

# Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31 and 2020/878/  
EU

Printing date 10.06.2025

Version number 6 (replaces version 5)

Revision: 10.06.2025

## 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

**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

**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

**1.4 Emergency telephone number:**

24-hour emergency information:

Giftnotruf Berlin, counselling in German and English

Phone: (030) 30686 700

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.

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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 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:

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*Hydrogen fluoride (HF)***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 of water.**Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).**Dispose contaminated material as waste according to section 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***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*

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Filter B

**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

**Eyeface 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:	~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.
Auto-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:	~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.**

**Ignition temperature:** Product is not selfigniting.

**Explosive properties:** Product does not present an explosion hazard.

**Solvent content:**

**Organic solvents:** 0.0 %

**VOC (EC)** 0.00 %

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**Change in condition**Evaporation rate *Not determined.***Information with regard to physical hazard classes**

Explosives	<i>Void</i>
Flammable gases	<i>Void</i>
Aerosols	<i>Void</i>
Oxidising gases	<i>Void</i>
Gases under pressure	<i>Void</i>
Flammable liquids	<i>Void</i>
Flammable solids	<i>Void</i>
Self-reactive substances and mixtures	<i>Void</i>
Pyrophoric liquids	<i>Void</i>
Pyrophoric solids	<i>Void</i>
Self-heating substances and mixtures	<i>Void</i>
Substances and mixtures, which emit flammable gases in contact with water	<i>Void</i>
Oxidising liquids	<i>Void</i>
Oxidising solids	<i>Void</i>
Organic peroxides	<i>Void</i>
Corrosive to metals	<i>Void</i>
Desensitised explosives	<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)

**85392-66-1 potassium difluorodihydroxyborate(1-)**

Oral | LD50 | 744 mg/kg (rat)

**Primary irritant effect:****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.*

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## 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.**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 (EU) 2019/1021 on persistent organic pollutants (POP) None of the ingredients are included.

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**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.

**REGULATION (EU) 2019/1148****Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

**Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

**Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

**Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

**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

29.04.2024: chapter 15

10.06.2025: chapter 1, 8

**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:** 5**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

ATE: Acute toxicity estimate values

Acute Tox. 4: Acute toxicity – Category 4

Repr. 2: Reproductive toxicity – Category 2

**Safety data sheet SD3028**