

FEP - Material Safety Data Sheet

Product Identification

Product Name: FEP Fluoropolymer resin

Types	100, 100 X, 100-J, 100-N, 106-N, 130-J, 140-J, 160-N, 5100-J, 6100, 6100-J, 106 X, G1, G3, G7, CJ95, CJ99, CJ 95 X, CJ 99 X, 9302 X, FPD9848, TE9298, TE9290, TE9302-N, TE9469, TE9475, TE9486, TE9491, TE9494, TE9494-J, TE9495, TE9497, TE9808, TE9817, TE9818, TE9820, TE9821, TE9823, TE9824, TE9828, TE9831, TE9832, TE9835, TE9837, TE9838, TE9839, TE9845, TE9846
Synonyms	Poly(Hexafluoropropene/Tetrafluoroethylene)
Use of Substance	Resin for moulding and/or extrusion

Physical and Chemical Properties

Water Solubility	Insoluble
Flash Point (Method used)	Difficult to ignite, and flame goes out when initiating source is removed.
Auto Ignition temperature	530°C - 550°C
Flammable Limits	Not applicable
Form	Pellets
Appearance and Odour	None
Colour	White, translucent
Melting Point	257°C - 263°C
Density	2.1 - 2.2 g/cm ³

Health Hazard Data

No hazards which require special first aid measures. Never give anything by mouth to an unconscious person. When symptoms persist or in all cases of doubt seek medical advice.

First Aid Measures

Eye Contact	Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin Contact	Do not peel polymer from the skin. Cool skin rapidly with cold water after contact with molten material. Wash off with soap and water. Consult a physician.
Ingestion	Not a probable route of exposure. However, in case of accidental ingestion, call a physician.
Inhalation	Remove from exposure, lie down. Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. Consult a physician.

Most important symptoms and effects, both acute and delayed:

Symptoms: Polymer fume fever

Treatment: Treat symptomatically.

Fire Fighting Measures

Flash Point	Difficult to ignite, and flame goes out when initiating source is removed.
Flammability Limits	Not applicable
Extinguishing Media	Carbon dioxide (CO ₂), Dry powder, Foam, Water

Special Fire Fighting Procedures	Hazardous thermal decomposition products, Carbon oxides , acid fluorides , Fluorinated compounds , Hydrogen fluoride, Carbonyl fluoride In the event of fire, wear self-contained breathing apparatus. Wear suitable protective equipment. Wear neoprene gloves during cleaning up work after a fire
Further information	Protect from hydrogen fluoride fumes which react with water to form hydrofluoric acid. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Difficult to ignite, and flame goes out when initiating source is removed

Accidental Release Measures

Advice on safe handling	When opening containers, avoid breathing vapours that may be emanating. Avoid breathing dust. Avoid contamination of cigarettes or tobacco with dust from this material. General precaution for all plastics and elastomers: Provide appropriate exhaust ventilation at dryers, machinery and at places where dust or volatiles can be generated. In case of insufficient ventilation, wear suitable respiratory equipment.
Advice on protection against fire and explosion	Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).
Requirements for storage areas and containers	Keep container tightly closed in a dry and well-ventilated place. Protect from contamination
Advice on common storage	No special restrictions on storage with other products. Keep away from tobacco products.
Other data	Stable under recommended storage conditions

Exposure Controls

Engineering measures	Ensure adequate ventilation, especially in confined areas. Good general ventilation should be provided to keep dust concentrations below the exposure limits. Local exhaust ventilation should be employed to minimize airborne contamination.
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Personal Protection

Respiratory Protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Suitable respiratory equipment: Half mask with a particle filter FFP2/FFP3 (EN149)
Skin Protection	When handling hot material, use heat resistant gloves. Protective gloves (Type: Kevlar® - heat resistant, use possible until worn out)
Eye Protection	Safety glasses with side-shields
Other Protective Equipment	If there is a potential for contact with hot/molten material wear heat resistant clothing and footwear
Hygiene Measures	Regular cleaning of equipment, work area and clothing. Wash hands and face before breaks and immediately after handling the product. Do not contaminate tobacco products. General precaution for all plastics and elastomers: Do not breathe fumes evolved from hot polymer.

Stability and Reactivity

Stability	The product is chemically stable under recommended conditions of storage, use and temperature.
Conditions to avoid	To avoid thermal decomposition, do not overheat. Abnormally long processing time or high temperatures can produce irritating and toxic fumes. Stable under normal conditions.
Incompatible materials	Powdered metals finely divided aluminium potent oxidizer like fluorine (F ₂) and related compounds. Contact with incompatible materials can cause fire and explosion.
Hazardous Decomposition	Hazardous thermal decomposition products may include: Hydrogen fluoride Carbonyl fluoride perfluoroisobutylene acid fluorides Carbon oxides Fluorinated compounds.
Reactivity	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	During drying, cleaning and moulding, small amounts of hazardous gases and/or particulate matter may be released. These may irritate eyes, nose and throat. Large molten masses may give off hazardous gases. Stable under normal conditions.

Toxicological Information

Acute inhalation toxicity	The thermal decomposition vapours of fluorinated polymers may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco. Poly(Hexafluoropropene/Tetrafluoroethylene) LC50 / 4 h rat : > 8 mg/l
Repeated dose toxicity	Poly(Hexafluoropropene/Tetrafluoroethylene) Oral rat No toxicological significant effects were found. Inhalation rat No toxicological significant effects were found
Toxicity to fish	Poly(Hexafluoropropene/Tetrafluoroethylene) The substance is a polymer and is not expected to produce toxic effects.
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Results of PBT and vPvB Assessment	No data available
Additional ecological Information	This product has no known eco-toxicological effects.

Disposal Considerations

Product	Like most thermoplastic plastics the product can be recycled. If recycling is not practicable, dispose of in compliance with local regulations. Incinerate only if incinerator is capable of scrubbing out hydrogen fluoride and other acidic combustion products.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal

Transport Information

ADR

Proper Shipping Name	Not applicable
UN Number	Not applicable
Hazard Class / Packing Group	Not applicable
Environmental Hazards	Not applicable
Special precautions for user	Not classified as dangerous in the meaning of transport regulations.

IATA_C

Proper Shipping Name	Not applicable
UN Number	Not applicable
Hazard Class / Packing Group	Not applicable
Environmental Hazards	Not applicable
Special precautions for user	Not classified as dangerous in the meaning of transport regulations.

IMDG

Proper Shipping Name	Not applicable
UN Number	Not applicable
Hazard Class / Packing Group	Not applicable
Environmental Hazards	None
Special precautions for user	Not classified as dangerous in the meaning of transport regulations.

Other regulations: Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work. Assessment is not required for this substance

Disclaimer

To the best of our knowledge the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy or completeness of such information. We strongly recommend that users seek and adhere to the manufacturer's or supplier's current instructions for handling each material they use and they satisfy themselves that they can meet all applicable safety and health standards. This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.