

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

### 1.1 Product identifier

TA Flux

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

To be applied on the root side of welds to prevent oxidation

### 1.3 Details of the supplier of the safety data sheet

TA Chemistry AB

*Address:* Tierpsvägen 2, 815 75 Söderfors, Sweden

*Telephone no.* +46 (0)293-308 85

*E-mail:* contact@tchemistry.se

*Web:* www.tchemistry.com

*Contact:* Raymond Palm

### 1.4 Emergency telephone number

Daytime ( 08.00-16.00): +46 (0)293-308 85

Other times: +46 (0) 70-236 78 32

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

*Classification according to Directive 1999/45/EG (Preparations Directive) <sup>1)</sup>*

Xi; R36/37/38

*Classification of the substance under regulation (EG) nr 1272/2008 (CLP) <sup>1)</sup>*

Not available.

<sup>1)</sup> For an explanation of abbreviations/codes for classification in plain language, see Section 16.

### 2.2 Label elements

**Hazard symbol:**



**Hazard designation:** Irritating

**Risk phrases:** R36/37/38: Irritating to eyes, respiratory system and skin.

**Safety advice phrases:** S7: Keep container tightly closed.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection

S38: In case of insufficient ventilation, wear suitable respiratory equipment

**Contents:** Quartz: 35-45%, Calcium hydroxide: 25-35%, Titanium dioxide: 10-20%, Calcium fluoride: 7-15%, Manganese dioxide: 9-10%, Iron: 3-5%

### 2.3 Other hazards

The mixture does not meet the criteria for persistent, bioaccumulative and toxic substances (PBT) or very persistent and very bioaccumulative substances (vPvB).

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Name:	CAS No.	EC No.	REACH Reg. No.	Conc. %:	Classification (DSD) <sup>1)</sup> :	Classification (CLP) <sup>1)</sup> :
Quartz (SiO <sub>2</sub> ) <sup>2)</sup>	14808-60-7	238-878-4	not available	35-45	-	not available
Calcium hydroxide Ca(OH) <sub>2</sub>	1305-62-0	215-137-3	not available	25-35	Xi; R36/3738	not available
Titanium dioxide(TiO <sub>2</sub> )	13463-67-7	236-675-5	not available	10-20	-	not available
Calcium fluoride (CaF <sub>2</sub> )	7789-75-5	232-188-7	not available	7-15	-	not available
Manganese dioxide (MnO <sub>2</sub> )	1313-13-9	215-202-6	not available	9-10	Xn; R20/22	Acute Tox. 4: H332 Acute Tox. 4: H302
Iron (Fe)	7439-89-6	231-096-4	not available	3-5	F; R11	not available

1) For an explanation of codes for classification, see Section 16.

2) This product contains less than 1% quartz (respirable)

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Inhalation	Rinse nose and mouth with water. Blow one's nose. Supply fresh air and keep victim warm and calm. Give artificial respiration or oxygen if victim is breathing irregularly or breathing has stopped. If irritation persists seek medical assistance.
Skin contact	Rinse skin with plenty of water. Remove contaminated clothing and shoes. Wash off immediately using water and soap and rinse well. If irritation persists seek medical assistance.
Eye contact	Remove any contact lenses. Rinse open eyes in running water for at least 15-30 minutes. Keep eyelids open. Obtain medical assistance immediately. Continue to rinse the eyes under transport to eye doctor.
Ingestion	Rinse the mouth with water. Do not induce vomiting. Seek medical assistance.

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

EYE CONTACT: Dust and splash in the eyes of the solution may cause strong irritation with burning sensation, redness and possibly burns.

SKIN CONTACT: Irritating to skin. Prolonged skin contact could give blisters and wounds especially at wet skin.

INHALATION: Irritating to mucous membranes, nose and throat, and may cause cough. Prolonged and repeated inhalation of manganese may cause damage to the central nervous system

INGESTION: Irritation and burning in the mouth and throat. May also cause burns with burning pain in the stomach.

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

Show this safety data sheet to the on-duty doctor. Keep victim warm and calm.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Use the appropriate extinguisher depending on the environment; the product is non-flammable.

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

No special.

### 5.3 Advice for firefighters

Breathing apparatus with filter of type P3.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Wear suitable protective gloves, eye protection and protective clothing. Keep good ventilation or use breathing apparatus with dust filter type P3. Block of the danger zone if possible.

**6.2 Environmental precautions**

Prevent spillage from entering sewage, ditches or public waters.

**6.3 Methods and material for containment and cleaning up**

Pick up spill mechanically. Clean without deploy dust. Avoid dry sweeping and use water or vacuum system to prevent formation of dust. Collect in suitable container and send for destruction. Flush with plenty of water. At larger leakage contact rescue.

**6.4 Reference to other sections**

See section 1 for Emergency telephone number, section 8 for personal protection and section 13 for waste treatment methods.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Only use the product in a well-ventilated area and use local exhaust. Follow the handling regulations. Always mix the product in the original can to prevent formation of dust. Don't use other container/can. Use personal equipment (see section No. 8). Avoid direct contact and don't inhale dust. Do not eat, drink or smoke while handling the product. There must be an eye shower and an emergency shower available.

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

Keep packages securely closed in a well-ventilated area. Store packages indoor at room temperature in upright position and away from incompatible materials, see section No. 10. Storage should be in a restricted area, with no access for unauthorized persons. The shelf life of an un-opened package is 3 years

**7.3 Specific end use(s)**

Not applicable.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Occupational exposure limits (Source: GESTIS International limit values database via [www.dguv.de/ifa/en/gestis/limit\\_values/index.jsp](http://www.dguv.de/ifa/en/gestis/limit_values/index.jsp))

Substance:	Country	Limit value (8 hours) mg/m <sup>3</sup>	Limit value short term mg/m <sup>3</sup>	Remarks
<b>Quartz</b>	Austria	0,15		respirable aerosol
	Belgium	0,1		
	Denmark	0,3	0,6	inhalable aerosol
		0,1	0,2	respirable aerosol
	France	0,1		respirable aerosol
	Hungary	0,15		respirable aerosol
	Spain	0,1		respirable aerosol
	Sweden	0,1		respirable aerosol
	Switzerland	0,15		respirable aerosol
	Netherlands	0,075		respirable dust
Substance:	Country	Limit value (8 hours) mg/m <sup>3</sup>	Limit value short term mg/m <sup>3</sup>	Remarks
<b>Calcium hydroxide</b>	Austria	2	4	inhalable aerosol
	Belgium	5		
	Denmark	5	10	
	European Union	5		Indicative Occupational Exposure Limit Values and Limit Values for Occupational
	France	5		
	Germany(AGS)			
	Germany(DFG)	1 (1)	2 (1,2)	1) inhalable aerosol (2) 15 minutes average value
	Hungary	5		
	Latvia	10		
	Spain	5		
	Sweden	3	6 (1)	Inhalable dust (1) Short-term value, 15 minutes average value
	Switzerland	5		5 inhalable aerosol
	United Kingdom	5		
Substance:	Country	Limit value (8 hours) mg/m <sup>3</sup>	Limit value short term mg/m <sup>3</sup>	Remarks
<b>Titanium dioxide</b>	Belgium	10		
	Denmark	6	12	total dust
	France	11		inhalable aerosol
	Latvia	10		
	Poland	10		
	Spain	10		
	Sweden	5		inhalable aerosol
	Switzerland	3		inhalable aerosol
	United Kingdom	4		respirable aerosol
		10		inhalable aerosol
Substance:	Country	Limit value (8 hours) mg/m <sup>3</sup>	Limit value short term mg/m <sup>3</sup>	Remarks
<b>Calcium fluoride</b>	Latvia	0,5	2,5 (1)	(1) 15 minutes average value
Substance:	Country	Limit value (8 hours) mg/m <sup>3</sup>	Limit value short term mg/m <sup>3</sup>	Remarks
<b>Manganese dioxide</b>	Latvia	0,3		Disintegration aerosol
	Sweden	0,2		Total dust
		0,1		respirable dust

#### Threshold limit values – ACGIH 2012

	Quartz	Calcium hydroxide	Titanium dioxide	Manganese dioxide
TLV	0,025 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	0.2 mg/m <sup>3</sup>	0.2 mg/m <sup>3</sup>

## 8.2 Exposure controls

*Appropriate technical control measures.*

Keep exposure at a low level through good ventilation and appropriate local extraction as well as the relevant handling regulations. Always mix the product in the original can to prevent formation of dust. Eye wash and safety shower facilities must be available at the workplace. Wash your hands and face before all meals and after work

*Individual protection measures, such as personal protective equipment:*

### Eye protection / Face protection

Use eye and skin protection.

### Hand protection

Wear protection gloves.

### Skin protection

Wear protective clothing.

### Respiratory protection

Wear respiratory protective equipment in the event of dust formation.

Breathing apparatus with dust filter type P3

*Environmental protection measures*

Prevent spillage from entering sewage or public waters.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>Appearance:</b>	Grey powder	<b>Vapour pressure:</b>	Not determined
<b>Odour:</b>	Odourless	<b>Vapour density:</b>	Not determined
<b>Odour threshold:</b>	Not determined	<b>Relative density:</b>	Not determined
<b>pH-value:</b>	<10 (10 g/l)	<b>Solubility:</b>	Slightly soluble
<b>Melting/freezing point:</b>	Not determined	<b>Partition coefficient (n-octanol/water):</b>	Not determined
<b>Boiling point:</b>	Not determined	<b>Self-ignition temperature:</b>	Not self-igniting
<b>Flash-point:</b>	Not determined	<b>Decomposition temperature:</b>	Not determined
<b>Evaporation rate:</b>	Not determined	<b>Viscosity:</b>	Not determined
<b>Flammability:</b>	Non-flammable	<b>Explosive properties:</b>	Not explosive
<b>Upper/lower flammability or explosive limits:</b>	Not relevant	<b>Oxidizing properties:</b>	Not oxidizing

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

None known

### 10.2 Chemical stability

Stable under normal conditions (see section7).

### 10.3 Possibility of hazardous reactions

None known

### 10.4 Conditions to avoid

Formation of dust (Always mix the product in the original can to prevent formation of dust).

### 10.5 Incompatible materials

None known

### 10.6 Hazardous decomposition products

None known

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Route of exposure	Effects
Eye Contact	Dust and splash of solution gives strong irritation, redness and pain. Risk for corrosive damage.
Skin contact	Gives irritation. Prolonged skin contact could give blisters and wounds especially at wet skin.
Inhalation	Irritating to mucous membranes, nose and throat, and may cause cough. Inhalation may be damaging to the lungs. Prolonged and repeated inhalation of manganese may cause damage to the central nervous system. May impair fertility - men exposed to manganese dusts showed a decrease in fertility.
Ingestion	Ingestion gives corrosive damage with burning pain in mouth and throat, possibly severe general effect and damage to the stomach.

**Acute toxicity:**

Calcium hydroxide: LD<sub>50</sub>, oral, rat: >2000 mg/kg  
 LD<sub>50</sub>, dermal, rat: >2500 mg/kg

Titanium dioxide: LD<sub>50</sub>, oral, rat: >10000 mg/kg  
 LD<sub>50</sub>, dermal, rat: >2500 mg/kg

Calcium fluoride: LD<sub>50</sub>, oral, rat: 4250 mg/kg

Iron (powder): LD<sub>50</sub>, oral, rat: 30000 mg/kg

**Skin corrosion/irritation:** No data available

**Sensitisation:** No data available

**Repeated dose toxicity:** Prolonged and/or massive exposure to respirable crystalline silica-containing dust may cause silicosis, a nodular pulmonary fibrosis caused by deposition in the lungs of fine respirable particles of crystalline silica

**Carcinogenicity:**

Quartz: Some studies show that the risk for cancer grows at exposure to silica. It's unclear if the risk is only connected to the people that have developed silicosis or not. IARC International Agency for Research on Cancer) has classified crystalline silica dust exposure as a possible human carcinogen substance.

Titan dioxide: IARC-group 2B (possibly carcinogenic to humans).

**Mutagenicity:** No data available

**Toxicity for reproduction:** No data available

## SECTION 12: Ecological information

### 12.1 Toxicity

Calcium hydroxide: LC50, fish, 96h: 457 mg/l, EC50, aquatic invertebrates, 48h: 49,1 mg/l,  
 EC50, aquatic plants, 72h: 184,57 mg/l

Titanium dioxide: LC50, fish, 48h: >1000 mg/l (ulgid)

Iron: Iron ions are toxic to aquatic organisms at low concentrations (~1mg/l)

### 12.2 Persistence and degradability

Criteria for biodegradability are not applicable to inorganic compounds.

### 12.3 Bioaccumulative potential

No data available.

### 12.4 Mobility in soil

No data available.

### 12.5 Results of PBT and vPvB assessment

The contents of the product do are not expected to be persistent, bioaccumulative and toxic substances (PBT) or very persistent and very bioaccumulative substances (vPvB).

### 12.6 Other adverse effects

No other adverse effects are known.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

Spillages and residues of this product and contaminated packaging must be disposed of as hazardous waste. Do not discharge into drains or water courses or into the environment.

**SECTION 14: Transport information**

<b>14.1 UN number</b>	Not classified as dangerous goods
<b>14.2 UN proper shipping name</b>	Not classified as dangerous goods
<b>14.3 Transport hazard class(es)</b>	Not classified as dangerous goods
<b>14.4 Packing group</b>	Not classified as dangerous goods
<b>14.5 Environmental hazards</b>	Not classified as dangerous goods
<b>14.6 Special precautions for user</b>	Not relevant
<b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not relevant

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Medical supervision is required for the handling of quartz. See further regulations on medical checks.

**15.2 Chemical safety assessment**

Not available.

**SECTION 16: Other information****Codes for classification in sections 2 and 3:**

Xn: Harmful    Xi: Irritating

R11: Highly flammable, R20/22: Harmful by inhalation and if swallowed, R36/37/38: Irritating to eyes, respiratory system and skin

**Changes following the latest review: Section 2.2, label elements.**

The safety data sheet has been revised in each section in accordance with the amendment to the regulation REACH (EC) no. 453/2010. This safety data sheet supersedes all previous editions

**Other information:**

TA Chemistry AB requests the users of this product to study this Safety Data Sheet (S.D.S.) and become aware of product hazards and safety information. To promote safe use of this product a user should:

- notify its employees, agents and contractors of the information on this S.D.S and any product hazards/safety information.
- furnish this same information to each of its customers for the product
- request such customers to notify employees and customers for the same product hazards and safety information. The information herein is given in good faith and based on technical data that TA Chemistry AB believes to be reliable. Since the conditions of use is outside our control, we assume no liability in connection with any use of this information and no warranty, expressed or implied is given. Contact TA Chemistry AB for more information.