



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 Lötflusmittel X32-10i

Issue date 02-September-2013

Version number 1.0

Revision date 09-September-2013

Supersedes date 02-September-2013

Product use Consumer use

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

Identified uses soft 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 F;R11, Xi;R36, R67

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

Hazard summary

Physical hazards Highly flammable.

Health hazards Irritating to eyes. Vapours may cause drowsiness and dizziness.

Environmental hazards Not classified for hazards to the environment.

Specific hazards Highly flammable. Irritating to eyes. Do not breathe dust/fume/gas/mist/vapors/spray.

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



Highly flammable

R-phrases

R11 Highly flammable.

R36 Irritating to eyes.

R67 Vapours may cause drowsiness and dizziness.

S-phrases	S2 Keep out of the reach of children. S9 Keep container in a well-ventilated place. S16 Keep away from sources of ignition - No smoking. S23 Do not breathe gas/fumes/vapour/spray. S25 Avoid contact with eyes. S26 In case of contact with eyes, Rinse immediately with plenty of water and seek medical advice. S29 Do not empty into drains. S46 If swallowed, seek medical advice immediately and show this container or label. S60 This material and its container must be disposed of as hazardous waste.
Authorisation number	Not available.
Supplemental label information	Not applicable.
2.3. Other hazards	Not assigned.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Propan-2-ol	<= 88	67-63-0 200-661-7	01-2119457558-25-xxxx	603-117-00-0	
Classification:	DSD: F;R11, Xi;R36, R67				
	CLP: Flam. Liq. 2;H225, Eye Irrit. 2;H319, STOT SE 3;H336				
Adipic acid	<= 2	124-04-9 204-673-3	-	607-144-00-9	
Classification:	DSD: Xi;R36				
	CLP: Eye Irrit. 2;H319				
Biphenyl-2-ol	<= 0.1	90-43-7 201-993-5	-	604-020-00-6	
Classification:	DSD: Xi;R36/37/38, N;R50				
	CLP: Acute Tox. 4;H302, Acute Tox. 3;H311, Skin Irrit. 2;H315, Eye Irrit. 2;H319, STOT SE 3;H335, Aquatic Acute 1;H400, Aquatic Chronic 1;H410				

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. In case of shortness of breath, give oxygen.

4.1. Description of first aid measures

Inhalation	Move to fresh air. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower.
Eye contact	Flush eyes immediately with large amounts of water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. If ingestion of a large amount does occur, call a poison control centre immediately.

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 In case of shortness of breath, give oxygen.

SECTION 5: Firefighting measures

General fire hazards Not available.

5.1. Extinguishing media

Suitable extinguishing media Water fog. Carbon dioxide (CO₂). Alcohol resistant foam. Powder.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire. Water.

5.2. Special hazards arising from the substance or mixture

Fire may produce irritating, corrosive and/or toxic gases.

5.3. Advice for firefighters

Special protective equipment for firefighters Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Structural firefighters protective clothing will only provide limited protection.

Special fire fighting procedures In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Withdraw immediately in case of rising sound from venting safety device or any discolouration of tanks due to fire. Move containers from fire area if you can do so without risk. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

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. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering them. Avoid inhalation of vapours and spray mists.

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. Contact local authorities in case of spillage to drain/aquatic environment. Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Extinguish all flames in the vicinity.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills in original containers for re-use. 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

May be ignited by open flame. Keep away from sources of ignition - No smoking. When using do not smoke. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get this material in contact with skin. Avoid prolonged exposure.

7.2. Conditions for safe storage, including any incompatibilities

Do not handle or store near an open flame, heat or other sources of ignition. Avoid temperatures exceeding 30 °C and below 5 °C. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Refrigeration recommended. Store in a well-ventilated place.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Propan-2-ol (67-63-0)	STEL	1250 mg/m ³
		500 ppm
	TWA	999 mg/m ³
		400 ppm

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 Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Avoid contact with eyes. Chemical goggles are recommended.

Skin protection

- Hand protection Wear protective gloves. Nitrile gloves are recommended.

- 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 Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

Thermal hazards Not available.

Hygiene measures When using, do not eat, drink or smoke. Avoid contact with eyes. Avoid contact with skin. Wash hands after handling. Keep away from food and drink. 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 Liquid.

Form liquid

Colour Colourless.

Odour Alcoholic.

Odour threshold Not available.

pH Not applicable.

Melting point/freezing point Not available.

Initial boiling point and boiling range > 82 °C (> 179.6 °F) @ 1013 mbar

Flash point 13.00 °C (55.40 °F) Isopropanol

Evaporation rate Not applicable.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) 2 %

Explosive limit – upper (%) 12 %

Vapour pressure 40 mbar @ 20 °C

Vapour density Not applicable.

Relative density Not available.

Solubility(ies) miscible

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

Ignition temperature 399 °C (750.2 °F)

Decomposition temperature Not available.

Viscosity Not applicable.

Explosive properties Not available.

Oxidizing properties Not available.

9.2. Other information

Density 0.82 g/cm³ @ 20 °C

VOC (Weight %) < 85 %

SECTION 10: Stability and reactivity

10.2. Chemical stability Risk of ignition.

10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Heat, flames and sparks. Avoid temperatures exceeding the flash point.
10.5. Incompatible materials	Strong oxidizing agents. May be corrosive to metals.
10.6. Hazardous decomposition products	Fire may produce irritating, corrosive and/or toxic gases.

SECTION 11: Toxicological information

General information	Not available.
Information on likely routes of exposure	
Ingestion	Not available.
Inhalation	Not available.
Skin contact	Not available.
Eye contact	Irritating to eyes.
Symptoms	Irritation of eyes and mucous membranes.

11.1. Information on toxicological effects

Components	Species	Test results
Adipic acid (124-04-9)		
Acute		
<i>Inhalation</i>		
NOEL	Rat	0.126 mg/l, 6 Hours
<i>Oral</i>		
LD50	Mouse	1900 mg/kg
	Rabbit	> 11000 mg/kg
	Rat	> 11000 mg/kg
<i>Other</i>		
LD50	Mouse	680 mg/kg
Biphenyl-2-ol (90-43-7)		
Acute		
<i>Dermal</i>		
LD50	Cat	500 mg/kg
<i>Oral</i>		
LD50	Cat	500 mg/kg
	Guinea pig	3500 mg/kg
	Mouse	2000 mg/kg
	Rat	> 1000 mg/kg
<i>Other</i>		
LD50	Mouse	50 mg/kg
Propan-2-ol (67-63-0)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	12800 mg/kg
<i>Oral</i>		
LD50	Mouse	4.5 g/kg
	Rabbit	5.03 g/kg
	Rat	4.7 g/kg
Skin corrosion/irritation	Not available.	
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
Adipic acid (124-04-9)		
Aquatic		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 97 mg/l, 96 hours
Biphenyl-2-ol (90-43-7)		
Aquatic		
Crustacea	EC50	Water flea (<i>Daphnia magna</i>) 1 - 2.4 mg/l, 48 hours
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 3.4 mg/l, 96 hours
Propan-2-ol (67-63-0)		
Aquatic		
Crustacea	EC50	Water flea (<i>Daphnia magna</i>) 13299 mg/l, 48 hours
Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>) > 1400 mg/l, 96 hours

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

12.3. Bioaccumulative potential Not available.

Partition coefficient n-octanol/water (log Kow)

Propan-2-ol	0.05
Adipic acid	0.08
Biphenyl-2-ol	3.09

Bioconcentration factor (BCF) Not available.

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	Waste codes should be assigned by the user based on the application for which the product was used.
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

14.1. UN number	UN1219
14.2. UN proper shipping name	Isopropanol
14.3. Transport hazard class(es)	3
Subsidiary class(es)	-
14.4. Packing group	II
14.5. Environmental hazards	No

Tunnel restriction code	D/E
Labels required	3
14.6. Special precautions for user	Not available.
Hazard ID	33

IATA

14.1. UN number	UN1219
14.2. UN proper shipping name	Isopropanol
14.3. Transport hazard class(es)	3
Subsidiary class(es)	-
14.4. Packing group	II
14.5. Environmental hazards	Not available.
Labels required	Not available.
ERG Code	3L
14.6. Special precautions for user	Not available.

IMDG

14.1. UN number	UN1219
14.2. UN proper shipping name	Isopropanol
14.3. Transport hazard class(es)	3
Subsidiary class(es)	-
14.4. Packing group	II
14.5. Environmental hazards	
Marine pollutant	No
Labels required	Not available.
EmS No.	F-E, S-D
14.6. Special precautions for user	Not available.
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	This substance/mixture is not intended to be transported in bulk.

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

Material name: Lötflusmittel X32-10i

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

Propan-2-ol (CAS 67-63-0)

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

Adipic acid (CAS 124-04-9)

Biphenyl-2-ol (CAS 90-43-7)

Propan-2-ol (CAS 67-63-0)

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

R11 Highly flammable.
R36 Irritating to eyes.
R36/37/38 Irritating to eyes, respiratory system and skin.
R50 Very toxic to aquatic organisms.
R67 Vapours may cause drowsiness and dizziness.
H225 - Highly flammable liquid and vapour.
H302 - Harmful if swallowed.
H311 - Toxic in contact with skin.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
H400 - Very toxic to aquatic life.
H410 - Very toxic to aquatic life with long lasting effects.

Training information

Not available.

Disclaimer

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

SDS sections updated

SECTION 2: Hazards identification: Response
SECTION 2: Hazards identification: 2.3. Other hazards
SECTION 2: Hazards identification: Classification of the substance or mixture
SECTION 11: Toxicological information: Germ cell mutagenicity
SECTION 11: Toxicological information: Skin corrosion/irritation
SECTION 12: Ecological information: 12.2. Persistence and degradability
Regulatory information: Safety phrases