

## SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II (including amendments) - United Kingdom (UK)

## Easy-flo™ Flux Powder

**Version** : 1  
**Date of issue/ Date of revision** : 09/07/2020  
**Date of previous issue** : No previous validation

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

**Product identifier** : Easy-flo™ Flux Powder  
**EC number** : 948-045-3

**REACH Registration number**

Registration number	Legal entity
01-2120790432-54-0000	-

**CAS number** : Not available.  
**Product type** : Powder.

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

**Specific uses** : Brazing. Flux agent.

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

**Supplier** : Johnson Matthey Plc,  
Gate 11, Orchard Road,  
Royston,  
Herts SG8 5HE  
United Kingdom  
+44 (1) 763 253000  
**e-mail address of person responsible for this SDS** : mj@matthey.com

**1.4 Emergency telephone number**

**Telephone number** : +44 (0)1763 253000  
**Hours of operation** : 24 hours

**SAFETY DATA SHEET**

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II (including amendments) - United Kingdom (UK)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : UVCB

**Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Acute Tox. 4, H302

Repr. 2, H361d (Unborn child) (oral)

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 11 for more detailed information on health effects and symptoms.

See Section 16 for the full text of the H statements declared above.

### 2.2 Label elements

**Hazard pictograms** :



**Signal word** : Warning

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

**Precautionary statements**

**Prevention** : Obtain special instructions before use. Wear protective gloves. Wear protective clothing. Wear eye or face protection.

**Response** : IF exposed or concerned: Get medical attention. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.

**Storage** : Store locked up.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazardous ingredients** : Reaction product of mixed inorganic base and acid resulting in dipotassium hydroxytetrafluoro triborontrioxide, potassium trihydroxy fluoroborate, dipotassium tetrahydroxy tetraboronpentaoxide dehydrate in powder

**Supplemental label elements** : Not applicable.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Special packaging requirements**

**Containers to be fitted with child-resistant fastenings** : Not applicable.

**Tactile warning of danger** : Not applicable.

**SAFETY DATA SHEET**

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II (including amendments) - United Kingdom (UK)

**SECTION 2: Hazards identification****2.3 Other hazards**

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII**

:	PBT	P	B	T	vPvB	vP	vB
	Not applicable (Inorganic)	N/A	N/A	N/A	Not applicable (Inorganic)	N/A	N/A

**Other hazards which do not result in classification**

: Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

**SECTION 3: Composition/information on ingredients****3.1 Substances**

: UVCB

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
Reaction product of mixed inorganic base and acid resulting in dipotassium hydroxytetrafluoro triborontrioxide, potassium trihydroxy fluoroborate, dipotassium tetrahydroxy tetraboronpentaoxide hydrate in powder	EC: 948-045-3	100	Acute Tox. 4, H302 Repr. 2, H361d (Unborn child) (oral)  <b>See Section 16 for the full text of the H statements declared above.</b>	[A]

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

[\*] Substance

[A] Constituent

[B] Impurity

[C] Stabilising additive

Occupational exposure limits, if available, are listed in Section 8.

**SAFETY DATA SHEET**

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II (including amendments) - United Kingdom (UK)

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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

#### Potential acute health effects

- Eye contact** : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
- Inhalation** : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Harmful if swallowed.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
irritation  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- Skin contact** : No specific data.

## SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II (including amendments) - United Kingdom (UK)

### SECTION 4: First aid measures

**Ingestion** : No specific data.

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

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** : No specific treatment.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

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

**Hazards from the substance or mixture** : No specific fire or explosion hazard.

**Hazardous combustion products** : Decomposition products may include the following materials: hydrogen fluoride, metal oxide/oxides

#### 5.3 Advice for firefighters

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

### SECTION 6: Accidental release measures

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

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

#### 6.2 Environmental precautions

## SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II (including amendments) - United Kingdom (UK)

### SECTION 6: Accidental release measures

**Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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

**Small spill** : Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor.

#### 6.4 Reference to other sections

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing dust. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

**SAFETY DATA SHEET**

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II (including amendments) - United Kingdom (UK)

## SECTION 7: Handling and storage

### 7.3 Specific end use(s)

**Recommendations** : Not available.

**Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
Reaction product of mixed inorganic base and acid resulting in dipotassium hydroxytetrafluoro triborontrioxide, potassium trihydroxy fluoroborate, dipotassium tetrahydroxy tetraboronpentaoxide dehydrate in powder	<b>EH40/2005 WELs (United Kingdom (UK)).</b> TWA: 2.5 mg/m <sup>3</sup> , (Fluorides (inorganic as F)) 8 hours.

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
Reaction product of mixed inorganic base and acid resulting in dipotassium hydroxytetrafluoro triborontrioxide, potassium trihydroxy fluoroborate, dipotassium tetrahydroxy tetraboronpentaoxide dehydrate in powder	DNEL	Long term Inhalation	7.8 mg/ m <sup>3</sup>	Workers	Systemic
	DNEL	Long term	13.6 mg/	Workers	Local

**SAFETY DATA SHEET**

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II (including amendments) - United Kingdom (UK)

**SECTION 8: Exposure controls/personal protection**

	DNEL	Inhalation Short term	m <sup>3</sup> 13.6 mg/	Workers	Local
	DNEL	Inhalation Long term Dermal	m <sup>3</sup> 367.7 mg/m <sup>3</sup>	Workers	Systemic

**PNECs**

Product/ingredient name	Compartment Detail	Value	Method Detail
Reaction product of mixed inorganic base and acid resulting in dipotassium hydroxytetrafluoro triborontrioxide, potassium trihydroxy fluoroborate, dipotassium tetrahydroxy tetraboronpentaoxide dehydrate in powder	Fresh water	2.02 mg/l	Sensitivity Distribution
	Marine water	2.02 mg/l	Sensitivity Distribution
	Sewage Treatment Plant	10 mg/l	Assessment Factors
	Soil	5.4 mg/kg dwt	Sensitivity Distribution

**8.2 Exposure controls****Appropriate engineering controls**

- : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Individual protection measures****Hygiene measures**

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. If operating conditions cause high dust concentrations to be produced, use dust goggles.

**Skin protection****Hand protection**

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures,

**SAFETY DATA SHEET**

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II (including amendments) - United Kingdom (UK)

## SECTION 8: Exposure controls/personal protection

- consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

- Physical state** : Solid. [Fine Powder]
- Colour** : White.
- Odour** : Odourless.
- Odour threshold** : Not applicable.
- pH** : 8
- Melting point/freezing point** : Decomposition temperature: 147°C
- Initial boiling point and boiling range** : Decomposition temperature: 147°C
- Flash point** : Not applicable.
- Evaporation rate** : Not applicable.
- Flammability (solid, gas)** : Not available.
- Upper/lower flammability or explosive limits** : Not available.
- Vapour pressure** : Not applicable.
- Vapour density** : Not available.
- Relative density** : 2.036
- Solubility(ies)** : Easily soluble in the following materials: hot water.  
Soluble in the following materials: cold water and methanol.
- Solubility in water** : <1.82 g/l
- Partition coefficient: n-octanol/water** : Not applicable.

**SAFETY DATA SHEET**

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II (including amendments) - United Kingdom (UK)

**SECTION 9: Physical and chemical properties**

<b>Auto-ignition temperature</b>	: >850°C
<b>Decomposition temperature</b>	: 147°C
<b>Viscosity</b>	: Not applicable.
<b>Explosive properties</b>	: Not available.
<b>Oxidising properties</b>	: Not available.

**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity****10.1 Reactivity**

No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability**

The product is stable.

**10.3 Possibility of hazardous reactions**

Hazardous reactions or instability may occur under certain conditions of storage or use.

**10.4 Conditions to avoid**

No specific data.

**10.5 Incompatible materials**

No specific data.

**10.6 Hazardous decomposition products**

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Reaction product of mixed inorganic base and acid resulting in dipotassium hydroxytetrafluoro triborontrioxide, potassium trihydroxy fluoroborate, dipotassium tetrahydroxy tetraboronpentaoxide	LC50 Inhalation Dusts and mists	Rat - Male, Female	>2.04 mg/l	4 hours

**SAFETY DATA SHEET**

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II (including amendments) - United Kingdom (UK)

**SECTION 11: Toxicological information**

dehydrate in powder	LD50 Dermal	Rabbit - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat - Male	3690 mg/kg	-

**Conclusion/Summary** : Harmful if swallowed.

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Reaction product of mixed inorganic base and acid resulting in dipotassium hydroxytetrafluoro triborontrioxide, potassium trihydroxy fluoroborate, dipotassium tetrahydroxy tetraboronpentaoxide dehydrate in powder	500	N/A	N/A	N/A	N/A

**Irritation/Corrosion****Conclusion/Summary**

- Skin** : Not classified. Based on available data, the classification criteria are not met.
- Eyes** : Not classified. Based on available data, the classification criteria are not met.
- Respiratory** : Not classified. Based on available data, the classification criteria are not met.

**Sensitisation**

Product/ingredient name	Route of exposure	Species	Result
Reaction product of mixed inorganic base and acid resulting in dipotassium hydroxytetrafluoro triborontrioxide, potassium trihydroxy fluoroborate, dipotassium tetrahydroxy tetraboronpentaoxide dehydrate in powder	skin	Guinea pig	Not sensitizing

**Conclusion/Summary**

- Skin** : Not classified. Based on available data, the classification criteria are not met.

**SAFETY DATA SHEET**

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II (including amendments) - United Kingdom (UK)

**SECTION 11: Toxicological information**

**Respiratory** : Not classified. To the best of our knowledge, the toxicological properties of this substance have not been thoroughly investigated.

**Mutagenicity**

Product/ingredient name	Test	Experiment	Result
Reaction product of mixed inorganic base and acid resulting in dipotassium hydroxytetrafluoro triborontrioxide, potassium trihydroxy fluoroborate, dipotassium tetrahydroxy tetraboronpentaoxide dehydrate in powder	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative
	OECD 476 In vitro Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal	Negative
	NTP	Experiment: In vitro Subject: Mammalian-Animal	Negative
	OECD 474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic	Negative

**Conclusion/Summary** : Not classified. Based on available data, the classification criteria are not met.

**Carcinogenicity**

**Conclusion/Summary** : Not classified. Based on available data, the classification criteria are not met.

**Reproductive toxicity**

**Conclusion/Summary** : Suspected of damaging the unborn child if swallowed.

**Teratogenicity**

**Conclusion/Summary** : Not applicable.

**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

Not available.

**SAFETY DATA SHEET**

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II (including amendments) - United Kingdom (UK)

## SECTION 11: Toxicological information

### Aspiration hazard

Product/ingredient name	Result
Not available.	

**Information on likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation.

### Potential acute health effects

- Eye contact** : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
- Inhalation** : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Harmful if swallowed.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:  
irritation  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- Skin contact** : No specific data.
- Ingestion** : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

- Potential immediate effects** : Harmful if swallowed. Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.
- Potential delayed effects** : Suspected of damaging the unborn child if swallowed.

#### Long term exposure

- Potential immediate effects** : Suspected of damaging the unborn child if swallowed.
- Potential delayed effects** : Suspected of damaging the unborn child if swallowed.

### Potential chronic health effects

**Conclusion/Summary** : Not available.

- General** : Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : Suspected of damaging the unborn child if swallowed.

**SAFETY DATA SHEET**

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II (including amendments) - United Kingdom (UK)

**SECTION 11: Toxicological information**

- Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : No known significant effects or critical hazards.  
**Other information** : Not available.  
**Other adverse symptoms** : No known significant effects or critical hazards.

**SECTION 12: Ecological information****12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
Reaction product of mixed inorganic base and acid resulting in dipotassium hydroxytetrafluoro triborontrioxide, potassium trihydroxy fluoroborate, dipotassium tetrahydroxy tetraboronpentaoxide dehydrate in powder	Acute LC50 25.05 to 80.06 mg/l Marine water	Crustaceans - Litopenaeus vannamei	96 hours
	Acute LC50 133 mg/l Fresh water	Daphnia - Daphnia	48 hours
	Acute LC50 74 mg/l Marine water	Fish - Limanda limanda	96 hours

**Conclusion/Summary** : Not classified. Based on available data, the classification criteria are not met.

**12.2 Persistence and degradability**

**Conclusion/Summary** : The methods for determining the biological degradability are not applicable to inorganic substances.

**12.3 Bioaccumulative potential**

Not available.

**12.4 Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

**12.5 Results of PBT and vPvB assessment**

**SAFETY DATA SHEET**

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II (including amendments) - United Kingdom (UK)

**SECTION 12: Ecological information**

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Reaction product of mixed inorganic base and acid resulting in dipotassium hydroxytetrafluoro triborontrioxide, potassium trihydroxy fluoroborate, dipotassium tetrahydroxy tetraboronpentaoxide dehydrate in powder	Not applicable (Inorganic)	N/A	N/A	N/A	Not applicable (Inorganic)	N/A	N/A

**12.6 Other adverse effects**

No known significant effects or critical hazards.

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

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

**Packaging**

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**SAFETY DATA SHEET**

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II (including amendments) - United Kingdom (UK)

**SECTION 14: Transport information**

	<b>ADR/RID</b>	<b>ADN</b>	<b>IMDG</b>	<b>IATA</b>
<b>14.1 UN number</b>	Not regulated.	Not regulated.	Not regulated.	Not regulated.
<b>14.2 UN proper shipping name</b>	-	-	-	-
<b>14.3 Transport hazard class (es)</b>	-	-	-	-
<b>14.4 Packing group</b>	-	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.	No.
<b>Additional information</b>	-	-	-	-

**14.6 Special precautions for user**

**: Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

: Not available.

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU Regulation (EC) No. 1907/2006 (REACH)****Annex XIV - List of substances subject to authorisation****Annex XIV**

None of the components are listed.

**Substances of very high concern**

None of the components are listed.

**Annex XVII -** : Not applicable.

**Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

**SAFETY DATA SHEET**

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II (including amendments) - United Kingdom (UK)

**SECTION 15: Regulatory information****Other EU regulations**

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
Reaction product of mixed inorganic base and acid resulting in dipotassium hydroxytetrafluoro triborontrioxide, potassium trihydroxy fluoroborate, dipotassium tetrahydroxy tetraboronpentaoxide hydrate in powder	-	-	Repr. 2, H361d (Unborn child) (oral)	-

**Ozone depleting substances (1005/2009/EU)**

Not listed.

**Prior Informed Consent (PIC) (649/2012/EU)**

Not listed.

**Seveso Directive**

This product is not controlled under the Seveso Directive.

**International regulations****Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol (Annexes A, B, C, E)**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**International lists****National inventory**

- Australia** : This material is not listed.
- Canada** : This material is not listed.
- China** : This material is not listed.
- Europe** : This material is listed or exempted.
- Japan** : **Japan inventory (ENCS)**: This material is not listed.  
**Japan inventory (ISHL)**: This material is not listed.
- New Zealand** : This material is not listed.

**SAFETY DATA SHEET**

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II (including amendments) - United Kingdom (UK)

**SECTION 15: Regulatory information**

<b>Philippines</b>	: This material is not listed.
<b>Republic of Korea</b>	: This material is not listed.
<b>Taiwan</b>	: This material is not listed.
<b>Thailand</b>	: This material is not listed.
<b>Turkey</b>	: This material is not listed.
<b>United States</b>	: This material is not listed.
<b>Viet Nam</b>	: This material is not listed.

**15.2 Chemical safety assessment**

Complete.

**SECTION 16: Other information**

✔ Indicates information that has changed from previously issued version.

<b>Abbreviations and acronyms</b>	: ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number vPvB = Very Persistent and Very Bioaccumulative
-----------------------------------	--

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Acute Tox. 4, H302 Repr. 2, H361d (Unborn child) (oral)	Expert judgment Expert judgment

**Full text of abbreviated H statements**

H302 H361d (oral)	Harmful if swallowed. Suspected of damaging the unborn child if swallowed.
----------------------	---

**Full text of classifications [CLP/GHS]**

Acute Tox. 4, H302 Repr. 2, H361d (oral)	ACUTE TOXICITY (oral) - Category 4 REPRODUCTIVE TOXICITY (Unborn child) (oral) - Category 2
---	--

**Notice to reader**

Information in this publication is believed to be accurate and is given in good faith, but it is for the Customer to satisfy itself of the suitability for its own particular purpose. Accordingly, Johnson Matthey gives no warranty as to the fitness of the Product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that such exclusion is prevented by law. Freedom under Patent, Copyright and Designs cannot be assumed. It is the policy of Johnson Matthey to update this information regularly. You are therefore advised to check that this sheet is the most recent issue.