

# Safety data sheet

## according to 1907/2006/EC, Article 31 and 453/2010/EC

Printing date 30.09.2015

Version number 2

Revision: 30.09.2015

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

**1.1 Product identifier**

Trade name: **Hartlötpaste "UNIVERSAL"**  
**Hard solder paste "UNIVERSAL"**

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

*No further relevant information available.*

**Application of the substance / the mixture** *Soldering flux*

**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Felder GmbH  
 Im Lipperfeld 11  
 D-46047 Oberhausen

Tel.: +49 (0)208/ 85035-0

Fax.: +49 (0)208/ 26080

<http://www.felder.de>

e-mail: [info@felder.de](mailto:info@felder.de)

**Further information obtainable from:**

*Labor*

*(Mo-Do. 8:00-16:00/ Fr. 8:00-13:00)*

Tel.: +49(0)208/ 8 50 35-0

e-mail: [mprobst@felder.de](mailto:mprobst@felder.de)

**1.4 Emergency telephone number:**

*24 hr. emergency information:*

*Poison emergency call Berlin*

*"Giftnotruf Berlin"*

Tel.: 0049-30-30686 790

### SECTION 2: Hazards identification

**2.1 Classification of the substance or mixture**

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



GHS08 health hazard

Repr. 2 H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

**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**

GHS07 GHS08

**Signal word** *Warning*

**Hazard-determining components of labelling:**

*potassium pentaborate*

**Hazard statements**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.

**Precautionary statements**

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

P264 Wash thoroughly after handling.

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

P321 *Specific treatment (see on this label).*

P405 *Store locked up.*

P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

### Labelling of packages where the contents do not exceed 125 ml

#### Hazard pictograms



GHS07 GHS08

**Signal word** *Warning*

#### Hazard-determining components of labelling:

*potassium pentaborate*

#### Hazard statements

*H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.*

#### Precautionary statements

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

P201 *Obtain special instructions before use.*

P202 *Do not handle until all safety precautions have been read and understood.*

P308+P313 *IF exposed or concerned: Get medical advice/attention.*

P405 *Store locked up.*

P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

#### 2.3 Other hazards

#### Results of PBT and vPvB assessment

**PBT:** *Not applicable.*

**vPvB:** *Not applicable.*

## SECTION 3: Composition/information on ingredients

### 3.2 Chemical characterisation: Mixtures

**Description:** *Mixture: consisting of the following components.*

#### Dangerous components:

CAS: 12229-13-9	potassium pentaborate		<50%
EINECS: 234-371-7			
Reg.nr.: 01-2119970729-20			

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

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

**General information:** *Take affected persons out into the fresh air.*

**After inhalation:** *Supply fresh air; consult doctor in case of complaints.*

**After skin contact:** *If skin irritation continues, consult a doctor.*

**After eye contact:** *Seek medical treatment.*

#### After swallowing:

*Rinse out mouth and then drink plenty of water.*

*Seek medical treatment.*

**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.*

**For safety reasons unsuitable extinguishing agents:** *None*

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

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**5.3 Advice for firefighters****Protective equipment:** *Do not inhale explosion gases or combustion gases.***SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures** *Wear protective clothing.***6.2 Environmental precautions:***Dilute with plenty of water.**Do not allow to enter sewers/ surface or ground water.***6.3 Methods and material for containment and cleaning up:***Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).***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:** *No special measures required.***7.2 Conditions for safe storage, including any incompatibilities****Storage:****Requirements to be met by storerooms and receptacles:** *No special requirements.***Information about storage in one common storage facility:** *Store away from foodstuffs.***Further information about storage conditions:** *Store in dry conditions.***Storage class:** *10-13***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:***The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.***Additional information:** *The lists valid during the making were used as basis.***8.2 Exposure controls****Appropriate engineering controls:***Ensure adequate ventilation.**Remove the fumes by suitable suction devices.***Personal protective equipment:****General protective and hygienic measures:** *Wash hands before breaks and at the end of work.***Respiratory protection:***Use suitable respiratory protective device in case of insufficient ventilation.**Filter P2**Filter B***Protection of hands:***Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation***Material of gloves***Nitrile rubber, NBR**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 cannot be calculated in advance and has therefore to be checked prior to the application.**Recommended thickness of the material:  $\geq 0,4$  mm***Penetration time of glove material***The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.**The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.**Value for the permeation: Level  $\leq 6$* **Eye protection:***Goggles recommended during refilling**in cases of application: protective goggles*

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Body protection: *Protective work clothing*

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

##### Appearance:

Form: *Pasty*  
 Colour: *Whitish*  
 Odour: *Odourless*  
 Odour threshold: *Not determined.*  
 pH-value: *Not determined.*

#### Change in condition

Melting point/Melting range: *ca.500 °C*  
 Boiling point/Boiling range: *100 °C*  
 Flash point: *Not applicable.*  
 Flammability (solid, gaseous): *Not applicable.*

#### Ignition temperature:

Decomposition temperature: *Not determined.*  
 Self-igniting: *Product is not selfigniting.*  
 Danger of explosion: *Product does not present an explosion hazard.*

#### Explosion limits:

Lower: *Not determined.*  
 Upper: *Not determined.*

#### Vapour pressure at 20 °C:

23 hPa  
 Density at 20 °C: *1,26 g/cm<sup>3</sup>*  
 Relative density: *Not determined.*  
 Vapour density: *Not determined.*  
 Evaporation rate: *Not determined.*

#### Solubility in / Miscibility with

water: *Fully miscible.*

Partition coefficient (n-octanol/water): *Not determined.*

#### Viscosity:

Dynamic: *Not determined.*  
 Kinematic: *Not determined.*

#### Solvent content:

Organic solvents: *0,0 %*  
 VOC (EC) *0,0 %*  
*0,00 %*

#### 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: *Can decompose slowly with localised heating above 150 °C.*

10.3 Possibility of hazardous reactions *Reacts with strong acids.*

10.4 Conditions to avoid *No further relevant information available.*

10.5 Incompatible materials: *No further relevant information available.*

10.6 Hazardous decomposition products: *Irritant gases/vapours*

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

#### LD/LC50 values relevant for classification:

##### 12229-13-9 potassium pentaborate

Oral	LD50	3690 mg/kg (rat) (OECD 401)
Dermal	LD50	>2000 mg/kg (rabbit) (U.S. EPA FIFRA)

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**Primary irritant effect:****Skin corrosion/irritation***Causes skin irritation.***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***Suspected of damaging fertility. Suspected of damaging the unborn child.***STOT-single exposure** *Based on available data, the classification criteria are not met.***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.*

## 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***06 03 14 | solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13***Uncleaned packaging:****Recommendation:** *Disposal must be made according to official regulations.***Recommended cleansing agents:** *Water, if necessary together with cleansing agents.*

## SECTION 14: Transport information

**14.1 UN-Number****ADR, ADN, IMDG, IATA**

Void

**14.2 UN proper shipping name****ADR, ADN, IMDG, IATA**

Void

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

Void

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

Void

**14.5 Environmental hazards:****Marine pollutant:**

No

**14.6 Special precautions for user***Not applicable.***14.7 Transport in bulk according to Annex II of Marpol and the IBC Code***Not applicable.***UN "Model Regulation":**

Void

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## 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.*

#### National regulations:

**Information about limitation of use:** *Employment restrictions concerning juveniles must be observed.*

**Waterhazard class:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.*

**Other regulations, limitations and prohibitive regulations** *Observe national special regulations.*

**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

*H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.*

**Recommended restriction of use** *For commercial use only.*

**Contact:** *Dr. M. Probst*

#### Abbreviations and acronyms:

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*

*IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)*

*ICAO: International Civil Aviation Organisation*

*ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)*

*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*

*Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2*

*Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2*

*Repr. 2: Reproductive toxicity, Hazard Category 2*

**Safety data sheet SD3027**

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