

# Safety Data Sheet

according to Regulation (EG) Nr. 1907/2006  
(changed by Regulation (EU) Nr. 453/2010)



## INMAFEED K1015, K1016 Zirconia / black Injection Moulding Feedstock

Print date: 10.04.2013

Product code:

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

#### Identification of the substance or preparation:

INMAFEED K1015, K1016 Zirconia/black Injection Moulding Feedstock

#### Use of the substance/preparation:

Use for ceramic injection moulding

#### Company/undertaking identification

Company name: INMATEC Technologies GmbH  
Street: Heerstrassenbenden 11  
Place: D-53359 Rheinbach  
Phone: +49-2226-9087-0  
Responsible Department: INMATEC Technologies GmbH  
Quality management, job safety  
Phone: 02226/9087-30 + 53  
Emergency telephone: +49-2226-9087-0 (08:00 - 17:00h)

### 2. Hazards identification

#### Classification

The preparation is not dangerous in the sense of Directive 1999/45/EC.

### 3. Composition/information on ingredients

#### Chemical characterization (Mixture)

#### Hazardous components

EC-No.	CAS-No.	Chemical name	Quantity	Classification
215-227-2	1314-23-4	ZIRCONIUMDIOXID	80 - 85 %	
	25322-68-3 68441-17-8	Combination based on polymers	10 - 15 %	
215-227-2	1314-36-9	YTTRIUMOXID	1 - 5 %	
235-013-2	12055-23-1	HAFNIUMDIOXID	1 - 5 %	

Full text of each relevant R phrase can be found in Section 16

#### Further Information

The preparation is not dangerous in the sense of Directive 1999/45/EC.

### 4. First aid measures

#### General information

In case of accident or if you feel unwell, seek medical advice immediately (show safety data sheet if possible).

#### After inhalation

Provide fresh air. In case of irritation of the respiratory tract seek medical advice. In case of allergic symptoms especially in the breathing area, seek medical advice immediately.

#### After contact with skin

In case of skin irritation consult a doctor. After contact with skin, wash immediately with water and soap.

#### After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of troubles or persistent symptoms, consult an ophthalmologist.

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### After ingestion

Rinse mouth thoroughly with water. Let water be swallowed in little sips (dilution effect). Do not induce vomiting.

## 5. Fire-fighting measures

### Suitable extinguishing media

Extinguishing materials should be selected according to the surrounding area. Water fog. Carbon dioxide (CO<sub>2</sub>). Extinguishing powder. Foam.

### Extinguishing media which must not be used for safety reasons

High power water jet.

### Special exposure hazards arising from substance or preparation itself, combustion products, resulting gases

Can be released in case of fire: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

### Special protective equipment for fire-fighters

Wear a self-contained breathing apparatus and chemical resistant suit.

## 6. Accidental release measures

### Personal precautions

Provide adequate ventilation.  
Avoid generation of dust. Do not breathe dust.  
Wear personal protection equipment. (Refer to chapter 8).

### Environmental precautions

Dumping into the environment must be prevented.

### Methods for cleaning up/taking up

Collect in closed containers for disposal. Avoid generation of dust. Wash with generous amount of water.

## 7. Handling and storage

### Handling

#### Advice on safe handling

Wear suitable protective clothing (Refer to chapter 8).

#### Advice on protection against fire and explosion

Please note: Usual measures für fire prevention.  
Product is Combustible  
Under certain conditions dust explosible; Fire-class B

#### Further information on handling

Conditions to avoid: Avoid generation of dust.

### Storage

#### Requirements for storage rooms and vessels

Keep/Store only in original container. Keep container tightly closed. Do not store at temperatures over 30° C.

#### Advice on storage compatibility

Do not store together with:  
Sodium nitrate, oxygen difluoride, chlorine trifluoride, ethylene, fluorine; Vinyl acetate, hydrogen halides, chlorinated hydrocarbons

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### Further information on storage conditions

Protect from moisture

Storageclass (VCI): 11

## 8. Exposure controls / personal protection

### Exposure limit values

#### Additional advice on limit values

Zirconia:

1 mg/m<sup>3</sup> in relation to the respirable fraction.

Exceeding factor: 1

Duration 15 min, average; 4 times per shift; a distance 1 h

Category I - substances for which the local effect being relevant, or respiratory sensitisers.

### Exposure controls

#### Occupational exposure controls

Avoid contact with skin, eye and clothing

#### Protective and hygiene measures

Always close containers tightly after the removal of product.

#### Respiratory protection

Respiratory protection required in case of:

exceeding critical value

Suitable respiratory protective equipment:

Combination filter device (DIN EN 141). Filtertyp: B-P2/P3

#### Hand protection

Pull-over gloves of rubber. DIN EN 374.

Suitable material:

CR (polychloroprenes, Chloroprene rubber) - 0.5mm

NBR (Nitrile rubber) - 0.35mm

FKM (fluororubber) - 0.4mm

PVC (Polyvinyl chloride) - 0,5mm

Butyl rubber - 0.5mm

#### Eye protection

Suitable eye protection. Tightly sealed safety glasses. DIN EN 166

## 9. Physical and chemical properties

### General Information

Physical state: granules (solid)

Colour : white light grey

Odour: characteristic

### Important health, safety and environmental information

#### Changes in the physical state

## 10. Stability and reactivity

### Conditions to avoid

Keep away from heat. Decomposition takes place from temperatures above: 150° C

Exothermic decomposition between 150 - 170°C

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### Materials to avoid

Sodium nitrate, oxygen difluoride, chlorine trifluoride, ethylene, fluorine, Vinyl acetate, hydrogen halides, chlorinated hydrocarbons

### Hazardous decomposition products

Can be released in case of fire: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## 11. Toxicological information

### Acute toxicity

Acute toxicity, oral rat. LD50: >15000 mg/kg  
Irritant effect on the eye: Not an irritant  
Irritant effect on the skin: Not an irritant

## 12. Ecological information

### Ecotoxicity

Acute fish toxicity: LC50>10g/l  
Bacterial toxicity: EC0>1.000mg/l  
Methode: OECD 209

### Persistence and degradability

Product is biodegradable with difficulty.  
Method: Zahn-Wellens-Test

### Further information

Elimination occurs essentially by mechanical separation or ultrafiltration

## 13. Disposal considerations

### Advice on disposal

Waste disposal according to official state regulations. Consult the local waste disposal expert about waste disposal.

### Waste disposal number of waste from residues / unused products

060316 WASTES FROM INORGANIC CHEMICAL PROCESSES;  
wastes from the MFSU of salts and their solutions and metallic oxides; metallic oxides other than those mentioned in 060315

### Contaminated packaging

Cleaned containers may be recycled.

## 14. Transport information

### Land transport (ADR/RID)

UN-number: Not restricted  
Warning plate

### Description of the goods

Not restricted

### Inland waterways transport

UN-number: Not restricted

### Description of the goods

Not restricted

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**INMATEC**

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### Marine transport

UN-number: Not restricted

### Description of the goods

Not restricted

### Air transport

UN/ID number: Not restricted

### Description of the goods

Not restricted

## 15. Regulatory information

### Labelling

S phrases Do not breathe dust.

### National regulatory information

Water contaminating class (D):

1-slightly water contaminating

## 16. Other information

### Further information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

### Changes

Rev.: 1.2 Revision

**The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet).**

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