Revision Date 08/26/2010 Print Date 03/21/2011

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Luviquat™ MS 370

Product Number : 53123 Brand : Fluka

Company : Sigma-Aldrich

3050 Spruce Street

SAINT LOUIS MO 63103

USA

Telephone : +18003255832 Fax : +18003255052 Emergency Phone # : (314) 776-6555

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

No known OSHA hazards

GHS Label elements, including precautionary statements

Pictogram none Signal word none

Hazard statement(s)

H401 Toxic to aquatic life.

Precautionary none

statement(s)

HMIS Classification

Health hazard: 0 Flammability: 0 Physical hazards: 0

NFPA Rating

Health hazard: 0 Fire: 0 Reactivity Hazard: 0

Potential Health Effects

InhalationMay be harmful if inhaled. May cause respiratory tract irritation.SkinMay be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation. **Ingestion** May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Poly[(3-methyl-1-vinylimidazolium methyl sulfate)-co-(1-vinylpyrrolidone)]

Polyquaternium D44

CAS-No.	EC-No.	Index-No.	Concentration
0/10/110.	LO 140.	mack Ho.	Concontitution

Fluka - 53123 Page 1 of 6

Water					
7732-18-5	231-791-2	-	60 %		
1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate (1:1), polymer with 1-Ethenyl-2-pyrrolidinone					
150599-70-5	-	-	40 %		

4. 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.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

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.

Methods and materials for containment and cleaning up

Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Normal measures for preventive fire protection.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Fluka - 53123 Page 2 of 6

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form clear, liquid
Colour light yellow

Safety data

pH 5.0 - 7.0 at 100 g/l Melting point no data available

Boiling point 100 °C (212 °F) at 1,013 hPa (760 mmHg)

Flash point no data available Ignition temperature no data available Lower explosion limit no data available Upper explosion limit no data available

Vapour pressure 27.01 hPa (20.26 mmHg) at 23 °C (73 °F)

121.1 hPa (90.8 mmHg) at 50 °C (122 °F)

Density 1.110 g/cm3

Water solubility completely miscible
Viscosity, dynamic 2.5 Pas at 25 °C (77 °F)

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

no data available

Materials to avoid

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

no data available

Skin corrosion/irritation

no data available

Fluka - 53123 Page 3 of 6

Serious eye damage/eye irritation

Eyes: 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.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a

carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or

anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a

carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life.

Fluka - 53123 Page 4 of 6

13. DISPOSAL CONSIDERATIONS

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

Not dangerous goods

IMDG

UN-Number: 3082 Class: 9 Packing group: III EMS-No: F-A, S-F Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Marine pollutant: Marine pollutant

IATA

UN-Number: 3082 Class: 9 Packing group: III

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s.

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION

OSHA Hazards

No known OSHA hazards

DSL Status

This product contains the following components listed on the Canadian NDSL list. All other components are on the Canadian DSL list.

CAS-No.

1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate (1:1), polymer with 150599-70-5

1-Ethenyl-2-pyrrolidinone

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

No SARA Hazards

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Water CAS-No. Revision Date 7732-18-5

1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate (1:1), polymer with 150599-70-5

1-Ethenyl-2-pyrrolidinone

New Jersey Right To Know Components

CAS-No. Revision Date

Water 7732-18-5 1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate (1:1), polymer with 150599-70-5

1-Ethenyl-2-pyrrolidinone

Fluka - 53123 Page 5 of 6

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further information

Copyright 2010 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Fluka - 53123 Page 6 of 6