SAFETY DATA SHEET

IN COMPLIANCE WITH REGULATION (EC) 1907/2006 REACH AND (EU) No 2020/878

PTFE MPS FLUORMICRO

Date 10/04/2024
Rev 01/00

1 - IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1	**Product identification**	Polytetrafluoroethylene (PTFE) PTFE Repro
	Product name	PTFE MPS FLUORMICRO P100, T100, M100
	Grade	Molding through compression and extrusion of the material
	Chemical formula	$-(CF_2-CF_2)_n-$
	Product code	
1.2	**Identified and recommended uses for the substance or mixture**	
	Identified uses	For industrial use only

1.3	**Information about the supplier of the safety data sheet**	
	Society	FLUORMETALLsrl
	Address	Via dell'Artigianato, 4 Trescore Balneare (BG) Via Europa Unita, 16 Trescore Balneare (BG) Via Cremasca, 24 24052 Azzano San Paolo (BG)
	Telephone / Fax	035 4258560 / 035 942794
	Email address	info@fluormetall.it
1.4	**Emergency telephone number**	035 4258560 (internal number) only during office hours Turin poison control center - Telephone +39 011 663 7637 (24 hours) Poison control center IRCCS Maugeri Foundation Pavia - Telephone +39 38 224 444 (24 hours) Interdepartmental research center on acute poisoning Padua - Telephone +39 049 8275078 (8:00 am - 8:00 pm) Poison Control Center Rome - Telephone +39 649970698 (24 hours) Foggia poison control center - Telephone +39 881732326 (8:00-18:00)

2 – HAZARDS IDENTIFICATION

2.1	**Classification of the substance or mixture**
	*Questa miscela è classificata come **non pericolosa** in accordo con le direttive vigenti*
2.1.1	**European Regulation (EC) 1272/2008, as mentioned**
2.1.2	**Classification in accordance with CLP (Classification Labeling an Packaging, Regulation (EC) No 1272/2008).**

Hazard class	Hazard category	H sentences
None	None	None

2.2	**Label elements:** None
2.2.1	**Names on the label:** No labelling
2.2.2	**Signal word :** None
2.2.3	**Hazard pictograms:** None
2.2.4	**Hazard Statements:** None
2.2.5	**Precautionary statements:** None
2.3	**Other hazards :** The product is biologically inert. Not dangerous under normal conditions of handling and use. Ecological damage is neither known nor foreseeable under conditions of normal use. Thermal decomposition can cause the release of toxic and corrosive gases. The product does not contain substances with properties that interfere with the endocrine system in concentrations ≥ 0.1%.

3 – COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Blend
3.2 Concentration

Substance	CAS	REACH Registration no	Concentration %	CLP classification
Polytetrafluoroethylene	9002-84-0	It is not registered as it is a "polymer"	>99,9	Not dangerous

3.2. 1 There are no persistent, bioaccumulative and toxic substances according to the criteria set out in Annex XIII, for very persistent and very bioaccumulative substances according to the criteria in Annex XIII, or for substances included in the list established in accordance with Article 59, paragraph 1, for reasons other than the dangers referred to in letter a).

3.2.2 The full hazard statements are given in section 16

4 – FIRST AID MEASURES

4.1	**Description of first aid measures** **Symptoms following exposure to thermal decomposition products**	
4.1.1	Inhalation	Headache, shortness of breath, cough, chills and fever, tachycardia.
4.1.2	Skin contact	Redness, irritation, burns
4.1.3	Eye contact	Redness, irritation, burns
4.1.4	Ingestion	Not a probable route of exposure. However, in case of accidental ingestion, call a doctor
4.2	**First aid measures in case of exposure to thermal decomposition gases**	
4.2.1	Inhalation	Move the affected person immediately to fresh air. Consult a doctor immediately. If not breathing, provide artificial respiration, preferably mouth-to-mouth. If breathing is difficult, administer oxygen. Symptoms from inhalation of decomposition products do not occur until several hours after exposure. Keep the affected person under medical observation for at least 48 hours. Timely intervention by a doctor is absolutely necessary.
4.2.2	Eye contact	Wash immediately and abundantly with water for at least 15 minutes, retracting the eyelids often. Contact your doctor if the burning continues.
4.2.3	Skin contact	Wash immediately with soap and water (be careful be careful when washing the skin under the nails). Contact your doctor if burning continues.
4.2.4	Ingestion	Do not eat, drink or smoke during use. Wash thoroughly with soap and water

5 – FIRE-FIGHTING MEASURES

5.1	**Fire fighting**
5.1.1	Water, Powder, Foam, Chemical powder, Carbon dioxide (CO2)
5.2	Special hazards arising from the substance or mixture
	In the event of a fire, dangerous substances due to decomposition can be produced, such as: Hydrogen fluoride in the gaseous state, Fluorophosgene.
5.3	**Recommendations for fire extinguishers**
	Wear self-contained breathing apparatus and protective clothing.
	In case of close intervention, wear acid-proof suits
	Evacuate personnel to safe areas
	Getting closer to danger. Keeping upwind.
	Protect the intervention team with water spray.
	Cool the containers and the surrounding environment with nebulized water.

	Keep the product and empty containers away from heat and ignition sources.
5.4	**Firefighter protection**
5.4.1	Self-contained breathing apparatus
	Clothing, complete anti-acid protection

6 – MEASURES IN CASE OF ENVIRONMENTAL RELEASE

6.1	**Personal precautions, protective devices and procedures in case of emergency**
	Provide adequate ventilation
	Avoid dust formation.
	The material can make surfaces slippery.
	Collect to avoid the risk of slipping.
	Keep open flames away.
6.2	**Environmental precautions**
	It must not be abandoned in the environment.
	Do not flush into surface water or sanitary sewer systems.
6.3	Methods and materials for containment and cleanup
	Sweep or vacuum up spills and place in a suitable container for disposal
6.4	**Reference to other sections**
	None

7 – HANDLING AND STORAGE

7.1	**Precautions for Safe Handling**
7.1.1	**Precaution**
	Provide adequate ventilation
	Use personal protective equipment
	Avoid dust formation
	Do not contaminate tobacco products
	Keep away from heat sources and other sources of fire
	To avoid thermal decomposition do not overheat
	Take preventive measures to avoid the production of electrostatic charges
	Before each operation clean and dry the pipes and equipment
	Make sure all equipment is earthed before starting transfer operations
7.1.2	**Security measures**
	Keep away from sparks and flames, hot surfaces and flammable materials. Do not store near incompatible materials (see par. 10).
7.2	Conditions for safe storage, including any incompatibilities
7.2.1	**Storage**
	Keep away from sparks and flames, hot surfaces and flammable materials. Do not store near incompatible materials (see par. 10).
7.2.2	**Packaging**
	Cardboard boxes or plastic drums, wooden boxes

8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1	**Control parameters**
8.1.1	Exposure limit values

HF	TLV/CEILING	2,6 mg/ m^3	3 ppm
COF_2	TLV/STEL	13,5 mg/ m^3	5 ppm

Ingredient	Authority	type	Limit	Additional information
Polytetrafluoroethylene	CMRG	TWA,as respirable dust	5 mg/m^3	-
Polytetrafluoroethylene	CMRG	TWA, as total dust	10 mg/m^3	

In case of thermal decomposition (breathing gas)

	Limit	Authority
Hydrogen Fluoride	TWA 1,8 ppm 1,5 mg/m^3	**EC 2000/39**
	STEL 3ppm 2,5 mg/m^3	**EC 2000/39**
	TWA 0,5 ppm	**ACGIH**
	C 2ppm	**ACGIH**
Carbonyl difluoride	TWA 2,5 mg/m^3	**EC 2000/39**
	TWA 2 ppm	**ACGIH**
	STEL 5 ppm	**ACGIH**
Tetrafluoroethylene	TWA 2 ppm	**ACGIH**
Hexafluoropropene	TWA 0,1 ppm	**ACGIH**
Perfluoroisobutene	C 0,01 ppm	**ACGIH**

Source of exposure limit data:
ACGIH : American Conference of Governmental Industrial Hygienists
CMRG: Chemical Manufacturer Recommended Guideline
OSHA: Occupational Safety and Health Administration
AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

8.2	**Exposure controls**
8.2.1	Appropriate engineering controls
8.2.2	**Individual protection measures**
8.2.2.1	**Respiratory protection**
	Normally no respiratory protective equipment is required. In case of dust/mists/fumes, anti-dust mask with FP2 type filter. Use a respirator when handling involving possible exposure to product vapor. Only use breathing apparatus that complies with international/national standards.
8.2.2.2	**Hand protection**
	Gloves in l When handling hot material, use heat resistant gloves.
8.2.2.3	**Eye protection**
	Tight-fitting safety goggles.
8.2.2.4	**Body protection**
	Clothing with long sleeves Safety boots
8.2.2.5	**Hygiene measures**
	When using, do not eat, drink or smoke. Wash your hands before breaks and at the end of the working day. Handle in compliance with good industrial hygiene and safety practices
8.2.3	**Environmental exposure control**
	The working environment is monitored every four years. Result: not dangerous

9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1	**Information on basic physical and chemical properties.**	
	General indications	
Propriety	**Value**	**Information**
Physical State	Solid	
Color	Various	See technical data sheet
Odor	Characteristic	
Olfactory threshold		Reason for missing data: Given the poor or slight perceptibility, intensity, diffusion and hedonic tone of the product, the olfactory threshold cannot be determined
Melting or freezing point	327 ÷ 335 °C	
Initial boiling point	Undefined	Not defined as the product is a solid
Flammability	Not inflammable	The product is not flammable
Lower explosive limit	Not available	Reason for missing data: the non-explosivity is deduced from the chemical structure of the product.
Upper explosive limit	Not available	Reason for missing data: the non-explosivity is deduced from the chemical structure of the product.
Flash point	Not available	Reason for lack given: the product is not flammable
Auto-ignition temperature	575 °C	
Decomposition temperature	> 350 °C	
pH	Not available	Reason for lack given: The product is a solid
Kinematic viscosity	Not available	Reason for missing data: test not performed
Dynamic viscosity	Not available	Reason for missing data: test not performed
Solubility	Not soluble in water	
Partition coefficient n-octanol/water	Not available	Reason for missing data: test not performed
Vapor pressure	Not available	Reason for missing data: test not performed
Density and/or relative density	Vedi technical data sheet	The density values of the individual compounds are shown on the technical data sheets
Relative vapor density Particle characteristics	Not available	Reason for missing data: test not performed

10 – STABILITY AND REACTIVITY'

10.1	**Stability**
	The product is stable under normal conditions of use and storage.
10.2	**Chemical stability**
	The product is chemically stable.
10.3	**Possibility of dangerous reactions**
	During drying, cleaning and molding, small amounts of hazardous gases and/or particulates may be released. These can irritate the eyes, nose and throat. Large masses of melt can emit dangerous gases. Stable under normal conditions
10.4	**Conditions to avoid**
	To avoid thermal decomposition do not overheat
	Keep away from flames and sparks
10.5	**Incompatible materials**

	Finely split aluminum powdered metals Powerful oxidants such as fluorine and related compounds. Contact with incompatible materials can cause fires and explosions
10.6	**Hazardous decomposition products**
	Hydrogen fluorine in gaseous state, Fluorophosgene
	Tetrafluoroethylene, Hexafluoropropene, Perfluoroisobutene The temperature level reached affects the thermal combustion products.

11 – TOXICOLOGICAL INFORMATION

11.1	**Acute toxicity**
	See 11.1.1
11.1.1	**Acute oral toxicity**
	DL50, rat > 11,280 mg/Kg
11.1.2	**Acute inhalation toxicity**
	Vapors from the thermal decomposition of fluorinated plastics can cause polymer fume fever with flu-like symptoms in humans, particularly when smoking contaminated tobacco
11.2	**Skin corrosion/irritation**
	Polytetrafluoroethylene - rabbit Classification: Not classified as irritant Result: No skin irritation Polytetrafluoroethylene - human Classification: Not classified as irritant Result: No skin irritation
11.3	**Serious eye damage / Eye irritation**
	No data available
11.4	**Raising awareness**
	Classification: non-sensitizing to the skin Result: Does not cause skin sensitization. Patch tests on human volunteers have not demonstrated sensitizing properties
11.5	**Mutagenicity**
	polytetrafluoroethylene Tests on cultures of bacteria or mammalian cells showed no mutagenic effects.
11.6	**Carcinogenicity**
	Polytetrafluoroethylene. Not classifiable as a human carcinogen
11.7	**Toxic for reproduction**
	Polytetrafluoroethylene. Non-toxic for reproduction
11.8	**Repeated dose toxicity**
	Polytetrafluoroethylene. Oral - rat feeding No relevant toxicological effects were found
11.9	**More information**
	none

12 – ECOLOGICAL INFORMATION

12.1	**Toxicity**
	No data available
12.2	**Persistence and degradability**
	No data available
12.3.	**Bioaccumulation potential**
	No data available
12.4.	**Mobility in soil**
	No data available
12.5.	**Results of PBT and vPvB assessment**
	The substance/mixture does NOT contain PBT/vPvB substances according to Regulation (EC) 1907/2006, annex XIII
12.6	**Properties of interference with the endocrine system**
	No endocrine disruptors present in concentrations >0.1%
12.7.	**Other adverse effects**
	No adverse effects noted

13 – DISPOSAL CONSIDERATION

13.1	**Waste treatment methods**
	Product that is not recyclable must be disposed of in an authorized landfill or destroyed in a high temperature incinerator designed to burn halogen materials.
13.2	**Contaminated containers**
	Dispose of in authorized landfills according to local laws and regulations.

14 – TRANSPORT INFORMATION

14.1	**Specific hazards**	
	The product is not classified as dangerous for transport	
14.2	**Packaging information**	
	Product generally shipped in plastic bags inside containers, cardboard boxes or plastic drums, wooden boxes	
14.3	**International transport classification**	
	Packaging group:	Not assigned
	U.N. Number:	Not assigned

15 – REGULATORY INFORMATION

15.1	**EC Regulations**
	Legislative Decree 3/2/1997 n. 52 (Classification, packaging and labeling of dangerous substances). Legislative Decree 14/3/2003 n. 65 (Classification, packaging and labeling of dangerous preparations). Legislative Decree 2/2/2002 n. 25 (Risks deriving from chemical agents at work). DM Work 02/26/2004 (Professional exposure limits); DM 04/03/2007 (Implementation of Directive No. 2006/8/EC). Regulation (EC) no. 1907/2006 (REACH), Regulation (EC) n. 1272/2008 (CLP), Regulation (EC) n. 453/2010 (Requirements for the compilation of safety data sheets), Regulation (EC) n.790/2009. Legislative Decree. 21 September 2005 n. 238 (Seveso Ter Directive). Regulation (EU) 2015/830, Regulation (EU) 2020/878 Based on available data, the product does not contain SVHC substances in percentages ≥ 0.1%. Substances subject to authorization (Annex XIV REACH) None. Substances subject to export notification requirements Regulation (EU) 649/2012: None. Substances subject to the Rotterdam Convention: None. Substances subject to the Stockholm Convention: None.
15.2	**Chemical safety assessment**
	None

16 – OTHER INFORMATION

16.1	**Other information**
	Safety data sheet in accordance with Regulation (EC) n.1907 / 2006 and (EC) n.453 / 2010
	Regulation (EC) No.1907/2006 of the European Parliament and of the Council of 18 December 2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, Which amendment 1999/45/EC and repealing Regulation (EEC) 793/93 and Council Regulation (EC) No. 1488/94 of the Commission, as well as Directive 76/769/EEC and Directives 93/67/EEC, 93/105/EC and 2000/21/EC. Regulation (EU) no. 453/2010 of the Commission, of 20 May 2010, amending Regulation (EC) no. 1907/2006 of the European Parliament and of the Council. EEC/EU Regulation n. 453 of 20/05/2010 of the Commission, of 20 May 2010, amending Regulation (EC) no. 1907/2006 of the European Parliament and of the Council. EEC/EU Regulation n.1272 of 16/12/2008 "Regulation (EC) n.1272/2008 of the European Parliament and of the Council on the classification, labeling and packaging of substances and mixtures, which amends and repeals the directives 67/548/EEC and 1999/45/EC and amending Regulation (EC) n.1907/2006.
	Bibliography
	- 1. Regulation (EC) 1907/2006 of the European Parliament (REACH) - 2. Regulation (EC) 1272/2008 of the European Parliament (CLP) - 3. Regulation (EU) 2020/878 (Annex II of the REACH Regulation)

	- 4. Regulation (EC) 790/2009 of the European Parliament (I Atp. CLP) - 5. Regulation (EU) 286/2011 of the European Parliament (II Atp. CLP) - 6. Regulation (EU) 618/2012 of the European Parliament (III Atp. CLP) - 7. Regulation (EU) 487/2013 of the European Parliament (IV Atp. CLP) - 8. Regulation (EU) 944/2013 of the European Parliament (V Atp. CLP) - 9. Regulation (EU) 605/2014 of the European Parliament (VI Atp. CLP) - Regulation (EU) 2015/1221 of the European Parliament (VII Atp. CLP) - 10. Regulation (EU) 2016/918 of the European Parliament (VIII Atp. CLP) - 11. Regulation (EU) 2016/1179 (IX Atp. CLP) - 12. Regulation (EU) 2017/776 (X Atp. CLP) - 13. Regulation (EU) 2018/669 (XI Atp. CLP) - 14. Regulation (EU) 2019/521 (XII Atp. CLP) - 15. Delegated Regulation (EU) 2018/1480 (XIII Atp. CLP) - 16. Regulation (EU) 2019/1148 - 17. Delegated Regulation (EU) 2020/217 (XIV Atp. CLP) - 18. Delegated Regulation (EU) 2020/1182 (XV Atp. CLP) - 19. Delegated Regulation (EU) 2021/643 (XVI Atp. CLP) - 20. Delegated Regulation (EU) 2021/849 (XVII Atp. CLP) - - - The Merck Index. - 10th Edition - - Handling Chemical Safety - - INRS - Fiche Toxicologique (toxicological sheet) - - Patty - Industrial Hygiene and Toxicology - - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition - - IFA GESTIS website - - ECHA Agency website - - Database of SDS models of chemical substances - Ministry of Health and Higher Institute of Health

The information in this safety data sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury arising from its use (except where required by law). The information may not be valid for any use not indicated in this safety data sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own testing to ensure the suitability of the product for their intended applications.