



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 Flussmittel 400-25

Issue date 27-November-2012

Version number 1.1

Revision date 20-March-2013

Supersedes date 27-November-2012

Product use professional 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

Contact person Dr. Sven Mönninghoff

Telephone number +49 (0) 202 585-129

Fax +49 (0) 202 585 155

e-mail sven.moeninghoff@stannol.de

Contact person HSE-BBS@bayer.com

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, R43-67

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

Hazard summary

Physical hazards Highly flammable.

Health hazards Irritating to eyes. May cause sensitisation by skin contact. 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. May cause sensitisation by skin contact. 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

Contains: Rosin

EC number -

EC label



Irritant



Highly flammable

R-phrases	R11 Highly flammable. R36 Irritating to eyes. R43 May cause sensitisation by skin contact. R67 Vapours may cause drowsiness and dizziness.
S-phrases	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. 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. S36/37 Wear suitable protective clothing and gloves. 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	<= 75	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				
Rosin	<= 25	8050-09-7 232-475-7	-	650-015-00-7	
Classification:	DSD: R43 CLP: Skin Sens. 1;H317				
Dimethylammonium Chloride	<= 1	506-59-2 208-046-5	-	-	
Classification:	DSD: Xn;R22, Xi;R36/37/38 CLP: Acute Tox. 4;H302, Skin Irrit. 2;H315, Eye Irrit. 2;H319, STOT SE 3;H335				

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. Take off contaminated clothing and shoes immediately. 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. Immediately flush skin with plenty of water. Get medical attention if irritation develops and persists. Wash clothing separately before reuse.
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.
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.
Special fire fighting procedures	Use standard firefighting procedures and consider the hazards of other involved materials. 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. Water runoff can cause environmental damage.

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. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin. Avoid contact with eyes. 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. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Refrigeration recommended. Store in a well-ventilated place. Avoid temperatures exceeding 30 °C and below 5 °C.
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	Form
Propan-2-ol (67-63-0)	STEL	1250 mg/m3	
		500 ppm	
	TWA	999 mg/m3	
		400 ppm	
Rosin (8050-09-7)	STEL	0.15 mg/m3	Fume.
	TWA	0.05 mg/m3	Fume.

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. Viton or nitrile rubber 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. Avoid contact with the skin. Wear chemical protective equipment that is specifically recommended by the manufacturer. Wear protective gloves.
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 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	Yellow.
Odour	Solvent.
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)
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	43 hPa @ 20 °C
Vapour density	Not applicable.
Relative density	Not available.
Solubility(ies)	miscible
Partition coefficient (n-octanol/water)	Not available.
Ignition temperature	425 °C (797 °F)
Decomposition temperature	Not available.
Viscosity	Not applicable.
Explosive properties	Not available.
Oxidizing properties	Not available.

9.2. Other information

Density	0.85 g/cm ³ @ 20 °C
VOC (Weight %)	70 - 75 %

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.
10.6. Hazardous decomposition products	Carbon oxides.

SECTION 11: Toxicological information

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

11.1. Information on toxicological effects

Components	Species	Test results
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	May cause sensitisation by skin contact.	
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. Avoid discharge into drains, water courses or onto the ground.
-----------------------	---

Components		Species	Test results
Propan-2-ol (67-63-0)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	13299 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	> 1400 mg/l, 96 hours
Rosin (8050-09-7)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	911 mg/l, 48 hours

Components	Species	Test results
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) > 1000 mg/l, 96 hours
12.2. Persistence and degradability	The product is easily biodegradable.	
12.3. Bioaccumulative potential	Not available.	
Partition coefficient n-octanol/water (log Kow)		
Propan-2-ol		0.05
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	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
	EWC-code: 140603
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.

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

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

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

Rosin (CAS 8050-09-7)

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

Rosin (CAS 8050-09-7)

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

Young people under 18 years old are not allowed to work with this product according to the EU Directive 94/33/EC on the protection of young people at work.

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. R22 Harmful if swallowed. R36 Irritating to eyes. R36/37/38 Irritating to eyes, respiratory system and skin. R43 May cause sensitisation by skin contact. R67 Vapours may cause drowsiness and dizziness. H225 - Highly flammable liquid and vapour. H302 - Harmful if swallowed. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation. H336 - May cause drowsiness or dizziness.
Revision information	SECTION 2: Hazards identification: Prevention Physical & Chemical Properties: Multiple Properties
Training information	Not available.
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available.