

**Safety data sheet**  
according to 1907/2006/EC, Article 31 and 2020/878/EU

Printing date 27.05.2022

Version number 4 (replaces version 3)

Revision: 03.03.2021

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

**1.1 Product identifier**

Trade name: CuFe-Nr.1 spezial  
UFI: 9YC8-R0TN-300Y-TPS6

**FELDER**  
seit 1979  
LÖTTECHNIK

**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:**

lab

(mo-thu. 8:00 a.m. - 4:00 p.m./ fr. 8:00 a.m. - 1:00 p.m.)

email: [mprobst@felder.de](mailto:mprobst@felder.de)

**1.4 Emergency telephone number:**

Tel: +49(0)208/ 85035-29

(Mo-Do: 08:00-16:00;Fr: 08:00-13:00)

EuPCs: PC-TEC-24

**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 H361 Suspected of damaging fertility or the unborn child.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

**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 difluorodihydroxyborate(1-)

**Hazard statements**

H302 Harmful if swallowed.

H361 Suspected of damaging fertility or the unborn child.

**Precautionary statements**

P264 Wash thoroughly after handling.

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

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

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.

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**Labelling of packages where the contents do not exceed 125 ml**  
**Hazard pictograms**



GHS07 GHS08

**Signal word** Warning**Hazard-determining components of labelling:**

potassium difluorodihydroxyborate(1-)

**Hazard statements**

H361 Suspected of damaging fertility or the unborn child.

**Precautionary statements**

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

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

CAS: 85392-66-1	potassium difluorodihydroxyborate(1-)	50-100%
EINECS: 286-925-2	◆ Repr. 2, H361; ◆ Acute Tox. 4, H302	
Reg.nr.: 01-2119980037-35	Specific concentration limit: Repr. 2; H361: C ≥ 7.1 %	

**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****General information:**

Take affected persons out of danger area and lay down.

Take affected persons out into the fresh air.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

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: Seek medical treatment.

**After swallowing:**

Rinse out mouth and then drink plenty of water.

Call for a doctor immediately.

**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**

If swallowed, gastric irrigation.

In cases of irritation to the lungs, initial treatment with Dexamethason metered aerosol.

**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:** None**5.2 Special hazards arising from the substance or mixture**

In case of fire, the following can be released:

Hydrogen fluoride (HF)

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**5.3 Advice for firefighters****Protective equipment:**

*Do not inhale explosion gases or combustion gases.  
Wear self-contained respiratory protective device.*

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

*Ensure adequate ventilation*

*Avoid formation of dust.*

*Wear protective clothing.*

**6.2 Environmental precautions:**

*Do not allow to penetrate the ground/soil.*

*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:**

*Dilute with plenty water.*

*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**

*Extractors are required on all machines used for thermal processing or splinter removal processes.*

*Extractor required at the object.*

*Ensure good ventilation/exhaustion at the workplace.*

**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:** *Store only in the original receptacle.*

**Information about storage in one common storage facility:** *Store away from foodstuffs.*

**Further information about storage conditions:**

*Store in dry conditions.*

*Protect from frost.*

**Storage class:** 12

**7.3 Specific end use(s)** *No further relevant information available.*

**SECTION 8: Exposure controls/personal protection****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** *No further data; see item 7.*

**Appropriate engineering controls:**

*Ensure adequate ventilation.*

*Remove the fumes by means of suitable suction devices.*

**Individual protection measures, such as personal protective equipment****General protective and hygienic measures:**

*Keep away from foodstuffs, beverages and feed.*

*Wash hands before breaks and at the end of work.*

*Do not inhale gases / fumes / aerosols.*

**Respiratory protection:**

*Use suitable respiratory protective device in case of insufficient ventilation.*

*Filter P2*

*Filter B*

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**Hand protection****Protective gloves**

*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 16523-1:2015 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  $\leq 6$*

**As protection from splashes gloves made of the following materials are suitable:**

*Natural rubber, NR**Nitrile rubber, NBR*

**Eye/face protection in cases of application: protective goggles**

**Body protection: Protective work clothing**

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

Colour:	Brown
Odour:	Odourless
Odour threshold:	Not determined.
Melting point/freezing point:	$\sim 500$ , getrocknet °C
Boiling point or initial boiling point and boiling range	Undetermined.
Flammability	Not applicable.
Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not determined.
Flash point:	Not applicable.
Ignition temperature:	700 °C
Decomposition temperature:	Not determined.
pH at 20 °C	5.5
Viscosity:	
Kinematic viscosity	Not determined.
Dynamic:	Not determined.
Solubility	
water at 20 °C:	$\sim 500$ g/l
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure:	Not determined.
Density and/or relative density	
Density at 20 °C:	1.6 g/cm <sup>3</sup>
Relative density	Not determined.
Vapour density	Not determined.

### 9.2 Other information

#### Appearance:

Form: **Pasty**

**Important information on protection of health and environment, and on safety.**

**Auto-ignition temperature:**

*Product is not selfigniting.*

**Explosive properties:**

*Product does not present an explosion hazard.*

**Solvent content:**

0.0 %

**Organic solvents:**

0.00 %

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<b>Change in condition</b>	
<b>Evaporation rate</b>	<i>Not determined.</i>
<b>Information with regard to physical hazard classes</b>	
<b>Explosives</b>	<i>Void</i>
<b>Flammable gases</b>	<i>Void</i>
<b>Aerosols</b>	<i>Void</i>
<b>Oxidising gases</b>	<i>Void</i>
<b>Gases under pressure</b>	<i>Void</i>
<b>Flammable liquids</b>	<i>Void</i>
<b>Flammable solids</b>	<i>Void</i>
<b>Self-reactive substances and mixtures</b>	<i>Void</i>
<b>Pyrophoric liquids</b>	<i>Void</i>
<b>Pyrophoric solids</b>	<i>Void</i>
<b>Self-heating substances and mixtures</b>	<i>Void</i>
<b>Substances and mixtures, which emit flammable gases in contact with water</b>	<i>Void</i>
<b>Oxidising liquids</b>	<i>Void</i>
<b>Oxidising solids</b>	<i>Void</i>
<b>Organic peroxides</b>	<i>Void</i>
<b>Corrosive to metals</b>	<i>Void</i>
<b>Desensitised explosives</b>	<i>Void</i>

## 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 and stored according to specifications.*

**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:** *Hydrogen fluoride*

## SECTION 11: Toxicological information

**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Acute toxicity**

*Harmful if swallowed.*

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

**ATE (Acute Toxicity Estimates)**

Oral | LD50 | 930 mg/kg (rat)

**Skin corrosion/irritation** *Based on available data, the classification criteria are not met.*

**Serious eye damage/irritation** *Based on available data, the classification criteria are not met.*

**Respiratory or skin sensitisation** *Based on available data, the classification criteria are not met.*

**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 or 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.*

**11.2 Information on other hazards**

**Endocrine disrupting properties**

*None of the ingredients is listed.*

## 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.*

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**12.4 Mobility in soil** No further relevant information available.**12.5 Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

**12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.**12.7 Other adverse effects****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.

## 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

16 05 07\*: discarded inorganic chemicals consisting of or containing hazardous substances

HP 6: Acute Toxicity

HP 10: Toxic for reproduction

cleaned plastic can:

15 01 02: plastic packaging

overpack:

15 01 01: paper and cardboard packaging

**Uncleaned packaging:** 15 01 10\*: packaging containing residues of or contaminated by hazardous substances**Recommendation:** Disposal must be made according to official regulations.

#### Recommended cleansing agents:

mechanical scratching, clean with alkaline soap solution and subsequent rinsing with ethanol or isopropanol.

## SECTION 14: Transport information

### 14.1 UN number or ID 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 Maritime transport in bulk according to IMO

instruments Not applicable.

UN "Model Regulation": Void

## 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.

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.

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**REGULATION (EU) 2019/1148**

<b>Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))</b>
<i>None of the ingredients is listed.</i>

<b>Annex II - REPORTABLE EXPLOSIVES PRECURSORS</b>
<i>None of the ingredients is listed.</i>

**National regulations:****Information about limitation of use:**

*Employment restrictions concerning pregnant and lactating women must be observed.*

*Employment restrictions concerning juveniles must be observed.*

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

**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.*

**Reasons for changes:**

02.11.2015: chapter 1, 8, 15 adaption to Regulation 453/2010/EC, 830/2015/EU, 18/2012/EU

22.06.2018: chapter 13

03.03.2021: chapter 1, 2, 15, 16

**Information referred to in Annex I, point 1.3.4.2 of Regulation 1272/2008/EC:****Relevant phrases**

H302 Harmful if swallowed.

H361 Suspected of damaging fertility or the unborn child.

**Contact:** Dr. M. Probst

**Version number of previous version:** 3

**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 relatif au transport international 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

Acute Tox. 4: Acute toxicity – Category 4

Repr. 2: Reproductive toxicity – Category 2

**Safety data sheet SD3028**

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