



STANNOL

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture Mulifix 450-01

SDS number 7716

Issue date 03-July-2013

Version number 1.0

Revision date 03-July-2013

Product use Professional use

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses flux for soldering

Uses advised against None known

1.3. Details of the supplier of the safety data sheet

Company name STANNOL GmbH

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Directive 67/548/EEC or 1999/45/EC as amended

Classification Xi;R36/38

The full text for all R-phrases is displayed in section 16.

Hazard summary

Physical hazards Not classified for physical hazards.

Health hazards Irritating to eyes and skin.

Environmental hazards Not classified for hazards to the environment.

Specific hazards Irritating to eyes.

Main symptoms Irritation of eyes and mucous membranes.

2.2. Label elements

Label according to Directive 67/548/EEC or 1999/45/EC as amended

EC number -

EC label



Irritant

R-phrases R36/38 Irritating to eyes and skin.

S-phrases S24/25 Avoid contact with skin and eyes.
S26 In case of contact with eyes, Rinse immediately with plenty of water and seek medical advice.
S60 This material and its container must be disposed of as hazardous waste.

Authorisation number	Not available.
Supplemental label information	Avoid breathing vapours. Wash hands after handling and before eating. Keep out of reach of children.
2.3. Other hazards	This Product contains modified rosin. Elevated temperatures or mechanical action may form vapours, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs. Prolonged or repeated exposure to smoke or fumes generated by heating this product may cause respiratory sensitisation.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Terpineol	20 - 30	8000-41-7 232-268-1	-	-	
Classification:	DSD: Xi;R36/38				
	CLP: Skin Irrit. 2;H315, Eye Irrit. 2;H319				
Malonic Acid	1 - 5	141-82-2 205-503-0	-	-	
Classification:	DSD: Xn;R22, Xi;R36				
	CLP: Acute Tox. 4;H302, Eye Irrit. 2;H319				

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

#: This substance has been assigned Community workplace exposure limit(s).

Composition comments The full text for all R- and H-phrases is displayed in section 16. The full text for all R-phrases is displayed in Section 16.

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation	Call a physician if symptoms develop or persist.
Skin contact	Get medical attention if irritation develops and persists.
Eye contact	Flush eyes immediately with large amounts of water. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.
Ingestion	Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed Irritation of eyes and mucous membranes.

4.3. Indication of any immediate medical attention and special treatment needed Not available.

SECTION 5: Firefighting measures

General fire hazards Not available.

5.1. Extinguishing media

Suitable extinguishing media	Carbon dioxide (CO ₂). Foam. Dry powder.
Unsuitable extinguishing media	None known.

Hazardous combustion products By heating and fire, irritating vapours/gases may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Special fire fighting procedures	In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
For emergency responders	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the MSDS.

6.2. Environmental precautions Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up Soak up with inert absorbent material. Collect in containers and seal securely. Remove containers and flush area with water. For waste disposal, see section 13.

6.4. Reference to other sections For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Avoid contact with eyes.

7.2. Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Use care in handling/storage. Store in accordance with local/regional/national/international regulation.

7.3. Specific end use(s) Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Recommended monitoring procedures	Follow standard monitoring procedures.

8.2. Exposure controls

Appropriate engineering controls Ensure adequate ventilation, especially in confined areas. Ventilation should effectively remove and prevent buildup of any vapor/mist/fume/dust generated from the handling of this product.

Individual protection measures, such as personal protective equipment

Eye/face protection	Avoid contact with eyes. Chemical goggles are recommended.
Skin protection	
- Hand protection	Nitrile gloves are recommended. Glove thickness : > = 0.4 mm. Break through time : > 480 min.
- Other	Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Respiratory protection	No personal respiratory protective equipment normally required. If ventilation is insufficient, suitable respiratory protection must be provided.
Thermal hazards	Not available.

Hygiene measures Wash hands after handling. Do not eat, drink or smoke when using the product. Handle in accordance with good industrial hygiene and safety practices.

Environmental exposure controls Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state	Solid.
Form	Paste.
Colour	Light brown.

Odour Characteristic.

Odour threshold Not available.

pH Not applicable.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point 93.00 °C (199.40 °F)

Evaporation rate Not applicable.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapour pressure Not applicable.

Vapour density Not applicable.

Relative density Not available.

Solubility(ies) Not available.

Partition coefficient (n-octanol/water) Not available.

Decomposition temperature Not available.

Viscosity Not applicable.

Explosive properties Not available.

Oxidizing properties Not available.

9.2. Other information

Density 0.82 g/cm³

VOC (Weight %) < 3 % 1999/13/EC

SECTION 10: Stability and reactivity

10.1. Reactivity Reacts with: Strong oxidising substances.

10.2. Chemical stability Material is stable under normal conditions.

10.3. Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid Avoid temperatures exceeding the flash point. By heating and fire, irritating vapours/gases may be formed.

10.5. Incompatible materials Strong oxidising substances.

10.6. Hazardous decomposition products Carbon oxides. Irritants.

SECTION 11: Toxicological information

General information Not available.

Information on likely routes of exposure

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Inhalation May cause irritation to the respiratory system.

Skin contact Irritating to skin.

Eye contact Irritating to eyes.

Symptoms Irritation of eyes and mucous membranes.

11.1. Information on toxicological effects

Acute toxicity No data available.

Skin corrosion/irritation Irritating to skin.

Serious eye damage/irritation Irritating to eyes.

Respiratory sensitisation Not available.

Skin sensitisation Not available.

Germ cell mutagenicity Not available.

Carcinogenicity Not available.

Reproductive toxicity Not available.

Specific target organ toxicity - single exposure Not available.

Specific target organ toxicity - repeated exposure Not available.

Aspiration hazard Not available.

Mixture versus substance information Not available.

Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity Not expected to be harmful to aquatic organisms.

Components	Species	Test results
Malonic Acid (141-82-2)		
Aquatic		
Crustacea	EC50 Water flea (Daphnia magna)	233 - 324 mg/l, 48 hours

12.2. Persistence and degradability No data is available on the degradability of this product.

Biodegradability

Percent degradation (Aerobic biodegradation)

Terpineol	100 % OECD 301B Observation Period: 28 days
Malonic Acid	94 - 100 % EU Method C.4-B Observation Period: 28 days

12.3. Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient

n-octanol/water (log Kow)

Malonic Acid	-0.81
Terpineol	3.33

12.4. Mobility in soil Not available.

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Dispose of in accordance with local regulations. Avoid discharge into water courses or onto the ground.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

EU waste code EWC-code: 160508

Disposal methods/information This material and its container must be disposed of as hazardous waste. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not discharge into drains, water courses or onto the ground. Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I

Not listed.

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II

Not listed.

Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended

Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(1) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 143/2011 Annex XIV Substances Subject to Authorisation

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work

Not regulated.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding

Not regulated.

Other EU regulations

Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances

Not regulated.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Not regulated.

Directive 94/33/EC on the protection of young people at work

Not regulated.

Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

National regulations

Not available.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

Not available.

References

Not available.

Information on evaluation method leading to the classification of mixture

Not available.

Full text of any statements or R-phrases and H-statements under Sections 2 to 15

R22 Harmful if swallowed.
R36 Irritating to eyes.
R36/38 Irritating to eyes and skin.
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.

Training information

Not available.

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available.

SDS sections updated

Product and company identification: Product and company identification
Composition/Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties
Regulatory information: Risk Phrases - Class.