

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 16.10.2020

Version number 2.1

Revision: 16.10.2020

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

#### 1.1 Product identifier

- **Trade name:** **Flux AK-1**
- **UFI:** UKA0-E0NV-M00R-6YJG

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

- **Technical function** soldering
- **Application of the substance / the mixture** Soldering flux

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

**Manufacturer/Supplier:**  
Stannol GmbH & Co. KG  
Haberstrasse 24  
D-42551 Velbert

+49 (0) 2051 3120 332  
sdb@stannol.de

- **Further information obtainable from:** Product Safety Department

- **1.4 Emergency telephone number:**  
8:00 am - 5:00 pm (CET) +49 (0) 2051 3120 332

National Poisons Information Service  
+44 121 507 4123

Members of the public seeking specific information on poisons should contact:  
In England and Wales: NHS 111 - dial 111  
In Scotland: NHS 24 - dial 111

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

- **Classification according to Regulation (EC) No 1272/2008**

Flam. Liq. 2 H225 Highly flammable liquid and vapour.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

#### 2.2 Label elements

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger

- **Hazard-determining components of labelling:**

propan-2-ol

- **Hazard statements**

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

- **Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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- P337+P313 If eye irritation persists: Get medical advice/attention.  
P403+P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**2.3 Other hazards**

Flux / flux gels:

Inhalation of vapors released during the soldering process should be avoided. Flux vapors irritate the nose, throat, and respiratory tract, and can lead to allergic reactions (asthma) after prolonged or repeated contact. Therefore, an active suction is recommended.

After working with the product and before eating, drinking or smoking, wash your hands with soap and water.

Keep out of the reach of children.

**Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

**SECTION 3: Composition/information on ingredients****3.2 Mixtures**

- **Description:** Mixture of substances listed below with nonhazardous additions.

**Dangerous components:**

CAS: 67-63-0	propan-2-ol	Flam. Liq. 2, H225	50-90%
EINECS: 200-661-7		Eye Irrit. 2, H319; STOT SE 3, H336	
CAS: 109-59-1	2-isopropoxyethanol	Flam. Liq. 3, H226	2-9%
EINECS: 203-685-6		Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	
CAS: 124-04-9	adipic acid	Eye Irrit. 2, H319	2-9%
EINECS: 204-673-3			

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.

- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing agents:**

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**For safety reasons unsuitable extinguishing agents:** Water with full jet

- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

**5.3 Advice for firefighters**

- **Protective equipment:** No special measures required.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

Wear protective clothing.

- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

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- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.
- **Storage class:** 3
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**  
**CAS: 67-63-0 propan-2-ol**  
WEL (Great Britain) Short-term value: 1250 mg/m<sup>3</sup>, 500 ppm  
Long-term value: 999 mg/m<sup>3</sup>, 400 ppm
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes.  
Avoid contact with the eyes and skin.
- **Respiratory protection:**  
Not necessary if room is well-ventilated.  
Use suitable respiratory protective device in case of insufficient ventilation.  
Filter A
- **Protection of hands:**



Protective gloves

Solvent resistant gloves  
Rubber gloves  
Synthetic rubber gloves

To avoid skin problems reduce the wearing of gloves to the required minimum.

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The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Safety glasses

### SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Fluid
Colour:	Colourless
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not determined.

· **Change in condition**

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	82 °C

Flash point:	12 °C
Flammability (solid, gas):	Not applicable.
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapour pressure:	Not determined.
Density:	Not determined.
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with water:	Not miscible or difficult to mix.
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent content:	
Organic solvents:	89.6 %

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Water: 0.4 %  
VOC (EC) 89.60 %

· 9.2 Other information No further relevant information available.

### SECTION 10: Stability and reactivity

- 10.1 Reactivity No further relevant information available.
- 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: No dangerous decomposition products known.

### SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
- Acute toxicity Based on available data, the classification criteria are not met.
- LD/LC50 values relevant for classification:  
CAS: 67-63-0 propan-2-ol  
Oral LD50 5,045 mg/kg (rat)  
Dermal LD50 12,800 mg/kg (rabbit)  
Inhalative LC50/4 h 30 mg/l (rat)
- Primary irritant effect:
- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- Serious eye damage/irritation  
Causes serious eye irritation.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure  
May cause drowsiness or dizziness.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- 12.1 Toxicity
- Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- Additional ecological information:
- General notes:  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- 12.5 Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

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**SECTION 13: Disposal considerations****· 13.1 Waste treatment methods****· Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

**· European waste catalogue**

HP3 Flammable

HP4 Irritant - skin irritation and eye damage

HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

**· Uncleaned packaging:****· Recommendation:** Packagings that may not be cleansed are to be disposed of in the same manner as the product.**SECTION 14: Transport information****· 14.1 UN-Number****· ADR, IMDG, IATA**

UN1219

**· 14.2 UN proper shipping name****· ADR**

1219 ISOPROPANOL (ISOPROPYL ALCOHOL)

**· IMDG, IATA**

ISOPROPANOL (ISOPROPYL ALCOHOL)

**· 14.3 Transport hazard class(es)****· ADR, IMDG, IATA****· Class**

3 Flammable liquids.

**· Label**

3

**· 14.4 Packing group****· ADR, IMDG, IATA**

II

**· 14.5 Environmental hazards:**

Not applicable.

**· 14.6 Special precautions for user**

Warning: Flammable liquids.

**· Hazard identification number (Kemler code):**

33

**· EMS Number:**

F-E,S-D

**· Stowage Category**

B

**· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

**· Transport/Additional information:****· ADR****· Limited quantities (LQ)**

1L

**· Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

**· Transport category**

2

**· Tunnel restriction code**

D/E

**· IMDG****· Limited quantities (LQ)**

1L

**· Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

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· UN "Model Regulation": UN 1219 ISOPROPANOL (ISOPROPYL ALCOHOL), 3, II

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - Directive 2012/18/EU
  - **Named dangerous substances - ANNEX I** None of the ingredients is listed.
  - **Seveso category** P5c FLAMMABLE LIQUIDS
  - **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
  - **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
  - **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
  - **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**  
None of the ingredients is listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
  - H225 Highly flammable liquid and vapour.
  - H226 Flammable liquid and vapour.
  - H312 Harmful in contact with skin.
  - H319 Causes serious eye irritation.
  - H332 Harmful if inhaled.
  - H336 May cause drowsiness or dizziness.
- **Department issuing SDS:** Product Safety Department
- **Contact:** Hr. Dörr
- **Abbreviations and acronyms:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Flam. Liq. 2: Flammable liquids – Category 2
  - Flam. Liq. 3: Flammable liquids – Category 3
  - Acute Tox. 4: Acute toxicity - dermal – Category 4
  - Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
  - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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