

Safety Data Sheet (SDS)

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Applicable products CHUKOH FLO™ Skived tape (MSF, MSM, MSE)
 CHUKOH FLO™ PTFE sheet
 CHUKOH FLO™ Bubbling sheet
 CHUKOH FLO™ PTFE Integrated tank
 CHUKOH FLO™ PTFE rod
 CHUKOH FLO™ PTFE pipe

1. Product and company identification

Product name See the applicable products above.
 Product code -
 Company name CHUKOH CHEMICAL INDUSTRIES, LTD.
 Address ATT New Tower 10F, 2-11-7, Akasaka, Minato-ku,
 Tokyo
 Telephone 03-6230-4414/81-3-6230-4417
 Fax 03-6230-4413/81-3-6230-4446
 Recommended use For industrial use
 Restrictions on use For industrial use
 Information on domestic manufacturers, etc. See above

2. Hazards identification

GHS Classification Not applicable
 GHS label elements Not applicable
 Pictures or symbols No information available
 Warning statements No information available
 Hazard information No information available
 Cautionary statements No information available
 Other hazards not related to or addressed by the GHS classification No information available
 Summary of important indications and possible emergencies No information available
 Other Not hazardous under normal handling. Heating fluorocarbon resin produces pyrolysis products (fumes), which may cause eye, nose, and lung irritation if inhaled.

3. Composition/information on ingredients

Substance/Mixture Mixture

Chemical name or generic name	Concentration or concentration ranges	Chemical formula	Reference No. in gazetted list in Japan		CAS No.
			Chemical Substances Control Law	Industrial Safety and Health Act	
Poly-Tetra-Fluoro-Ethylene (PTFE)	100%	(C ₂ F ₄) _x	6-939	6-939	9002-84-0

Ingredients contributing to GHS classification No information available

4. First-aid measures

Inhalation	If fumes from heating or burning are inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice/attention if you feel unwell.
Skin contact	Wash with plenty of soap and water. If molten polymer contacts skin, cool rapidly with cold water. Do not attempt to peel polymer from skin. Seek medical advice/attention if irritation occurs.
Eye contact	Flush eyes cautiously with water for several minutes. Seek medical advice/attention if irritation persists.
Ingestion	Rinse mouth. Seek medical advice/attention if you feel unwell.
The most important manifestations of acute and delayed symptoms	No information available
Precautions necessary for the protection of persons who provide first-aid measures	No information available
Special precautions for physicians	No information available

5. Fire-fighting measures

Appropriate fire extinguishing media	Use extinguishing media appropriate for surrounding fire: Water, foam, powder, etc.
Fire extinguishing media that should not be used in case of fire	No information available
Specific fire hazards	This product hardly flammable. Fire may produce irritating, corrosive, and/or toxic gas.
Specific fire extinguishing methods	Move product from fire area if you can do so without risk. Fight fire from maximum distance and use unmanned hose holders or monitor nozzles.
Special protective equipment and precautions for firefighters	Wear self-contained breathing apparatus (SCBA). Firefighters should wear protection clothing and self-contained breathing apparatus (SCBA).
Cautions	When fluorocarbon resin is exposed to high temperatures, it produces harmful particulates, fumes, and gases. In case of fire, evacuate upwind as far as possible to avoid inhalation.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Wear suitable protective equipment (see Section 8, Exposure controls/personal protection) to prevent inhalation and exposure of eyes or skin.
Environmental precautions	Avoid discharge to rivers and environmental effects.
Methods and materials for containment and cleaning up	Break into small pieces. Collect if scatter. Dispose in accordance with Section 13.
Measures to prevent secondary accidents	No information available

7. Handling and storage

Handling	
Technical measures	Install equipment in Section 8, Exposure controls/personal protection. Wear protective equipment.

Precautions for safe handling Prohibit the use of heat, sparks, and fire in the surrounding area.
 Watch out for fire.
 Do not carry cigarettes, cigars or tobaccos and do not smoke in the workplace as decomposition gas may be inhaled by smoking if the substance contacts them.
 Ensure good ventilation/exhaustion.
 Avoid breathing dust/fume.
 Wash hands thoroughly after handling.
 Do not use and heat this products over 260°C.
 If there is a risk of above, good ventilation is necessary and also local exhaust equipment is to be installed.

Avoidance of contact See Section 10, Stability and reactivity.
 Hygiene measures Wash hands thoroughly after handling.

Storage

Conditions for safe storage Stable at normal storage conditions. Storage at or below 25°C and 60% RH is preferred.
 Keep away from oxidizing agents.
 Safe containers and packaging materials No restriction for packaging materials. Use containers which will not be broken.

8. Exposure controls/personal protection

Control concentration
 Allowable concentration Not set
 Engineering measures In a process to heat over 260°C, good ventilation is necessary and also local exhaust equipment is to be installed.

Protective equipment

Respiratory protection Wear appropriate respiratory protection if ventilation is not enough.
 Hand protection Wear eye protection.
 Eye protection Wear personal protective equipment including protective clothing and protective mask if necessary.
 Skin and body protection Wear personal protective equipment including protective clothing and protective mask if necessary.

9. Physical and chemical properties

Appearance

Physical state Solid
 Color White

Odor Odorless
 Melting point/freezing point Not available
 Boiling point, initial boiling point, and boiling range Not available

Flammability Flame Retardancy

Lower explosion limit and upper explosion limit/flammable limit
 Lower Not available
 Upper Not available

Flash point Not available

Autoignition temperature	Not available
Decomposition temperature	Not available
pH	Not available
Viscosity	Not available
Solubility	Not available
Partition coefficient (n-octanol	Not available
Vapor pressure	Not available
Density and/or relative density	2.1–2.3g/cm ³
Relative gas density	Not available
Particle characteristics	Not available
Other data	Not available
10. Stability and reactivity	
Reactivity	Hazardous reactions will not occur under normal conditions. Begins to decompose, very slowly, at temperatures above 260°C. Thermal decomposition is more rapid at temperatures above 400°C.
Chemical stability	Stable under normal storage and handling conditions. May react with metal powders such as aluminum and magnesium or with fluorine compounds such as fluorine and chlorine trifluoride, and cause fire and explosion.
Possibility of hazardous reactions	Hazardous reaction or polymerization generating excessive pressure/heat will not occur.
Conditions to avoid	Heat. Contact with incompatible materials.
Incompatible materials	Metal powders such as aluminum and magnesium or fluorine compounds such as fluorine and chlorine trifluoride.
Hazardous decomposition products	Thermal decomposition of this product may evolve the following decomposition products at the following temperatures: Carbonyl fluoride and hydrogen fluoride (above 400°C). Tetrafluoroethylene (above 430°C). Hexafluoropropylene (above 440°C). Perfluoroisobutylene (above 475°C).
11. Toxicological information	
Acute toxicity	
Oral	LD50 in mouse : 1,250mg/kg LD50 in rat : 12,500mg/kg
Dermal	Not available
Inhalation (vapor)	Not available
Inhalation (dust)	Not available
Skin corrosion/irritation	Not available
Serious eye damage/eye irritation	Not available
Respiratory or skin sensitization	Not available
Germ cell mutagenicity	Not available
Carcinogenicity	Not available
Reproductive toxicity	Not available
Specific target organ toxicity (single exposure)	Not available

Specific target organ toxicity (repeated exposure)	Not available
Swallowing hazard	Not available
Others	Thermal decomposition of fluoropolymers may generate polymer fumes, hydrogen fluoride, carbonyl fluoride, and perfluoroisobutylene. The toxicity information is as follows.
Effects on humans	Inhalation of fumes from burning may produce polymer fume fever, a temporary flu-like condition with fever, chills and cough. This may last for a whole day and night. Skin absorption will not occur. There are no reports of sensitization.
Effects of hydrogen fluoride	Inhalation of low concentrations of hydrogen fluoride can initially include symptoms of choking, coughing, and severe eye, nose, and throat irritation, fever, chills for one to two days, followed by difficulty in breathing, cyanosis, and pulmonary edema. Overexposure to hydrogen fluoride can injure the liver and kidneys.
Effects of carbonyl fluoride	Skin: Irritation with discomfort or rash Eye: Corrosion with corneal or conjunctival ulceration Upper respiratory passage: Irritation Lung: Temporary irritation effects with cough, discomfort, difficulty in breathing, or shortness of breath (Individuals with pre-existing diseases of the lungs may have increased susceptibility to the toxicity after excessive exposures to thermal decomposition products.)
Effects of perfluoroisobutylene	Even trace amounts are extremely toxic.
12. Ecological information	
Ecotoxicity	Not available Handle with care as leakage or disposal may affect the environment. In particular, ensure that the product does not flow directly into the ground, rivers or drains.
Persistence and degradability	Not available
ecological accumulative property	Not available
Mobility in soil	Not available
Hazardous to the ozone layer	Does not contain any substances that deplete the ozone layer listed in Annexes to the Montreal Protocol.
13. Disposal considerations	
Waste from residues	Dispose in accordance with applicable laws and regulations and standards of local governments. Entrust the disposal to a licensed waste disposal contractor or a local public body who conducts the disposal. When entrusting the disposal to a disposal contractor, notify the danger and toxicity thoroughly to the contractor.
Contaminated container and packaging	Dispose in accordance with applicable laws and regulations and standards of local governments.
14. Transport information	
UN number	Not dangerous goods
Item (UN transport name)	Not dangerous goods

UN Classification	Not dangerous goods
Container grade	Not dangerous goods
marine pollutant	Not dangerous goods
Liquid substances transported in bulk according to MARPOL 73/78 Annex II and IBC Code	Not dangerous goods
Special safety measures for transportation or means of transportation	Confirm that there is no damage, corrosion, or leakage of the containers before transportation. Avoid direct sunlight at transportation. Load containers not to cause damage, corrosion or leakage and thoroughly prevent load collapse. Do not stack heavy objects.
Regulatory information on domestic regulations, if any	Not applicable

15. Regulatory information

Applicable laws and regulations and information on requirements imposed by such laws and regulations

Pollutant Release and Transfer Register (PRTR)	Not applicable
Industrial Safety and Health Law	Not applicable
Poisonous and Deleterious Substances Control Act	Not applicable

Other applicable laws and regulations and information on requirements imposed by Not applicable

16. Other information

Hazard statements herein are made based on the assumption of industrial use and general handling. Handle with care at the actual use by referring to the hazard statements herein.

Restrictions on use This product is not intended for medical use. Do not use this product for implant or in a way that will contact with the body fluid or tissue.
 Consult with us in advance if it is expected to use the product in medical field.

References SDS made by raw material manufacturers.

The information herein may be revised if any new findings are obtained.
 Values of concentration and physical and chemical properties are not guaranteed values.
 Hazards identification was prepared based on the documents, information and data available at the time of preparation, but it does not mean that all documents, information and data are covered.