

# Material Safety Data Sheet

## According to 91/155 EEC

Printing date 29.03.2006

Reviewed on 08.06.2005

### 1 Identification of the substance/preparation and of the company/undertaking

- **Product details**
- **Trade name:** Brealloy Flux
- **Article number:** 500 0001 1
- **Application of the substance / the preparation**  
Brealloy flux is suitable for all CoCrMo alloys for model casting.
- **Manufacturer/Supplier:**  
Bredent  
Weißenhorner Straße 2  
D-89250 Senden  
Tel.: +49 (0) 7309/872-0  
Fax: +49 (0) 7309/872-24
- **Further information obtainable from:** R & D
- **Information in case of emergency:** Tel.: +49 (0) 6132-84436 (24 h)

### 2 Composition/information on ingredients

- **Chemical characterization**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 7789-29-9 EINECS: 232-156-2	potassium bifluoride	T, C; R 25-34	1-5%
CAS: 107-21-1 EINECS: 203-473-3	ethanediol	Xn; R 22	≤ 1%

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

### 3 Hazards identification

- **Hazard description:**



C Corrosive

- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 22 Harmful if swallowed.

R 34 Causes burns.

- **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

### 4 First aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After skin contact:**  
Immediately wash with water and soap and rinse thoroughly.  
If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Induce vomiting and call for medical help.

GB

(Contd. on page 2)

# Material Safety Data Sheet

## According to 91/155 EEC

Printing date 29.03.2006

Reviewed on 08.06.2005

Trade name: Brealloy Flux

(Contd. of page 1)

### 5 Fire-fighting measures

- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Person-related safety precautions:** Wear protective clothing.
- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
  - Dilute with plenty water.
  - Pick up mechanically.
  - Dispose contaminated material as waste according to item 13.

### 7 Handling and storage

- **Handling:**
- **Information for safe handling:**
  - Keep receptacles tightly sealed.
  - Ensure that suitable extractors are available on processing machines
  - Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- Store only in the original receptacle.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.

### 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **Ingredients with limit values that require monitoring at the workplace: 7789-29-9**

#### potassium bifluoride

OES Long-term value: 2.5 mg/m<sup>3</sup>  
as F

#### 107-21-1 ethanediol

OES Short-term value: 104\*\* mg/m<sup>3</sup>  
Long-term value: 10\* 52\*\*  
mg/m<sup>3</sup>\*particulate, IOELV, Sk \*\*vapour, New, IOELV, Sk

- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - The usual precautionary measures are to be adhered to when handling chemicals.
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing
  - Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.
  - Do not eat, drink, smoke or sniff while working.
- **Respiratory protection:** Not necessary if room is well-ventilated.

(Contd. on page 3)

GB

# Material Safety Data Sheet

## According to 91/155 EEC

Printing date 29.03.2006

Reviewed on 08.06.2005

Trade name: Brealloy Flux

(Contd. of page 2)

### · Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

### · Material of gloves

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 can not be calculated in advance and has therefore to be checked prior to the application.

### · 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.

### · Eye protection:



Tightly sealed goggles

### · Body protection: Protective work clothing

## 9 Physical and chemical properties

### · General Information

<b>Form:</b>	Pasty
<b>Colour:</b>	White
<b>Odour:</b>	Odourless

### · Change in condition

**Melting point/Melting range:** Undetermined.  
**Boiling point/Boiling range:** Undetermined.

· **Flash point:** Not applicable.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Density at 20°C:** 1.6 g/cm<sup>3</sup>

· **Solubility in / Miscibility with water:** Soluble.

## 10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Dangerous reactions** No dangerous reactions known.

### · Dangerous decomposition products:

Development of small quantities of volatile fluorine compounds when soldering. Use gas extractor unit.

GB

(Contd. on page 4)

# Material Safety Data Sheet

## According to 91/155 EEC

Printing date 29.03.2006

Reviewed on 08.06.2005

Trade name: Brealloy Flux

(Contd. of page 3)

### 11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Harmful  
Corrosive  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

### 12 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.

### 13 Disposal considerations

- **Product:**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### 14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **Marine pollutant:** No

### 15 Regulatory information

- **Labelling according to EU guidelines:**  
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.
- **Code letter and hazard designation of product:** C Corrosive
- **Hazard-determining components of labelling:** potassium bifluoride
- **Risk phrases:**  
22 Harmful if swallowed.  
34 Causes burns.
- **Safety phrases:**  
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

(Contd. on page 5)

GB

# Material Safety Data Sheet

According to 91/155 EEC

Printing date 29.03.2006

Reviewed on 08.06.2005

**Trade name: Brealloy Flux**

2 Keep out of the reach of children.

(Contd. of page 4)

**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 R-phrases**

22 Harmful if swallowed.

25 Toxic if swallowed.

34 Causes burns.

**· Department issuing MSDS: R &****D · Contact: R & D**

GB