

# Safety data sheet

Page: 1/8

BASF Safety data sheet according to 91/155/EEC

Date / Revised: 24.03.2006

Product: **Luviquat\* HM 552**

Version: 1.1

(30034753/SDS\_COS\_EU/EN)

Date of print 03.02.2008

## 1. Substance/preparation and company identification

### Luviquat\* HM 552

Use: cosmetic ingredient

Company:

BASF SE

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Care Chemicals

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## 2. Composition/information on ingredients

Chemical nature

INCI Name: Polyquaternium-16

Preparation based on: copolymer, 1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with 1-ethenyl-2-pyrrolidinone, in water

Hazardous ingredients

1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with 1-ethenyl-2-pyrrolidinone

CAS Number: 95144-24-4

The wording of the hazard symbols and R-phrases is specified in chapter 16 if dangerous ingredients are mentioned.

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### 3. Hazard identification

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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### 4. First-aid measures

General advice:

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist

On ingestion:

Rinse mouth and then drink plenty of water.

Note to physician:

Treatment: Symptomatic treatment (decontamination, vital functions).

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### 5. Fire-fighting measures

Suitable extinguishing media:

water, carbon dioxide, foam

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

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### 6. Accidental release measures

Personal precautions:

No special precautions necessary.

Environmental precautions:

Do not discharge into drains/surface waters/groundwater.

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Methods for cleaning up or taking up:

For small amounts: Rinse away with water. Subject contaminated water to waste water treatment.

For large amounts: Dike spillage. Vacuum up spilled product.

For residues: Pick up with suitable absorbent material.

Dispose of absorbed material in accordance with regulations.

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## 7. Handling and storage

### Handling

Handle in accordance with good industrial hygiene and safety practice.

### Storage

Further information on storage conditions: Keep container tightly closed and in a cool place. Keep container dry. Store only in corrosion proof containers.

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## 8. Exposure controls and personal protection

### Components with workplace control parameters

Product contains residual monomer(s). The substance mentioned is contained only in traces in the product.

| 88-12-0: 1-vinyl-2-pyrrolidone

### Personal protective equipment

Respiratory protection:

Respiratory protection in case of vapour/aerosol release. Particle filter with low efficiency for solid particles (e.g. EN 143 or 149, Type P1 or FFP1)

Hand protection:

Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) and other  
Supplementary note: The specifications are based on own tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the determined permeation time.  
Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:

Safety glasses with side-shields (frame goggles) (f.e. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to DIN-EN 465).

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General safety and hygiene measures:  
Handle in accordance with good industrial hygiene and safety practice.

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## 9. Physical and chemical properties

Form:	liquid
Colour:	clear yellowish
Odour:	faint specific odour
pH value:	7
Boiling point:	100 °C
Vapour pressure:	23 hPa (20 °C) 123 hPa (50 °C)
Density:	1.04 g/cm <sup>3</sup> (20 °C)
Miscibility with water:	miscible in all proportions
Viscosity, dynamic:	approx. 3,500 mPa.s (approx. 25 °C)

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## 10. Stability and reactivity

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

Hazardous reactions:  
No hazardous reactions if stored and handled as prescribed/indicated.

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## 11. Toxicological information

### Acute toxicity

**Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.**

LD50 rat (oral): > 5,000 mg/kg (BASF-Test)

LC50 rat (by inhalation): > 5.1 mg/l 4 h (OECD Guideline 403)

LD50 rat (dermal): > 2,000 mg/kg (BASF-Test)

### **Irritation**

**Not irritating to the skin. Not irritating to the eyes.**

Primary skin irritation rabbit: non-irritant

Primary irritations of the mucous membrane rabbit: non-irritant

### **Sensitization**

**Skin sensitizing effects were not observed in animal studies.**

Open epicutaneous test (OET) guinea pig: Non-sensitizing. (OECD Guideline 406)

### **Genetic toxicity**

**The substance was not mutagenic in bacteria.**

### **Other relevant toxicity information**

The product has not been tested. The statements on toxicology have been derived from products of a similar structure and composition.

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## **12. Ecological information**

### **Ecotoxicity**

Assessment of aquatic toxicity:

**Very toxic (acute effect) to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.**

Toxicity to fish:

LC50, 96 h, > 0.56 - 1 mg/l, *Oncorhynchus mykiss*, OECD 203; ISO 7346; 84/449/EEC, C.1, static  
The details of the toxic effect relate to the nominal concentration.

Aquatic invertebrates:

EC50, 48 h, 39.1 mg/l, *Daphnia magna*, OECD Guideline 202, part 1, static  
The details of the toxic effect relate to the nominal concentration.

Aquatic plants:

EC50, 72 h, 1.19 mg/l, *Desmodesmus subspicatus*, OECD Guideline 201, static  
The details of the toxic effect relate to the nominal concentration.

Microorganisms/Effect on activated sludge:

EC20, > 100 mg/l, activated sludge, DIN/EN/ISO 8192-OECD 209-88/302/EEC, P. C, aerobic  
The product has not been tested. The statement has been derived from products of a similar structure and composition.

## Persistence and degradability

Assessment biodegradation and elimination (H<sub>2</sub>O):

**Not readily biodegradable (by OECD criteria). Poorly biodegradable. Moderately/partially eliminated from water. The product can be virtually eliminated from water by abiotic processes e.g. adsorption onto activated sludge. The product has not been tested. The statement has been derived from products of a similar structure and composition.**

Elimination information:

< 10 % BOD of the ThOD (28 d) (OECD 301F; ISO 9408; 92/69/EEC, C.4-D) (aerobic, activated sludge, domestic)

## 13. Disposal considerations

Observe national and local legal requirements.

## 14. Transport information

### Land transport

<b>ADR</b>	: Class	9
	Packing group	III
	UN-number	3082
	Designation of goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains: VINYLIMIDAZOLIUM METHOCHLORIDE, 1-VINYL-2- PYRROLIDONE)

<b>RID</b>	: Class	9
	Packing group	III
	UN-number	3082
	Designation of goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains: VINYLIMIDAZOLIUM METHOCHLORIDE, 1-VINYL-2- PYRROLIDONE)

### Inland waterway transport

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<b>ADNR</b>	: Class	9
	Packing group	III
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**Sea transport**

<b>IMDG/GGVSee</b>	: Class	9
	Packing group	III
	UN-number	3082
	Marine pollutant	YES
	Exact technical name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains VINYLIMIDAZOLIUM METHOCHLORIDE, 1-VINYL-2- PYRROLIDONE)

**Air transport**

<b>ICAO/IATA</b>	: Class	9
	Packing group	III
	UN-number	3082
	Exact technical name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains VINYLIMIDAZOLIUM METHOCHLORIDE, 1-VINYL-2- PYRROLIDONE)

**15. Regulatory information****Regulations of the European union (Labelling) / National legislation/Regulations**Directive 1999/45/EC ('Preparation Directive'):

Hazard symbol(s)	
N	Dangerous for the environment.
R-phrase(s)	
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrase(s)	
S61	Avoid release to the environment. Refer to special instructions/safety data sheets.

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Classification according to the calculation method of the directive for preparations (1999/45/EC).

Hazard determinant component(s) for labelling: 1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with 1-ethenyl-2-pyrrolidinone

#### Other regulations

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## 16. Other information

Full text of hazard symbols and R-phrases if mentioned as hazardous components in chapter 2:

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Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.