



**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** Lötflussmittel X33F-07i / X33S-07i

**Issue date** 02-September-2013

**Version number** 1.0

**Revision date** 02-September-2013

**Product use** Consumer use

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

**Identified uses** flux for soft soldering

**Uses advised against** None known

### 1.3. Details of the supplier of the safety data sheet

**Company name** STANNOL GmbH

**Address** Oskarstr. 3-7  
42283 Wuppertal  
Germany

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**Emergency telephone number** +49 (0) 202 585 129 (8:00 a.m. – 4:00 p.m. (MET))

## 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. Occupational exposure to the substance or mixture may cause adverse health effects.

**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.  
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**

<b>Chemical name</b>	<b>%</b>	<b>CAS-No. / EC No.</b>	<b>REACH Registration No.</b>	<b>INDEX No.</b>	<b>Notes</b>
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Propan-2-ol	<= 97	67-63-0 200-661-7	01-2119457558-25-xxxx	603-117-00-0	
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**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	
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**Classification:** **DSD:** Xi;R36

**CLP:** 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. 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 (CO<sub>2</sub>). 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/m3
		500 ppm
	TWA	999 mg/m3
		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

<b>- Hand protection</b>	Wear protective gloves. Nitrile gloves are recommended.
<b>- Other</b>	Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
<b>Respiratory protection</b>	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.
<b>Thermal hazards</b>	Not available.
<b>Hygiene measures</b>	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.
<b>Environmental exposure controls</b>	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**

<b>Physical state</b>	Liquid.
<b>Form</b>	liquid
<b>Colour</b>	Colourless.
<b>Odour</b>	Alcoholic.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not applicable.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	> 82 °C (> 179.6 °F) @ 1013 mbar
<b>Flash point</b>	13.00 °C (55.40 °F) Isopropanol
<b>Evaporation rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Explosive limit - lower (%)</b>	2 %
<b>Explosive limit – upper (%)</b>	12 %
<b>Vapour pressure</b>	40 mbar @ 20 °C
<b>Vapour density</b>	Not applicable.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	miscible
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Ignition temperature</b>	399 °C (750.2 °F)
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not applicable.
<b>Explosive properties</b>	Not available.
<b>Oxidizing properties</b>	Not available.
<b>9.2. Other information</b>	
<b>Density</b>	0.80 g/cm <sup>3</sup> @ 20 °C
<b>VOC (Weight %)</b>	< 97 %

## **SECTION 10: Stability and reactivity**

<b>10.2. Chemical stability</b>	Risk of ignition.
<b>10.3. Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>10.4. Conditions to avoid</b>	Heat, flames and sparks. Avoid temperatures exceeding the flash point.
<b>10.5. Incompatible materials</b>	Strong oxidizing agents. May be corrosive to metals.
<b>10.6. Hazardous decomposition products</b>	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**

<b>Components</b>	<b>Species</b>	<b>Test results</b>
Adipic acid (124-04-9)		
<b>Acute</b>		
<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
Propan-2-ol (67-63-0)		
<b>Acute</b>		
<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
<b>Skin corrosion/irritation</b>	Not available.	
<b>Serious eye damage/irritation</b>	Irritating to eyes.	
<b>Respiratory sensitisation</b>	Not available.	
<b>Skin sensitisation</b>	Not available.	
<b>Germ cell mutagenicity</b>	Not available.	
<b>Carcinogenicity</b>	Not available.	
<b>Reproductive toxicity</b>	Not available.	
<b>Specific target organ toxicity - single exposure</b>	Not available.	
<b>Specific target organ toxicity - repeated exposure</b>	Not available.	
<b>Aspiration hazard</b>	Not available.	
<b>Mixture versus substance information</b>	Not available.	
<b>Other information</b>	Not available.	

## **SECTION 12: Ecological information**

**12.1. Toxicity** Not expected to be harmful to aquatic organisms. Avoid discharge into drains, water courses or onto the ground.

<b>Components</b>	<b>Species</b>	<b>Test results</b>
Adipic acid (124-04-9)		
<b>Aquatic</b>		
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) 97 mg/l, 96 hours
Propan-2-ol (67-63-0)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> ) 13299 mg/l, 48 hours

Components	Species	Test results
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> )
		> 1400 mg/l, 96 hours
<b>12.2. Persistence and degradability</b>	The product is easily biodegradable.	
<b>12.3. Bioaccumulative potential</b>	Not available.	
<b>Partition coefficient n-octanol/water (log Kow)</b>		
Propan-2-ol	0.05	
Adipic acid	0.08	
<b>Bioconcentration factor (BCF)</b>	Not available.	
<b>12.4. Mobility in soil</b>	Not available.	
<b>12.5. Results of PBT and vPvB assessment</b>	Not a PBT or vPvB substance or mixture.	
<b>12.6. Other adverse effects</b>	Not available.	

## **SECTION 13: Disposal considerations**

### **13.1. Waste treatment methods**

<b>Residual waste</b>	Dispose of in accordance with local regulations. Avoid discharge into water courses or onto the ground.
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal.
<b>EU waste code</b>	Waste codes should be assigned by the user based on the application for which the product was used.
<b>Disposal methods/information</b>	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**

<b>14.1. UN number</b>	UN1219
<b>14.2. UN proper shipping name</b>	Isopropanol
<b>14.3. Transport hazard class(es)</b>	3
<b>Subsidiary class(es)</b>	-
<b>14.4. Packing group</b>	II
<b>14.5. Environmental hazards</b>	No
<b>Tunnel restriction code</b>	D/E
<b>Labels required</b>	3
<b>14.6. Special precautions for user</b>	Not available.
<b>Hazard ID</b>	33

### **IATA**

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

### **IMDG**

<b>14.1. UN number</b>	UN1219
<b>14.2. UN proper shipping name</b>	Isopropanol
<b>14.3. Transport hazard class(es)</b>	3
<b>Subsidiary class(es)</b>	-
<b>14.4. Packing group</b>	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

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)

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.

Material name: Lötflussmittel X33F-07i / X33S-07i

8462 Version No.: 1.0 Revision date: 02-September-2013 Issue date: 02-September-2013

<b>References</b>	Not available.
<b>Information on evaluation method leading to the classification of mixture</b>	Not available.
<b>Full text of any statements or R-phrases and H-statements under Sections 2 to 15</b>	R11 Highly flammable. R36 Irritating to eyes. R67 Vapours may cause drowsiness and dizziness. H225 - Highly flammable liquid and vapour. H319 - Causes serious eye irritation. H336 - May cause drowsiness or dizziness.
<b>Training information</b>	Not available.
<b>Disclaimer</b>	The information in the sheet was written based on the best knowledge and experience currently available.
<b>SDS sections updated</b>	Product and company identification: Product and company identification Regulatory information: Safety phrases