1. Name of product, characterization and company name

Information on the product

Trade name: **Soldering flux 500-6 B**

Usage of the product / preparation Flux for soft soldering

Identification of the manufacturer / supplier

Address: Stannol GmbH
Oskarstr. 3 -7
42283 Wuppertal

Phone: 0202 585 0

Fax: 0202 585 155

Emergency call: 0202 585 119 (only during trading hour (8:00 h – 17:00 h)

E-mail: werner.kruppa@stannol.de

2. Possible hazards:

Danger symbols

Highly flammable

Irritating

R-phrases:	**11**	Highly flammable
	36	Irritating to eyes.
	43	May cause sensitization by skin contact.
	67	Vapours can cause sleepiness and daze

Additional hazards for human health and environment:
Irritates eyes
Vapours can cause sleepiness and daze

3. Composition/Information on the components

Chemical characterization: Solution of dicarbon acids and rosin in isopropanol

Composition according to EC 1907/2006:

Contents	CAS No.	EINECS No.	Symbols	R-phrases:	Substance
>90%	67-63-0	204-589-7	F; Xi	11-36-67	Propan-2-ol
<5%	n.a.	n.a.	Xi	36	Dicarbon acid mixture
<5%	8050-09-7	232-475-7	Xi	43	rosin

The wording of the R-phrases stated is indicated in Section 16

4. First Aid measures

General information: Remove contaminated clothing immediately.

After inhalation: Keep the person quiet, take to the fresh air and seek medical aid.

After skin contact: Wash with plenty of water and soap.

After eye contact: Flush eyes with plenty of flowing water holding eye lids apart (protect the uninjured eye, remove contact lenses).

After ingestion: Rinse mouth immediately and drink plenty of water. Seek medical advice.

Physician's information

Treatment: Decontamination, treatment of symptoms.

5. Fire fighting measures

Suitable extinguishing media: Powder, foam, CO_2 ; water jet.

Special protective equipment for fire fighting
Wear self contained breathing apparatus.

Additional advice: Do not discharge fire extinguishing water into surface water, groundwater and the soil.

6. Accidental release measures

Personal precautions: Wear breathing apparatus if exposed to vapours/dust/aerosols (solder fume).
Environmental precautions: Do not allow to enter drains/surface water/groundwater.
Methods for cleaning up: Take up spilled product with liquid-binding material (universal binding agent) and dispose.

7. Handling and storage

Advice on safe handling: Provide sufficient room ventilation, install local exhaust ventilation, if necessary. Avoid formation of vapours/aerosol.
Fire and explosion protection: The product is highly flammable. Take precautionary measures against static discharges.
Fire class: B (combustible liquid media)
Storage class according to VCI: 3 A
Requirements for storage rooms and containers: Ensure adequate ventilation of the storage area.
Further information on storage conditions: Keep container tightly closed and in a well ventilated place, away from ignition and heat sources, store at temperatures between +5 °C and +30°C.

8. Exposure controls and personal protection

Additional information on system design:
Provide sufficient ventilation. Install a local or a room ventilation, if required.

Substances with limit values to be monitored at the working place:

Danger to health at the working place:
Peak limit category:

Working place limit values according to TRGS 900 from Section 2 for Germany:

Product name	CAS No.	ml/m³ (ppm)	mg/m³	Type	Category	Remarks
Propan-2-ol	67-63-0	200	500		MAK (DFG)	

Skin resorption / Sensitization: Skin resorption H **Sensitization: --S (Rosin)---**

General protection and hygiene measures
Avoid direct contact with eyes, the skin and clothing.

Personal protection
Respiratory protection: Respiratory protection: particle filter.
Hand protection: Avoid skin contact.
A safety glove according to DIN EN 420 of the following material should be used as hand protection:

Material of the safety glove: nitrile rubber
Thickness of the glove material: 0.40 mm
Breakthrough time: >480 min.

Throw-away glove:

Material of the safety glove: nitrile rubber
Thickness of the glove material: 0.11 mm
Breakthrough time: 10 min.

The safety glove provides protection which is limited in time (dependent on the activity). Avoid longer contact times and remove the substance from the glove by wiping or rinsing off.

The individual safety gloves must comply with the specifications of the EC Directive 89/686/EEC and the standard EN374. We recommend to use Camatril 730 from KCL or Dermatril 740 (throw-away glove). The breakthrough times stated above were determined with material samples of the recommended hand protection types during laboratory measurements of the company KCL according to EN374.

This information is valid for: isopropanol

Please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell or www.kcl.de), if the product is diluted in or mixed with other substances or if the conditions differ from the EN374.

Eye protection: Wear safety glasses according to the EN 166:2001, e.g. eye glasses with side protection
Personal protection: Light protective clothing
Environment protection:

9. Physical and chemical properties

Form:	Form:			liquid		
	Colour:			light-yellow	Odour:	similar to alcohol
Flash point (cc):	at	12	°C			
Ignition temperature:	at	425	°C			
Vapour pressure:	at	20	°C	43	mbar	
Density:	at	20	°C	0,801	g/ml	
Boiling point:	at	1013	mbar	>80	°C	
Solubility in water:	at	20	°C	miscible	mg/l	

Solubility in organic solvents (at 20 °C)
Miscible with most organic solvents. Fully miscible in alcohol.

Explosion limits:	lower	2	Vol.-%
Explosion limits:	upper	12	Vol.-%

10. Stability and reactivity

Reaction with substances: Affects various metals
Reaction with: Strong oxidizing media

11. Toxicological information

The toxicological classification of the product is based on the results of the calculation procedure of the general preparation directive 1999/45/EC.

Acute toxicity: referred to isopropanol

Type	Value in mg/kg	Kind of administration	Species
LD50	5050	oral	Rat
LD50	6410	oral	Rabbit
LD50	4475	oral	Mouse

Further inhalative toxicological data:

LC50	72,6 mg/l	Rat	4h exposure time
LC50	46.6 mg/l	Rat	8h exposure time

Irritant effect on the eye: Irritant effect
Irritant effect on the skin: Irritant effect
Sensitization: Sensitization not known

12. Ecological information

General information: Volatile organic compound: VOC: > 90 %

These information apply to the main component: Isopropanol

Biodegradation: Readily biodegradadable
Biodegradability: 95%/21d Modified OECD Screening Test.
Ecotoxicity:
Biological effect:
Toxic to fishes and aquatic organisms. Does not affect sewage clarification according to current knowledge if applied as intended.
Fish toxicity:
LC50: 9640 mg/l/96h (Pimephales promelas)
Daphnia toxicity:
EC50: 13299 mg/l/48h (Daphnia magna)
Algae toxicity:
IC50: >1000 mg/l/72h (Scenedesmus subspicatus)
Lethal limit concentration:
Algae toxicity: IC5: 1800 mg/l/8d (Scenedesmus quadricauda)
Further information about ecology:
ThSB: 2,40g/g. BSB 49% of ThSB/5d. CSB: 96% of THSB.

13. Disposal considerations

Disposal information

Product:	Dispose off as special waste
Further information:	Disposal only by authorized waste disposal company
Waste identity number:	Waste identity number EAK-code: 140603 (solvents and mixtures)

14. Transport information

Transport GGVSEB/ADR:	Class:	3	Figure: F1
	UN-No.:	1219	Kemler number: 33
	Packing group:	II	
	Hazard label:	3	
	Limited quantity:	1L	
	Tunnel restriction code:	D / E 2	
	Proper shipping name:	Isopropanol (isopropyl alcohol)	
Sea-ship transport IMDG:	Class:	3	
	IMDG code:	3	EMS-No.:F-E S-D
	Marine pollutant:	No	MFAG: 305
	Hazard label:	3	
	Proper shipping name:	Isopropanol (isopropyl alcohol)	
Air transport IATA:	Class:	3	
	Hazard label:	3	
	Proper shipping name:	Isopropanol (isopropyl alcohol)	

15. Legal regulations:

Labelling information: **The product is classified and labelled according to the EC Directives.**

R-phrases:	**11**	Highly flammable
	36	Irritating to eyes.
	43	May cause sensitization by skin contact.
	67	Vapours can cause sleepiness and daze

Danger symbols

Highly flammable

Irritating

S-phrases:	**(2)**	Keep out of reach of children.
	7	Keep container tightly closed.
	16	Keep away from sources of ignition – No smoking.
	24/25	Avoid skin and eye contact.
	26	In case of contact with eyes rinse immediately with plenty of water and seek medical service.
Classification according to the EC Directive:		R11; Xi; R36; R43; R67
National regulations:		
Water hazard class:		WGK 1 (weakly water-endangering)
Solvent ordinance (31.BimSchV)		VOC weight content ca. 90% (calculated)
Ordinance on major accidents (12.BimSchV)		
Classification VbF:		B
Classification according to the TA Luft:		Organic materials; whole-carbon-concentration: Max. acceptable Emission50 mg/m^3 (mass-flow-rate >= 0,5 kg/h)
Ingredients:		Propan-2-ol

16. Further information

relevant R-phrases as per the wording in Section 3:

11	Highly flammable
36	Irritating to eyes.
43	May cause sensitization by skin contact.
67	Vapours can cause sleepiness and daze

n.k. not known

n.a. not applicable

Other information

This statement is based on our current knowledge and offers no assurance of product properties.

Department issueing the data sheet

Stannol GmbH/Quality Assurance/Laboratory

Contact person

Dr. Kruppa