

BrazeTec h 80 Paste

Version 2.2

GB

SDS Number: 300000000985

Revision Date: 06.08.2016

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

Product identifier : BrazeTec h 80 Paste

Product code : 300000000985

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 : Umicore AG & Co. KG
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 : 844 892 0111

Hours of operation : 24HRS

Only intended to inform professional caregivers in acute poisoning

Supplier

Emergency telephone number : 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: 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.

Eye irritation, Category 2 H319: Causes serious eye irritation.

Reproductive toxicity, Category 2 H361d: Suspected of damaging the unborn child.

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word : Warning

Hazard statements : H302 Harmful if swallowed.
H319 Causes serious eye irritation.
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.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P337 + P313 If eye irritation persists: 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. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
Potassium difluorodihydroxyborate(1-)	85392-66-1 286-925-2 / 01- 2119980037-35 /	Acute Tox. 4; H302 Repr. 2; H361d	<= 80

For explanation of abbreviations see section 16.

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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 symptoms persist, call a physician.
If unconscious, place in recovery position and get medical attention immediately.
- In case of eye contact : Remove contact lenses.
Immediately flush eye(s) with plenty of water.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Induce vomiting immediately and call a physician.
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.
Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Ingestion may provoke the following symptoms:
Stomach/intestinal disorders
Eye contact
Excessive lachrymation

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

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

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5.3 Advice for firefighters

- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.
- Further information : Standard procedure for chemical fires.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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).
Keep in suitable, closed containers for disposal.

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.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.
- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Hygiene measures : When using do not eat or drink. When using do not smoke.
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. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards. To maintain product quality, do not store in heat or direct sunlight.

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Other data : Keep in a dry place. No decomposition if stored and applied as directed.

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
Remarks:	Assessment Factors	
	Soil	5.4 mg/kg dry weight (d.w.)

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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 : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : Aqueous solution

Colour : white

Odour : odourless

pH : 6.2, Concentration: 10 g/l

Boiling point/boiling range : 100 °C

Flash point : Other information: The product is not flammable.

Density : 1.6 g/cm³

Solubility(ies)
Water solubility : 350 g/l soluble

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : The product has a corrosive effect on steel and aluminium.

No decomposition if stored and applied as directed.

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10.4 Conditions to avoid

10.5 Incompatible materials

10.6 Hazardous decomposition products

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat, male and female): 1,098 mg/kg
Method: OECD Test Guideline 401
GLP: no

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:

Species: Rabbit
Exposure time: 72 h
Method: OECD Test Guideline 404
Result: No skin irritation

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GLP: no

Remarks: May cause skin irritation in susceptible persons.

Components:

Potassium difluorodihydroxyborate(1-):

Species: Rabbit

Method: OECD Test Guideline 404

Result: No skin irritation

Serious eye damage/eye irritation

Product:

Result: 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

Species: Bacteria

Result: negative

Remarks: Based on read across from structural related substance:

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

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: No observed adverse effect level:
155 mg/kg body weight
General Toxicity F1: No observed adverse effect level: 155
mg/kg body weight
Remarks: Based on read across from structural related substance:

Species: Rat

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Application Route: Oral
Dose: 0, 34, 100, 336 milligram per kilogram
General Toxicity - Parent: No observed adverse effect level:
100 mg/kg body weight
General Toxicity F1: No observed adverse effect level: 100
mg/kg body weight
Remarks: Based on read across from structural related sub-
stance:

Effects on foetal develop-
ment

: Species: Rat
Application Route: Oral
Dose: 19, 36, 55, 76, 143 milligram per kilogram
General Toxicity Maternal: Lowest observed adverse effect
level: 143 mg/kg body weight
Developmental Toxicity: Lowest observed adverse effect level:
76 mg/kg body weight
Method: OECD Test Guideline 414
Remarks: Based on read across from structural related sub-
stance:

Species: Rat
Application Route: Oral
Dose: 19, 36, 55, 76, 143 milligram per kilogram
General Toxicity Maternal: No observed adverse effect level:
76 mg/kg body weight
Developmental Toxicity: Lowest observed adverse effect level:
55 mg/kg body weight
Method: OECD Test Guideline 414
Remarks: Based on read across from structural related sub-
stance:

Species: Rabbit
Application Route: Oral
Dose: 0; 62,5; 125; 250 milligram per kilogram
General Toxicity Maternal: Lowest observed adverse effect
level: 250 mg/kg body weight
Developmental Toxicity: Lowest observed adverse effect level:
250 mg/kg body weight
Method: OECD Test Guideline 414
Remarks: Based on read across from structural related sub-
stance:

Species: Rabbit
Application Route: Oral
Dose: 0; 62,5; 125; 250 milligram per kilogram
General Toxicity Maternal: No observed adverse effect level:
125 mg/kg body weight
Developmental Toxicity: No observed adverse effect level:
125 mg/kg body weight
Method: OECD Test Guideline 414
Remarks: Based on read across from structural related sub-
stance:

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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

Repeated dose toxicity

Components:

Potassium difluorodihydroxyborate(1-):

Species: Rat

NOAEL: 127.8 mg/kg

Application Route: Oral

Exposure time: 2 years

Number of exposures: daily

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:

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- Toxicity to bacteria : 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 days
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 days
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 days
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

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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

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 : Do not dispose of waste into sewer.
Dispose of in accordance with the European Directives on waste and hazardous waste.
In accordance with local and national regulations.
Do not contaminate ponds, waterways or ditches with chemical or used container.
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.
Send to a licensed waste management company.

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

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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

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 73/78 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

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : 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

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

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 : On the inventory, or in compliance with the inventory

TSCA : Not On TSCA 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
Potassium difluorodihydroxyborate(1-)

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NZIoC	: On the inventory, or 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

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

(Q)SAR - (Quantitative) Structure Activity Relationship; 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; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; DIN - Standard of the German Institute for Standardisation; 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; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; 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; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; 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; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; 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; TRGS - Technical Rule for Hazardous Substances; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of



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Chemicals; TCSI - Taiwan Chemical Substance Inventory; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice

Further information

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.

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