

BrazeTec h Paste

Version 2.9 DE SDS Number: 300000000990 Revision Date: 21.07.2018

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

Product identifier : BrazeTec h Paste

Product code : 300000000990

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

Use of the Sub-
stance/Mixture : brazing

1.3 Details of the supplier of the safety data sheet

Company : SAXONIA Technical Materials GmbH
Rodenbacher Chaussee 4
63457 Hanau
Germany

E-mail address of person
responsible for the SDS : info.ipds@umicore.com

1.4 Emergency telephone number

Poison Center

Telephone : +49 30 192 40

Hours of operation : 24HRS

Supplier

Emergency telephone num-
ber : For transport in Europe, Central- and South America, Israel
and Africa (Non-Arabic speaking countries): +32 3 213 15 70
For transport in the Middle East (Israel excluded) & Arabic
speaking Africa: +32 3 213 33 79
For transport in the USA and Canada: 1-877 986 4267
For transport in Asian and the Pacific (China excluded): +65
62 64 78 36
For transport in China: (+86) 400 88 71 190

Hours of operation : This telephone number is available 24 hours per day, 7 days
per week.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4 H302: Harmful if swallowed.

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Reproductive toxicity, Category 2

H361d: Suspected of damaging the unborn child.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

Hazard statements : H302 Harmful if swallowed.
H361d Suspected of damaging the unborn child.

Precautionary statements :

Prevention:

- P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

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

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

potassium difluorodihydroxyborate(1-)

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
potassium difluorodihydroxyborate(1-)	85392-66-1 286-925-2	Acute Tox. 4; H302 Repr. 2; H361d	<= 90

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01-2119980037-35

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and get medical attention immediately.
- In case of skin contact : If on clothes, remove clothes.
- In case of eye contact : Remove contact lenses.
Flush eyes with water as a precaution.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Ingestion may provoke the following symptoms:
Stomach/intestinal disorders

4.3 Indication of any immediate medical attention and special treatment needed

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

- Hazardous combustion products : Fluorine compounds
Boron oxides

5.3 Advice for firefighters

- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

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Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

6.4 Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Do not breathe vapours/dust.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : General industrial hygiene practice. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards. To maintain product quality, do not store in heat or direct sunlight.

Advice on common storage : No materials to be especially mentioned.

Storage class (TRGS 510) : 12, Non Combustible Liquids

Further information on storage stability : Keep in a dry place. No decomposition if stored and applied as directed.

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7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
potassium difluorodihydroxyborate(1-)	Workers	Inhalation	Long-term systemic effects	10,95 mg/m ³
	Workers	Inhalation	Long-term local effects	18,4 mg/m ³
	Workers	Inhalation	Acute local effects	18,4 mg/m ³
	Workers	Skin contact	Long-term systemic effects	500,1 mg/kg
	Consumers	Inhalation	Long-term systemic effects	5,11 mg/m ³
	Consumers	Inhalation	Long-term local effects	18,4 mg/m ³
	Consumers	Inhalation	Acute local effects	18,4 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	250,39 mg/kg
	Consumers	Ingestion	Long-term systemic effects	1,46 mg/kg
	Consumers	Ingestion	Acute systemic effects	1,46 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
potassium difluorodihydroxyborate(1-)	Fresh water	2,02 mg/l
	Marine water	2,02 mg/l
	Sewage treatment plant	10 mg/l
	Soil	5,4 mg/kg dry weight (d.w.)

8.2 Exposure controls

Engineering measures

Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Personal protective equipment

Eye protection : Safety glasses with side-shields conforming to EN166

Hand protection

Material : Nitrile rubber
Break through time : > 240 min
Glove thickness : 0,38 mm

Skin and body protection : Footwear protecting against chemicals

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	dispersion
Colour	:	white
Odour	:	odourless
pH	:	5,4 Concentration: 10 g/l
Melting point/range	:	not determined
Boiling point/boiling range	:	not determined
Flash point	:	Method: closed cup does not flash
Density	:	1,6 g/cm ³
Solubility(ies) Water solubility	:	500 g/l (20 - 23 °C)

9.2 Other information

Flammability (liquids)	:	The product is not flammable.
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SECTION 10: Stability and reactivity

10.1 Reactivity

Stable
No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : Stable under recommended storage conditions.

10.4 Conditions to avoid

Conditions to avoid : None known.
Extremes of temperature and direct sunlight.

10.5 Incompatible materials

Materials to avoid : Strong acids

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None known.

10.6 Hazardous decomposition products

Stable under normal conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

- Acute oral toxicity : Acute toxicity estimate: 760 mg/kg
Method: Calculation method
- Acute inhalation toxicity : Remarks: No data available
- Acute dermal toxicity : Remarks: No data available

Components:

potassium difluorodihydroxyborate(1-):

- Acute oral toxicity : LD50 (Rat, female): 608 mg/kg
Method: OECD Test Guideline 401
GLP: no
- Acute inhalation toxicity : LC50 (Rat, male and female): > 2,04 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: Based on read across from structural related substance
- Acute dermal toxicity : LD50 (Rabbit, male and female): > 2.000 mg/kg
GLP: yes
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on read across from structural related substance

Skin corrosion/irritation

Product:

Result: No skin irritation

Components:

potassium difluorodihydroxyborate(1-):

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Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Serious eye damage/eye irritation

Product:

Result: No eye irritation

Components:

potassium difluorodihydroxyborate(1-):

Species: Rabbit
Method: OECD Test Guideline 405
Result: No eye irritation

Respiratory or skin sensitisation

Product:

Remarks: No data available

Components:

potassium difluorodihydroxyborate(1-):

Exposure routes: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitisation.
Remarks: Based on read across from structural related substance

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available

Components:

potassium difluorodihydroxyborate(1-):

Genotoxicity in vitro : Test Type: Ames test
Test system: Bacteria
Result: negative
Remarks: Based on read across from structural related substance

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Method: OECD Test Guideline 476
Result: negative
Remarks: Based on read across from structural related substance

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Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Application Route: Oral
Dose: 0, 225, 450, 900, 1800, 3500
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on read across from structural related substance

Carcinogenicity

Product:

Remarks: No data available

Components:

potassium difluorodihydroxyborate(1-):

Species: Mouse, (male and female)
Application Route: Oral
Exposure time: 103 weeks
Dose: 0, 446, 1150 mg/kg body weight
Method: OECD Test Guideline 451
Result: negative
GLP: yes
Remarks: Based on read across from structural related substance

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Components:

potassium difluorodihydroxyborate(1-):

Effects on fertility : Species: Rat
Application Route: Oral
Dose: 0, 50, 155, 518 milligram per kilogram
General Toxicity - Parent: NOAEL: 155 mg/kg body weight
General Toxicity F1: NOAEL: 155 mg/kg body weight
Remarks: Based on read across from structural related substance

Species: Rat
Application Route: Oral
Dose: 0, 34, 100, 336 milligram per kilogram
General Toxicity - Parent: NOAEL: 100 mg/kg body weight
General Toxicity F1: NOAEL: 100 mg/kg body weight
Remarks: Based on read across from structural related substance

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- Effects on foetal development : Species: Rat
Application Route: Oral
Dose: 19, 36, 55, 76, 143 milligram per kilogram
General Toxicity Maternal: LOAEL: 143 mg/kg body weight
Developmental Toxicity: LOAEL: 76 mg/kg body weight
Method: OECD Test Guideline 414
Remarks: Based on read across from structural related substance
- Species: Rat
Application Route: Oral
Dose: 19, 36, 55, 76, 143 milligram per kilogram
General Toxicity Maternal: NOAEL: 76 mg/kg body weight
Developmental Toxicity: LOAEL: 55 mg/kg body weight
Method: OECD Test Guideline 414
Remarks: Based on read across from structural related substance
- Species: Rabbit
Application Route: Oral
Dose: 0; 62,5; 125; 250 milligram per kilogram
General Toxicity Maternal: LOAEL: 250 mg/kg body weight
Developmental Toxicity: LOAEL: 250 mg/kg body weight
Method: OECD Test Guideline 414
Remarks: Based on read across from structural related substance
- Species: Rabbit
Application Route: Oral
Dose: 0; 62,5; 125; 250 milligram per kilogram
General Toxicity Maternal: NOAEL: 125 mg/kg body weight
Developmental Toxicity: NOAEL: 125 mg/kg body weight
Method: OECD Test Guideline 414
Remarks: Based on read across from structural related substance
- Reproductive toxicity - Assessment : Some evidence of adverse effects on development, based on animal experiments.

STOT - single exposure

Product:

Remarks: No data available

STOT - repeated exposure

Product:

Remarks: No data available

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Repeated dose toxicity

Components:

potassium difluorodihydroxyborate(1-):

Species: Rat

NOAEL: 127,8 mg/kg

Application Route: Oral

Exposure time: 2 yr

Number of exposures: 1/d

Further information

Product:

Remarks: No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

potassium difluorodihydroxyborate(1-):

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 750 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes
Remarks: Fresh water

NOEC (Danio rerio (zebra fish)): 560 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes
Remarks: Fresh water

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 133 mg/l
Exposure time: 48 h
Remarks: Fresh water
Based on read across from structural related substance

Toxicity to microorganisms : EC50 (Pseudomonas putida): 240 mg/l
Exposure time: 17 h
Method: OECD Test Guideline 201
Remarks: Fresh water

NOEC (Pseudomonas putida): 180 mg/l
Exposure time: 17 h
Method: OECD Test Guideline 201
Remarks: Fresh water

Toxicity to fish (Chronic toxicity) : NOEC: 5,6 mg/l
Exposure time: 34 d

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- Species: Danio rerio (zebra fish)
Method: OECD Test Guideline 210
Remarks: Fresh water
Based on read across from structural related substance
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 25 mg/l
Exposure time: 72 h
Remarks: Fresh water
Based on read across from structural related substance
- Toxicity to soil dwelling organisms : LC50: 651,4 mg/kg
Exposure time: 7 d
Species: Eisenia fetida (earthworms)
Remarks: unit expressed as mg metal/kg
Based on read across from structural related substance
- LC50: 447,6 mg/kg
Exposure time: 14 d
Species: Eisenia fetida (earthworms)
Remarks: unit expressed as mg metal/kg
Based on read across from structural related substance
- Plant toxicity : Exposure time: 85 d
Remarks: Based on read across from structural related substance
- Sediment toxicity : NOEC: 20,1 mg/l
Remarks: unit expressed as mg metal/kg
Fresh water
Based on read across from structural related substance

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

Components:

potassium difluorodihydroxyborate(1-):

- Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): < 0,1
Remarks: Fresh water
Based on read across from structural related substance
Bioaccumulation is unlikely.
- Bioconcentration factor (BCF): 5 - 123
Remarks: terrestrial environment
Based on read across from structural related substance

12.4 Mobility in soil

No data available

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12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

12.6 Other adverse effects

Product:

Additional ecological information : No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with the European Directives on waste and hazardous waste.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.
Dispose of as hazardous waste in compliance with local and national regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

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14.5 Environmental hazards

Not regulated as a dangerous good

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 for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Not applicable

Water contaminating class (Germany) : WGK 1 slightly water endangering
Classification according to AwSV, Annex 1 (5.2)

TA Luft List (Germany) : Total dust:
Not applicable
Inorganic substances in powdered form:
portion Class 3: 80 %

Inorganic substances in vapour or gaseous form:
Not applicable
Organic Substances:
Not applicable
Carcinogenic substances:
Not applicable
Mutagenic:
Not applicable

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Toxic to reproduction:
Not applicable

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Not applicable

Other regulations:

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

The components of this product are reported in the following inventories:

CH INV : The formulation contains substances listed on the Swiss Inventory, Not in compliance with the inventory

DSL : This product contains the following components that are not on the Canadian DSL nor NDSL.

AICS : On the inventory, or in compliance with the inventory

NZIoC : Not in compliance with the inventory

ENCS : Not in compliance with the inventory

ISHL : Not in compliance with the inventory

KECI : Not in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TCSI : Not in compliance with the inventory

TSCA : On TSCA Inventory

15.2 Chemical safety assessment

SECTION 16: Other information

Full text of H-Statements

H302 : Harmful if swallowed.
H361d : Suspected of damaging the unborn child.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Repr. : Reproductive toxicity

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society

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for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

Acute Tox. 4	H302
Repr. 2	H361d

Classification procedure:

Calculation method
Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

DE / EN