

## **MATERIAL SAFETY DATA SHEET**

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COMERCIAL PRODUCT NAME:

ISOCOMP PTFE fluorocarbon resin filled compounds

including :Ticomp S END USE: various

1.1 Chemical characterization:

ISOCOMP PTFE fluorocarbon resin with fillers such as glass fiber, carbon, carbon fiber, graphite, molybdenum disulphide, bronze, stainless steel, mica, nickel, cadmium-

ASTM D792

free pigments

1.2 Form: pellets or powder; 1.3 Colour: various; 1.4 Odour:

2 PHYSICAL AND SAFETY DATA Tested in accordance with:

2.1 Change in physical state:

Boiling point:

Melting point: (resin), 327 – 342 °C

esin), 327 – 342 °C ASTM D1457

2.2 Density: 2.00 – 4.00 kg/l

2.3 Vapour pressure: n.a.

2.4 Viscosity: n.a.

2.5 Solubility in water insoluble

2.6 PH value: n.a.

2.7 Flash point: n.a.

2.8 Ignition temperature: (resin), > 500 °C ASTM D1929

2.9 Explosion limits: lower: vol.%; upper: vol.%

2.10 Thermal decomposition: (resin), stable up to 260 °C

2.11 Hazardous decomposition products: fluorinated olefins, carbonylfluoride, hydrogen fluoride,

2.12 Hazardous reactions: with magnesium or aluminium powder at 425 °C, with molten alkali

metals, or with interhalogen compounds.

Secondary reaction between filler and resin decomposition

products are possible, e.g. metal halide formation from bronze filler

2.13 Further information: Perfluoroisobutylene starts forming at around 500  $^{\circ}$ C, when

degradation occurs in the presence of air.

**TRANSPORTATION** Not a dangerous good in the meaning of the transport regulations

4 REGULATIONS



The product does not need to be labeled according to the EC-Directive 67/548 as amended.

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# 5 PROTECTIVE MEASURES, STORAGE AND HANDLING

5.1 Technical protective measures: provide appropriate exhaust ventilation at processing equipment

5.2 Personal protective equipment: Respiration: dust mask; Eyes: safety glasses;

Hands: protective gloves; Other:

5.3 Industrial hygiene: Do not contaminate tobacco products. Do not smoke in work area. Wash

hands before smoking. General precaution for all plastics elastomers: Do

not breath fumes evolved from hot polymer.

5.4 Protection against fire and explosion: Product resists ignition and does not promote flame spread. Take precautionary measures against static discharges.

5.5 Disposal: Can be landfilled, when in compliance with local regulations. Can be incinerated

using a scrubber to remove HF, when in compliance with local regulations. Special

precautions may be required depending on filler type.

## 6 MEASURES IN CASE OF ACCIDENTS AND FIRES

6.1 After spillage/leakage/gas leakage: Remove with vacuum cleaner to avoid dust formation and

to prevent slipping hazards.

6.2 Extinguishing media: Suitable: water, carbon dioxide (CO<sub>2</sub>), foam, dry powder.

6.3 First aid:

<u>Inhalation</u>: Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. Consult a physician after significant exposure. See also section 7.

Skin contact: Cool skin rapidly with cold water after contact with molten polymer. Do not

peel polymer from the skin. Obtain medical attention.

Eye contact: Rinse with water. Ingestion: No adverse effects.

6.4 Further information: ALT of PTFE is 400 °C. ALT (Approximate Lethal Temperature) is the

temperature at which decomposition products killed at least one rat out of

four, after a four hour exposure.

In case of fire, wear a self-contained breathing apparatus and a complete

suit protecting against chemicals.

Wear neoprene gloves when handling refuse from fire.

# 7 INFORMATION ON TOXICITY

Inhalation of thermal decomposition products from polymer (e.g. through smoking contaminated tobacco) may cause "polymer fume fever", producing flu-like symptoms in humane. The symptoms do not ordinarily occur until about two hours or more after exposure, and pass within 36 to 48 hours. Experience indicated that there is no long lasting nor cumulative effect.

Occupational exposure limits:



respirable dust: 8-h TWA = 5mg/m<sup>3</sup>

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hydrogen fluoride (as F): 8-h TWA = 3 ml/m3 =  $2.5 \text{ mg/m}^3$ 10-min TWA =  $6 \text{ ml/m3} = 5 \text{ mg/m}^3$ 

carbon black: 8-h TWA =  $3.5 \text{ mg/m}^3$  $10\text{-min TWA} = 7 \text{ mg/m}^3$ 

mica respirable dust: 8-h TWA = 1 mg/m<sup>3</sup>

nickel: 8-h TWA = 1 mg/m<sup>3</sup>

# 8 INFORMATION ON ECOLOGICAL EFFECTS

Ecotoxicological information

Aquatic toxicity: No information is available. Toxicity is expected to be low based on insolubility in water.

# 9 FURTHER INFORMATION

Further safety information on this product is available from ISOCOMP Technologies.

n.a. = not applicable



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