# Haiflon® FKM Terpolymer Gum HF-24603

CAS No.: 64706-30-5 · VDF / HFP / TFE terpolymer gum (type 246)

Haiflon® FKM terpolymer gum (type 246) is a high-performance fluoroelastomer composed of vinylidene fluoride (VDF), hexafluoropropylene (HFP) and tetrafluoroethylene (TFE), combining the elasticity of VDF, the chemical resistance of HFP and the enhanced fluid and heat resistance of TFE. With a typical fluorine content of 69%, it offers superior chemical resistance to dipolymer types, long-term performance at high temperatures, low fuel and gas permeability, and excellent durability against ozone, radiation and atmospheric aging.

## Key Performance Features

- **Excellent resistance to fuel penetration and low gas permeability**
- **Superior chemical stability; resistant to most organic/inorganic solvents and chemicals**
- **Outstanding long-term performance at high temperatures (250 °C continuous, 300 °C short-term)**
- **Not recommended for low-molecular-weight ketones, ethers, esters or certain amines**

## Quality Specification

| Item | Specification |
|---|---|
| Appearance | White or light-yellow flake |
| Fluorine content, % | 69 |
| Specific gravity, g/cm³ | 1.84 – 1.88 |
| Mooney viscosity, ML 1+10 (121 °C) | 41 – 60 |
| Tensile strength after press cure (177 °C × 10 min), MPa ≥ | 9 |
| Tensile strength after post cure (230 °C × 24 h), MPa ≥ | 10 |
| Elongation at break after press cure, % | 200 |
| Elongation at break after post cure, % | 180 |
| Oil resistance — 4109 bisphenol oil, 180 °C × 24 h, % | 6 |
| Oil resistance — RP-3 fuel, 200 °C × 24 h, weight gain, % ≤ | 7 |
| Water content, % ≤ | 0.15 |

## Typical Applications

- **Gaskets, seals, O-rings and V-rings for automotive fuel systems and aerospace engines**
- **Skeleton oil seals, diaphragms and hoses in petrochemical processing**
- **Cable sheathing, insulation cloth, valve liners, expansion joints, rollers and coatings**
- **Room-temperature vulcanizing (RTV) putties**
- **Suitable for aerospace, automotive, oil & gas, chemical processing and semiconductor industries**

## Processing Guidelines

Haiflon FKM terpolymer gum is compounded on internal mixers or two-roll mills with fillers, process aids and the cure system. Keep the compound well cooled during mixing and cool it as quickly as possible afterwards. Reference cure for property testing: press cure 10 min at 177 °C, post cure 24 h at 230 °C.

## Safety Precautions

- **FKM gum has good thermal stability below 260 °C; prolonged exposure at 260 – 300 °C causes slight decomposition, and above 320 °C**
- **releasing toxic HF and fluorocarbon compounds; burning releases toxic HF as well.**
- **Do not compound FKM with metal powders (e.g. Al, Mg) or amine compounds above 10% — temperature rise and reaction may dama**
- **operators.**
- **Store and handle in a well ventilated place; avoid eye contact; wash contacted skin and clothing after handling.**
- **Further safety information can be found in the product's Safety Data Sheet (SDS).**

## Storage & Handling

- **Store in clean, dry, cool conditions, away from direct sunlight and water; keep the package sealed.**
- **Shelf life is one year from the production date; product exceeding the shelf life may still be used after re-testing and approval.**
- **Transport as a non-hazardous chemical; avoid contamination.**

## Packing

Packed in PE bags, then in cardboard cartons; net weight 20 kg per carton. · Custom packing is available on request.

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