FKR-2275 SAFETY DATASHEET

SECTION 1 IDENTIFICATION OF SUBSTANCE

1.1 Product Identifier:

Identification on the label/ Trade name: FKR-2275 Series - Recycled FKM

1.2 Relevant Identified uses of the substance and uses advised against:

1.2.1 Identified uses:

Recycled FKM sheets use as filler for blending with FKM virgin rubber compounds to maintain same performance.

1.2.2 Uses advised against:

Other elastomer rather than bisphenol-cured FKM, e.g., peroxide-cured FKM, EPDM etc.

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.

2.2 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.
- 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 in question is Recycled FKM, specifically engineered for blending with FKM rubber compounds to ensure consistent performance.

The decision to include additional fillers or crosslinkers is left to your discretion and should be assessed based on your or customer's specific requirements.

3.2 Ingredients:

FKR-2275 is derived from a blend of authentic FKM waste, such as sprue, runners, flash, and scraps. After undergoing the recycling process, they become perfectly suitable for use in FKM rubber compounds.

FKR-2275

Chemical Description	CAS NO.	Amount
Fluorogum FKM	-	67.3%
Carbon Black N	1333-86-4	17%
Carbon Black MT	1333-86-4	6.7%
Calcium hydroxide	1305-62-0	3.8%
Magnesium oxide	1309-48-4	2.95%
Carnauba wax	8015-86-9	2.25%

KM-FOR-0926-01-A/0

SECTION 4 FIRST-AID MEASURES

4.1 Description of first aid measures:

4.1.1 In case of inhalation:

FKR-2275 is provided in sheet form and does not produce easily inhalable small particles. However, if the manufacturing process involves grinding or transforming the product into fine particles, and if inhalation occurs, it is essential to 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. No emergency measures are necessary, but if adverse eye effects follow, refer for medical attention.

4.1.4 In case of ingestion:

Do not induce vomiting. No emergency measures are necessary, but if adverse health effects follow, refer for medical attention.

4.2 Most important symptoms and effect, both acute and delayed:

4.2.1 Respiratory Irritation:

Inhalation of airborne particles from FKR-2275 may cause respiratory irritation, leading to symptoms such as coughing, sneezing, or difficulty in breathing.

4.2.2 Delayed Effects:

Allergic Reactions: In some cases, exposure to FKR-2275 may lead to delayed allergic reactions in individuals who are hypersensitive to FKM compounds. This could include skin rashes, itching, or other allergic symptoms.

It's important to note that FKM recycled rubber sheets are generally considered safe when handled properly. However, individuals with known sensitivities to FKM materials should take precautions to minimize exposure and use personal protective equipment if necessary. If you experience any adverse symptoms, it's advisable to seek medical attention for proper evaluation and guidance.

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 (>230°C), it can ignite. In the event of thermal decomposition, there is a possibility of releasing flammable or toxic gases. Combustion of this material can generate toxic gases. Combustion may produce a pungent odor and smoke that can lead to fire hazards and eye irritation.

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. Water can be used to cool fire exposed containers.

5.3 Specific Hazards arising from the substance or mixture:

Toxic by-products, including Hydrogen fluoride and toxic fluorocarbon olefins, may be found above 205°C and during combustion.

5.4 Advice for firefighting measures:

Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. 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 Product of combustion:

When lack of oxygen, may produce carbon monoxide (CO) and irritating fumes.

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 that personnel wear suitable PPE, including gloves and safety goggles, to protect against potential exposure.

6.2 Environmental precautions:

Consider recycling and sustainable practices for managing FKR-2275 waste. FKR-2275 is designed to be recycled again in an infinite cycle, so explore options for reusing or recycling the material rather than discarding it.

6.3 Methods of containment and cleaning up:

Use appropriate barriers or absorbent materials to encircle and isolate the spilled material.

Carefully pick up and collect the material using non-sparking tools or equipment.

Place the collected material into appropriate containers, ensuring proper labeling.

Avoid creating dust or airborne particles during cleanup.

6.4 Reference to other sections:

See Section 7 for information on safe handling.

See Section 8 for information on personal protective equipment.

See Section 13 for information on disposal.

SECTION 7 HANDLING AND STORAGE

7.1 Precautions for safe handling:

Precautions should be taken to maintain safe handling practices for FKR-2275, which is in sheet form. Adhering to good housekeeping standards and ensuring the regular, safe removal of waste materials will minimize risks related to spontaneous combustion and other fire hazards. The use of standard hand and eye protection remains advisable, especially in cases involving manual handling.

Please be aware of any regulations, including the *Occupational Safety and Health Act* that may apply to the handling of containers of this product, and refer to the guide weight indicated on the container when conducting assessments.

It's important to follow all relevant safety regulations and guidelines specific to your product to ensure safe handling and storage practices.

7.2 Conditions for safe storage, including any incompatibilities:

Store in a dry place and avoid sources of heat or ignition. Suggested to store below 38°C.

7.3 Specific end use(s):

Please contact our team for advice on specific end uses or applications.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Thus far, national critical values are yet to be formally established.

8.2 Exposure controls:

8.2.1 Appropriate engineering controls:

Implement engineering controls, such as local exhaust ventilation systems, to minimize airborne dust or particles that could be inhaled.

8.2.2 Individual protection measures:

Due to potential exposure to ambient temperatures ranging from -18°C to 38°C (0°F to 100°F) in open systems, it is advisable to wear safety goggles. When handling heated materials, it is essential to use heat-resistant gloves, sleeves, and face masks for personal protection.

8.2.3 Environmental exposure controls:

Avoid wind or airborne dispersal.

8.2.4 Emergency Response: Establish procedures for handling respiratory protection in emergency situations and ensure that employees are aware of them.

8.2.5 Regulatory Compliance: Comply with local, national, and international regulations. governing respiratory protection, such as OSHA (Occupational Safety and Health Administration) standards.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance: Solid, in sheet form

Physical state: Solid

Colour: Customizable, typically in Black or Brown.

Oduor: Odorless

pH: 6.0~10.0

Water Solubility: No

Flash point (°C): >230°C

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: Particle will scratch the eye surface/lead to physical stimuli.

Skin Contact: In normal industrial use is not dangerous, exposed to the hot material may cause

thermal burns.

Ingestion: When the ambient temperature as follows, can ignore the danger (-18-38°C / 0-100°F)

Inhalation: In normal industrial use is not dangerous.

SECTION 10 STABILITY AND REACTIVITY

10.1 Reactivity:

Inert.

10.2 Chemical stability:

Stable under recommended storage and handling conditions. Store below 38°C.

10.3 Possibility of hazardous reactions:

Avoid strong oxidizing agents.

10.4 Materials and Conditions to avoid:

Unless oxygen is completely eliminated from the storage area or additional antioxidants are introduced into the rubber compound, it is strongly recommended not to exceed a temperature of 230°C during heating. Exceeding this temperature threshold may result in decomposition of the product.

10.5 Incompatible materials:

Strong oxidizing agents, strongly alkaline materials, Aluminum and Magnesium.

10.6 Hazardous decomposition products:

Flammable hydrocarbons, Hydrogen fluoride, Reference product identification section can require access highly toxic data.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Acute Toxicity:

FKR-2275 is not typically associated with acute toxicity when used as intended. It is not expected to cause immediate harm upon contact or ingestion.

11.2 Chronic Toxicity:

Prolonged or repeated exposure through skin contacts or inhalation of dust or fumes is not known to cause chronic toxicity. However, good industrial hygiene and safety practices should always be observed.

11.3 Irritation:

Not expected to cause skin or eye irritation. It is generally considered non-irritating.

11.4 Sensitization:

It is not known to be a skin sensitizing agent.

11.5 Carcinogenicity:

There is no evidence to suggest that FKR-2275 is carcinogenic.

11.6 Reproductive Toxicity:

There is no evidence to suggest reproductive toxicity is associated.

11.7 Mutagenicity:

Not considered mutagenic.

11.8 Toxicological Effects of Overexposure:

Prolonged exposure to high temperatures or thermal decomposition products may result in the release of potentially toxic gases. It is important to avoid such overexposure.

SECTION 12 ECOLOGICAL INFORMATION

Fluorine and its compounds, when released into the environment, can exhibit varying degrees of ecotoxicity. The introduction of new FKM materials into ecosystems can contribute to the accumulation of these substances, potentially resulting in adverse effects on aquatic and terrestrial life. However, the recycling process employed for FKM materials, such as FKR-2275, offers a more environmentally sustainable approach, thereby mitigating the ecotoxicity associated with the manufacturing of new FKM materials.

The recycling of FKM waste into FKR-2275 significantly reduces the necessity for continuous production of new FKM materials. This reduction in the production of new FKM materials yields several ecological benefits:

12.1 Reduced Resource Extraction:

Recycling minimizes the need for raw material extraction and processing, decreasing the environmental impact associated with resource extraction.

12.2 Lower Energy Consumption:

The manufacturing of new FKM materials often requires significant energy input. By recycling FKM materials into FKR-2275, energy consumption is reduced, leading to lower greenhouse gas emissions.

12.3 Minimized Waste Generation:

Recycling FKM waste helps in the management of waste materials, preventing their release into ecosystems.

12.4 Diminished Ecotoxicity:

By decreasing the production of new FKM materials, the release of potentially ecotoxic substances into ecosystems is reduced, promoting the overall health of aquatic and terrestrial environments.

Overall, the recycling of FKM materials, as exemplified by FKR-2275, represents a sustainable and ecologically responsible approach to the use of fluorine-based materials, contributing to the preservation of natural ecosystems and reduced ecotoxicity.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

The authentic FKM waste, such as trims, sprue, runners, flash, and scraps could be sold back to us for recycling, creating the sustainable recycle process for the manufactures.

Transport to authorized waste location or incinerate under controlled conditions.

Comply with all the provisions made by the executive branch.

13.2 Product/ Packaging disposal:

Comply with all the provisions made by the executive branch.

SECTION 14 TRANSPORT INFORMATION

14.1 Transport Classification:

Non-hazardous

14.2 UN Number:

Not classified.

14.3 Packaging Specifications:

FKR-2275 is typically packaged in sturdy containers to ensure the safe transport of the product.

14.4 Transport Markings:

No special transport markings are required, as FKR-2275 falls under the category of non-hazardous materials.

14.5 Transport Documents:

In international transport, relevant transport documents such as a bill of lading and transport contracts may be required. Ensure compliance with import regulations of the destination country/region.

14.6 Special Precautions:

When transporting, ensure that the packaging is intact to prevent leakage or damage. Avoid contact with moisture or humidity to maintain product quality.

14.7 Transport Considerations:

Adhere to international and local regulations, including those related to the transport of goods and hazardous materials, where applicable. Ensure the safety and compliance of the product during the transport process.

SECTION 15 REGULATORY INFORMATION

15.1 Safety, health, and environmental regulations/legislation specific for the substance or mixture:

Not available.

15.2 Chemical safety assessment:

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16 OTHER INFORMATION

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Other Information

The information provided pertains specifically to the designated special materials and may not be applicable when these materials are processed with other substances or mixtures. While we have made every effort to provide the most reliable and accurate information available, we cannot guarantee or warrant the accuracy, reliability, or completeness of the content. Users are responsible for ensuring the suitability and applicability of the information to their specific needs and purposes. We disclaim any responsibility for losses or damages that may occur as a result of using the information provided and do not assume any warranties for violations.

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