

# METALLI

## SAFETY DATASHEET – ALL ROUND FLUX PASTE/POWDER

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

- 1.1 Product Identifier**
- Trade name of designation  
of the mixture **ALL ROUND FLUX Paste/Powder**
- Synonyms **EN 1045:1999 – FH10**
- Issue date **01 October 2015**
- Version number **1**
- 1.2 Relevant identified use of the substance or mixture advised against**
- Identified uses **Flux for Silver Brazing Alloys**
- Uses advised against **None known.**
- 1.3 Details of the supplier of the safety data sheet**
- Company **Metalli A/S**  
**Nyholms alle 46**  
**2610 Rødovre**  
**Denmark**
- E-mail **[info@metalli.dk](mailto:info@metalli.dk)**
- Telephone number **+45 3670 0544**
- 1.4 Emergency telephone number +45 3670 0544**

### SECTION 2: Hazards Identification

- 2.1 Classification of the substance or mixture**
- Classification according to Directive 67/548/EEC and 1999/45/EC and / or EC regulation 1272/2008 (CLP) The product thus requires a safety datasheet that complies with the provisions of EC Regulation 1907/2006 and subsequent amendments.**
- Any additional information concerning the risk for health and/or the environment is given in sections 11 and 12 of this sheet.
- Danger symbols:** Xn;
- R- phrases:** R20/22 – R36/37/38
- Physical hazards** Not classified for physical hazards.
- The classification of the compound, featuring an extreme pH value, is based on the results of an appropriate validated in-vitro test as set out in the 67/548/EEC directive; annex VI, paragraph 3.2.5, and following modifications.

The full wording of the Risk ® and hazard (H) phrases is given in section 16 of the sheet.

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**Environmental hazards** Not classified for hazards to the environment.

### 2.2 Label elements

Label according to Directive 67/548/EEC or 1999/45/EC as amended

Xn



Harmful

**R22** Harmful if swallowed  
**R62** Possible risk of impaired fertility

**R-Phrases** **R20/22** Harmful by inhalation and if swallowed  
**R36/37/38** Irritating to eyes, respiratory system and skin.

**S-Phrases** **S25** Avoid contact with eyes.  
**S26** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
**S37** wear suitable gloves.

**Contains:** Potassium tetrafluoroborate

**2.3 Other hazards** Information not available.

## SECTION 3: Compositional information

### 3.1 Mixtures

General information

Substance	CAS No.	EINECS No.	CLP-Classification	Applicable 'R'Phrases	% Concent
Potassium metaborate	13709-94-96	237-262-2	Eye Irrit. 2 H319 	Xi, R36/37/38 	54 to 56
Potassium tetrafluoroborate	14075-53-7	237-928-2	Aquatic Chronic 4 H413 	Xn, R20/22, Xi R36 	24 to 26
Potassium tetraborate	12045-78-2		Repr. 2 H361d	Xn, R20/22, Xi R36	24 to 26

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### Composition comments

The full text for all R-phrases is displayed in Section 16. All concentrations are in percent by weight unless ingredient is a gas.

### Additional information

This product contains a substance listed on the list of candidate substances according to the article 59 of the Regulation n. 1907/2006("REACH") at a concentration  $\geq 0.1\%$  by weight.

## SECTION 4: First aid measures

### General information

Get medical attention if any discomfort develops. Seek medical attention for all burns, regardless of how minor they may seem. Show this safety data sheet to the doctor in attendance.

#### 4.1 Description of first aid measures

##### Inhalation

Remove from source of exposure and allow to rest in fresh air. In acute case of breathing difficulties, give oxygen. In case of persistent irritation, summon medical aid.

##### Skin contact

Remove any contaminated clothing and wash skin immediately with soap and water. Seek medical attention if sores develop. Launder clothing before re-use.

##### Eye contact

Irrigate with water or isotonic saline for up to 20 minutes with eyes open. Rinse with lukewarm water, because cold water can damage the eye. Seek medical attention if there is any hint of eye damage.

##### Ingestion

Rinse mouth water & give patient water or milk mixed with calcium carbonate (chalk) to drink. Do not induce vomiting. Summon medical aid.

#### 4.2 Most important symptoms and effects, both acute and delayed

Information is not available

#### 4.3 Indication of any immediate medical attention and special treatment needed

Information not available.

## SECTION 5: Fire fighting measures

### General fire hazards

Use jets of water to cool the containers to prevent product decomposition and the development of prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Carbon dioxide, foam, powder or nebulised water spray.

##### Unsuitable extinguishing media

Not applicable.

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### 5.2 Special hazards arising from the substance or mixture

#### HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE.

Do not breathe combustion products (carbon oxide, toxic pyrolysis products, etc.)

### 5.3 Advice for fire-fighters

#### Special protective equipment for fire-fighters

Use full protection (fireproof clothing, hardhat with visor etc. ) with breathing apparatus if involved in a fire as harmful fumes may be evolved.

#### Special fire fighting procedures

Not applicable.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

Avoid contact with skin or eyes.

Use personal equipment during clean-up operation, gloves, eye protection etc. as considered appropriate to the size and nature of the release. Do not inhale dust.

#### For emergency responders

Not applicable.

### 6.2 Environmental precautions

Avoid any type of spill in the waters: drains or soils.

If product is likely to enter watercourse or sewerage system, inform necessary authorities. Product should be prevented from entering sewers, drainage systems and surface or groundwater. Dispose of all collected product / absorbent material as directed in Section 13.

### 6.3 Methods and material for Containment and cleaning up

Scrape up as much of the spill as possible and place collected product into a suitable container for disposal. Wash contaminated area with soap and water mop up as much as is possible. Avoid dust formation.

Use absorbent material to mop up remaining diluted product. Place mopped up product and any absorbent material into a suitable container for disposal.

### 6.4 Reference to other sections

For safe handling see section 7.

For personal protection, see section 8.

For waste disposal, see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Use only under conditions of good local ventilation or efficient extraction systems and do not inhale fumes evolved during use.

Avoid contact with skin and eyes. Do not eat, drink, smoke or apply cosmetics whilst using these materials. Keep away from food, drink and animal food stuffs and out of reach of children.

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Wash hands with soap and water following skin contact with the product and wash hands with soap and water after handling the product even if no direct

Skin contact has occurred. Observe good industrial hygiene practices.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry place. Keep container closed when not in use. Do not freeze.

### 7.3 Specific end use(s)

No further relevant information available.

## SECTION: 8 Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational exposure limits

Element	Type	Long term(8 Hour) TWA Value	Short term (15 Mins.) TWA Value
Potassium tetrafluoborate CAS 13709-94-96	VLA	2,5 mg/ m3	-

TWA = Time weighted average

#### Biological limit values

No biological exposure limits for the ingredient(s).

#### Recommended monitoring procedures

Follow standard monitoring procedures.

### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid exposure to fume by using good natural ventilation or local exhaust extraction. Local exhaust extraction systems should be tested for effectiveness to ensure adequate capture of the fume on initial installation and then checked on a regular basis to confirm on-going effectiveness.

#### Individual protection measures, such as personal protective equipment

##### General information

If risk of inhalation exists, personal respiratory protection should be worn. An emergency eye and shower system must be provided.

##### Eye/face protection

It is recommended that safety glasses are worn when handling or using this product for brazing. (standard EN166)

##### Skin protection

##### - Hand protection

Where regular, on-going skin contact with the product cannot be avoided suitable gloves should be worn. Seek advice from gloves supplier to most suitable type of gloves to protect against this type of product. Show gloves supplier this Safety Data Sheet. (Directive 89/686/EEC and standard EN 374)

In cases where skin contact with the product may occur on an irregular basis the use of barrier creams will help to prevent skin irritation in such circumstances. Suitable gloves should also be worn where the nature of the

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brazing operation may result in hand contact with the molten flux or brazing filler metal to protect against burns. Wear long-sleeved overalls and safety footwear. Wash body with soap and water after removing overalls.

- Other

None

### Respiratory protection

If risk of inhalation exists, personal respiratory should be worn.

### Thermal hazards

When heated the product will fume slightly and with overheating the flux fumes will increase. The fumes produced may include hydrogen fluoride and boron trifluoride, which can cause irritation of the nasal passages, eyes and throat.

### Hygiene measures

Wash hands after using these products.

### Environmental exposure controls

See section 6.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance	powder/pasta
Colour	White
Odour	mild
Odour threshold	Not determined
pH	8,0
Melting point/freezing point	> 400°C
Initial boiling point and boiling range	Not determined
Flash point	Not determined
Evaporation rate	Not determined
Flammability (Solid, gas)	Not determined
Upper/lower flammability or explosive limits	
Flammability limit – lower (%)	Not determined
Flammability limit – upper (%)	Not determined
Vapour pressure	Not determined
Vapour density	Not determined
Relative density	Not determined
Specific gravity	1,245 Kg/l
Solubility	Miscible
Partition coefficient (n-octanol/water)	Not determined
Decomposition temperature	Not determined
Viscosity	Not applicable
Oxidizing properties	Not determined

### 9.2 Other information

Other information	No further relevant information available
Bulk density	Not applicable
VOC (Weight %)	Not applicable

## SECTION 10: Stability and reactivity

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10.1	<b>Reactivity</b>	There are no particular risks of reaction with other substances in normal Conditions of use.
10.2	<b>Chemical stability</b>	Stable at normal conditions.
10.3	<b>Possibility of hazardous</b>	The vapours may also form conditions of use and storage.
10.4	<b>Conditions to avoid</b>	Avoid overheating, electrostatic discharge and all sources of ignition.
10.5	<b>Incompatible materials</b>	Information not available
10.6	<b>Hazardous decomposition products</b>	In the event of thermal decomposition or fire, vapours potentially dangerous health may be released.

### SECTION 11: Toxicological information

<b>General information</b>	Occupational exposure to the substance or mixture may cause adverse effects.
<b>Information on likely routes of exposure</b>	
<b>Acute effects:</b>	Inhalation and ingestion of this product are harmful. This product may irritate mucosa's, the upper respiratory tract, eyes and skin. Exposure symptoms may include: Stinging and irritated eyes, mouth, nose, throat, cough, respiratory disorders, dizziness, headache, nausea and sickness.
<b>Symptoms</b>	In the most serious cases, inhalation of this product may cause larynx and bronchial tube edema and irritation, chemical pneumonia and pulmonary edema. Ingestion of even small amounts of this product may cause health disorders (stomach pain, nausea, sickness, and diarrhea.)

### SECTION 12: Ecological information

12.1	<b>Toxicity</b>	Potassium tetraborate:		
	<b>Component</b>	<b>Test</b>	<b>Method</b>	<b>test results</b>
	Protassium tetraborate	CL50	Daphnia (en bore (B) 48h daphnia magna straus)	133 mg/l
	Protassium tetraborate	CL50 / 96h	Fish (en bore (B) -limanda limanda)	40 mg/l
12.2	<b>Persistence and degradability</b>	No further relevant information available.		
12.3	<b>Bioaccumulative potential</b>	No further relevant information available.		
	<b>Partition coefficient n-octanol/water (log Kow)</b>	No further relevant information available.		
	<b>Bioconcentration factor (BCF)</b>	Unknown.		
12.4	<b>Mobility in soil</b>			
	<b>Mobility in general</b>	No further relevant information available.		
12.5	<b>Results of PBT and vPvB Assessment</b>	Unknown.		
12.6	<b>Other adverse effects</b>	None		

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### SECTION 13: Disposal considerations

<b>13.1</b>	<b>Water treatment method</b>	
	<b>Residual waste</b>	Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be
	<b>Contaminated packaging</b>	Must be recovered or disposed of in compliance with national waste Management regulations.
	<b>EU waste code</b>	Not applicable.
	<b>Disposal methods/information</b>	Disposal must be performed through an authorized waste management firm, in compliance with national and local regulations.

### SECTION 14: Transport information

#### Land transport ADR/RID (cross-border)

<b>14.1</b>	<b>UN number</b>	
<b>14.2</b>	<b>UN proper shipping name</b>	
<b>14.3</b>	<b>Transport hazard class(es)</b>	Not dangerous under current provisions
<b>14.4</b>	<b>Packing group</b>	
<b>14.5</b>	<b>Environmental hazards</b>	Not applicable.
	<b>Tunnel restriction code</b>	
	<b>Labels required</b>	
<b>14.6</b>	<b>Special precautions for user</b>	

#### Maritime transport IMDG

<b>14.1</b>	<b>UN number</b>	
<b>14.2</b>	<b>UN proper shipping name</b>	
<b>14.3</b>	<b>Transport hazard class(es)</b>	Not dangerous under current provisions
<b>14.4</b>	<b>Packing group</b>	
<b>14.5</b>	<b>Environmental hazards</b>	Not applicable.
	<b>Marine pollutant</b>	No
	<b>Labels required</b>	
	<b>EmS No.</b>	Not applicable.
<b>14.6</b>	<b>Special precautions for user</b>	
<b>14.7</b>	<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.

#### Air transport ICAO-TI and IATA-DGR

<b>14.1</b>	<b>UN number</b>	
<b>14.2</b>	<b>UN proper shipping name</b>	
<b>14.3</b>	<b>Transport hazard class(es)</b>	not dangerous under current provisions
<b>14.4</b>	<b>Packing group</b>	

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14.5	<b>Environmental hazards</b>	Not applicable.
	<b>Labels required</b>	
	<b>ERG Code</b>	None.
14.6	<b>special precautions for user</b>	

### SECTION 15: Regulatory information

15.1	<b>Safety, health and environmental regulation specific for the substance or mixture</b>	
	<b>EU Regulations</b>	Regulation (EC) No 1907/2006 ("REACH").
	<b>Substances of very high concern (SVHC) according to REACH:</b>	
	<b>Authorisations</b>	Not regulated.
	<b>Restrictions on use</b>	No. restrictions on use.
	<b>Other EU regulations</b>	Not regulated.
	<b>Other regulations</b>	The product is classified and labeled in accordance with Regulation (EC) 1272/2008 (CLP regulation) as amended and respective national laws implementing EC directives. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.
	<b>National regulations</b>	Not listed.
15.2	<b>Chemical safety assessment</b>	No Chemical Safety Assessment has been carried-out.

### SECTION 16: Other information

Text of risk phrases mentioned in section 2-3 of the sheet:

<b>Full text of any statements or R/S</b>	R20/22	Harmful by inhalation and if swallowed
	R36	Irritating to eyes
	R33/37/38	Irritating to eyes, respiratory system and skin

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