

MATERIAL SAFETY DATASHEET

Material Safety Data Sheet (MSDS)**SECTION 1: IDENTIFICATION OF SUBSTANCE****1.1 Product Identifier:**

- Identification on the label/Trade name: **FFKM-R-2275UP Series – Recycled/Reclaim FFKM**

1.2 Manufacturer:

- Manufactured by Maxmold Polymer Co., Ltd. Hsinchu Factory.
- Hsinchu Factory: No. 23, Ln. 434, Sec. 4, Zhonghua Rd., Xiangshan Dist., Hsinchu City 30094, Taiwan

1.3 Relevant Identified Uses of the Substance and Uses Advised Against:

- **1.3.1 Identified Uses:**
 - Recycled FFKM sheets can be used directly or as a filler blended with virgin FFKM rubber compounds. The performance matches that of virgin FFKM.
- **1.3.2 Uses Advised Against:**
 - Other elastomers rather than peroxide-cured FFKM.

SECTION 2: HAZARDS IDENTIFICATION**2.1 Classification of the Substance or Mixture:**

- **2.1.1 Classification:**
 - This product is not classified as hazardous according to the Regulations for the Labeling and Safety Data Sheets for Toxic and Concerned Chemical Substances in Taiwan.
- **2.1.2 Label Elements:**
 - Hazard Pictograms: Not Applicable.
 - Signal Word(s): Not Applicable.
 - Hazard Statement: Not Applicable.
 - Precautionary Statement: Not Applicable.

2.2 Precautionary Statements:

- **2.2.1 Prevention:**
 - Keep away from heat, sparks, and open flames.
 - Avoid contact with strong oxidizing agents.
 - Store in a cool, well-ventilated place.
 - Use appropriate engineering controls to minimize exposure.
 - Wear appropriate personal protective equipment (PPE), including gloves and eye/face protection.
- **2.2.2 Response:**
 - In case of skin contact, wash with plenty of water and soap.
 - In case of eye contact, rinse cautiously with water for several minutes.

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- If exposed to fumes, move to fresh air immediately.
- If ingested, seek medical attention.
- **2.2.3 Storage:**
 - Store in a tightly closed container.
 - Keep away from incompatible materials.
 - Store away from direct sunlight and heat sources.
- **2.2.4 Disposal:**
 - Dispose of in accordance with local, regional, and national regulations.

2.3 Other Hazards:

- Not available.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS**3.1 Substance/Mixture:**

- The product is Recycled FFKM, specifically engineered for blending with FFKM rubber compounds to ensure consistent performance.

3.2 Ingredients:

- **Chemical Description:** FFKM
- **CAS NO.:** Not available
- **Amount (%):** 100

SECTION 4: FIRST-AID MEASURES**4.1 Description of First Aid Measures:**

- **4.1.1 In Case of Inhalation:**
 - FFKM-R-2275UP is provided in sheet form and does not produce easily inhalable small particles. If inhalation occurs during grinding or transforming the product, promptly relocate the affected person to an area with fresh air. If recovery is not rapid, obtain medical attention.
- **4.1.2 In Case of Skin Contact:**
 - Wash the affected parts with soap and water. No emergency measures are necessary, but if adverse skin effects follow, refer for medical attention.
- **4.1.3 In Case of Eye Contact:**
 - Flush eyes immediately with clean, fresh water for a minimum of 15 minutes, holding the eyelids open. If adverse eye effects follow, refer for medical attention.
- **4.1.4 In Case of Ingestion:**
 - Do not induce vomiting. If adverse health effects follow, refer for medical attention.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed:

- **Respiratory Irritation:** Inhalation of airborne particles from FFKM-R-2275UP may cause respiratory irritation, leading to symptoms such as coughing, sneezing, or difficulty in breathing.

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- Delayed Effects: Exposure may lead to delayed allergic reactions in hypersensitive individuals, including skin rashes, itching, or other allergic symptoms.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed:

- No specific requirement.

SECTION 5: FIRE-FIGHTING MEASURES**5.1 General Restrictions:**

- When the solid material reaches or exceeds its flash point, it can ignite. Thermal decomposition may release flammable or toxic gases.

5.2 Extinguishing Media:

- On large fires, use dry chemical, foam, or water spray. On small fires, use carbon dioxide (CO₂), dry chemical, or water spray.

5.3 Specific Hazards Arising from the Substance or Mixture:

- Toxic by-products, including hydrogen fluoride and toxic fluorocarbon olefins, may be found above 500°C and during combustion.

5.4 Advice for Firefighting Measures:

- Wear self-contained breathing apparatus and protective clothing. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire-exposed containers cool.

5.5 Products of Combustion:

- May produce carbon monoxide (CO) and irritating fumes under lack of oxygen conditions.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1 Personal Precautions, Protective Equipment, and Emergency Procedures:****6.1.1 For Non-Emergency Personnel:**

- Avoid sources of ignition and ventilate the area. Exclude all non-essential personnel. Avoid breathing the dust or smoke.

6.1.2 For Emergency Responders:

- Ensure personnel wear suitable PPE, including gloves and safety goggles.

6.2 Environmental Precautions:

- Consider recycling and sustainable practices for managing FFKM-R-2275UP waste. FFKM-R-2275UP is designed to be recycled again in an infinite cycle.

6.3 Methods of Containment and Cleaning Up:

- Use barriers or absorbent materials to encircle and isolate the spilled material. Carefully collect the material using non-sparking tools or equipment and place it into appropriate containers, ensuring proper labeling. Avoid creating dust or airborne particles.

6.4 Reference to Other Sections:

- See Section 7 for information on safe handling.
- See Section 8 for information on personal protective equipment.

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- See Section 13 for information on disposal.

SECTION 7: HANDLING AND STORAGE**7.1 Precautions for Safe Handling:**

- Maintain safe handling practices for FFKM-R-2275UP. Adhere to good housekeeping standards and ensure regular, safe removal of waste materials. Use standard hand and eye protection, especially in cases involving manual handling. Follow all relevant safety regulations.

7.2 Conditions for Safe Storage, Including Any Incompatibilities:

- Store in a dry place, avoiding sources of heat or ignition. Suggested storage temperature is below 38°C.

7.3 Specific End Use(s):

- Contact our team for advice on specific end uses or applications.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control Parameters:**

- National critical values are yet to be formally established.

8.2 Exposure Controls:**8.2.1 Appropriate Engineering Controls:**

- Implement local exhaust ventilation systems to minimize airborne dust or particles.

8.2.2 Individual Protection Measures:

- Wear safety goggles and heat-resistant gloves, sleeves, and face masks when handling heated materials.

8.2.3 Environmental Exposure Controls:

- Avoid wind or airborne dispersal.

8.2.4 Emergency Response:

- Establish procedures for handling respiratory protection in emergencies.

8.2.5 Regulatory Compliance:

- Comply with local, national, and international regulations governing respiratory protection.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on Basic Physical and Chemical Properties:**

Property	Value
Appearance	Solid, in sheet form
Physical state	Solid
Colour	Beige
Odour	Odorless
pH	6.0-10.0
Water Solubility	No
Flash Point (°C)	Not applicable

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Evaporation Rate	Not determined
Flammability Limits in Air	Not determined
Auto Ignition Temperature	Not determined
Vapour Pressure	Not determined
Liquid Viscosity	Not determined
Freezing/Melting Point	Not determined
Boiling Point	Not determined

9.2 Physical Hazards:

- **Eye Contact:** Particles can scratch the eye surface/lead to physical stimuli.
- **Skin Contact:** Exposure to hot material may cause thermal burns.
- **Ingestion:** At ambient temperatures (-18-38°C), ingestion is not considered dangerous.
- **Inhalation:** Not dangerous in normal industrial use.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

- Not classified as a reactivity hazard.

10.2 Chemical Stability:

- Stable under recommended handling and storage conditions.

10.3 Possibility of Hazardous Reactions:

- Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to Avoid:

- Avoid direct sunlight, high temperatures, and strong oxidizers.

10.5 Incompatible Materials:

- Strong oxidizing agents, alkalis, and acids.

10.6 Hazardous Decomposition Products:

- Thermal decomposition can produce toxic gases, including hydrogen fluoride (HF) and other fluorinated hydrocarbons.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:

11.1.1 Acute Toxicity:

- **Inhalation:** Inhalation of decomposition products may cause health problems, including irritation of the respiratory tract and lungs.
- **Ingestion:** Ingestion of small amounts during normal industrial handling is not expected to cause adverse health effects.
- **Skin Contact:** No adverse effects expected during normal use. However, contact with hot material may cause thermal burns.
- **Eye Contact:** Particles may cause mechanical irritation.

11.1.2 Chronic Toxicity:

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- No chronic health effects are expected from the normal handling of this material.

11.1.3 Respiratory or Skin Sensitization:

- This product is not expected to cause respiratory or skin sensitization.

11.1.4 Carcinogenicity:

- This product is not classified as a carcinogen.

11.1.5 Reproductive Toxicity:

- No reproductive toxicity is expected.

11.1.6 STOT-Single Exposure:

- No data available.

11.1.7 STOT-Repeated Exposure:

- No data available.

11.1.8 Aspiration Hazard:

- No data available.

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity:**

- Not expected to be toxic to aquatic life.

12.2 Persistence and Degradability:

- This product is not readily biodegradable.

12.3 Bioaccumulative Potential:

- Bioaccumulation is not expected due to the high molecular weight of the material.

12.4 Mobility in Soil:

- The product is not expected to be mobile in soil due to its solid form.

12.5 Results of PBT and vPvB Assessment:

- This product is not classified as persistent, bioaccumulative, and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

12.6 Other Adverse Effects:

- No known significant effects or critical hazards.

SECTION 13: DISPOSAL CONSIDERATIONS**13.1 Waste Treatment Methods:****13.1.1 Product Disposal:**

- Consider recycling options whenever possible. Waste material should be disposed of in accordance with local, regional, and national regulations. Do not incinerate unless the incinerator is suitable for the disposal of fluorinated materials.

13.1.2 Packaging Disposal:

- Dispose of packaging in accordance with local, regional, and national regulations. Recycling is encouraged where possible.

13.1.3 Special Precautions:

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- Avoid creating dust during disposal.

SECTION 14: TRANSPORT INFORMATION**14.1 UN Number:**

- Not applicable.

14.2 UN Proper Shipping Name:

- Not applicable.

14.3 Transport Hazard Class:

- Not applicable.

14.4 Packing Group:

- Not applicable.

14.5 Environmental Hazards:

- Not classified as environmentally hazardous.

14.6 Special Precautions for User:

- Avoid transporting with oxidizing materials. Protect from physical damage, heat, and sunlight.

14.7 Transport in Bulk According to Annex II of MARPOL and the IBC Code:

- Not applicable.

SECTION 15: REGULATORY INFORMATION**15.1 Safety, Health, and Environmental Regulations Specific for the Substance or Mixture:****15.1.1 National Regulations:**

- Comply with national regulations governing the handling and disposal of chemicals.

15.1.2 International Regulations:

- Comply with international agreements and regulations applicable to the transport, handling, and disposal of chemical products.

15.2 Chemical Safety Assessment:

- A chemical safety assessment has not been carried out for this product.

SECTION 16: OTHER INFORMATION**16.1 Indication of Changes:**

- This version has been updated to reflect changes in the product name and composition, including the removal of previous ingredients and the identification of the product as FFKM-R-2275UP. The document has been revised to include new information on the product's physical and chemical properties, handling and storage recommendations, and environmental impact.

16.2 Abbreviations and Acronyms:

- **PBT:** Persistent, Bioaccumulative, and Toxic.
- **vPvB:** Very Persistent and Very Bioaccumulative.
- **STOT:** Specific Target Organ Toxicity.

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- **UN:** United Nations.
- **CAS:** Chemical Abstracts Service.
- **MARPOL:** International Convention for the Prevention of Pollution from Ships.
- **IBC Code:** International Bulk Chemical Code.

16.3 Key References:

- Internal data and product specifications provided by Maxmold Polymer Co., Ltd.
- Regulatory guidelines and chemical safety databases.

16.4 Disclaimer:

- The information contained in this document is provided in good faith and is based on current knowledge as of the date of publication. It is intended to describe the product for health, safety, and environmental purposes only. No warranty or representation is made as to its accuracy or completeness. Users are responsible for ensuring that they have all necessary information to meet their requirements.

16.5 Date of Issue:

- 2023/11/16

16.6 Review Date:

- 2024/11/19

16.7 Revision:

- 2024/8/7

16.8 Prepared by:

- Hank Fan

16.9 Additional Information:

- This MSDS summarizes to our best knowledge the health and safety hazards information of the product and how to safely handle and use the product in the workplace. The information contained herein is offered in good faith, but no warranty, expressed or implied, is made. Consult our team for further assistance.

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