



» PRODUCT BULLETIN

OnFlex™ NHFR Non-Halogen Flame Retardant Thermoplastic Elastomers

OnFlex™ NHFR TPEs are non-halogenated flame retardant thermoplastic elastomers designed for superior fire performance and safety. These innovative materials offer excellent flexibility, low moisture absorption, and enhanced durability. They are ideal for applications that require stringent fire safety standards, such as automotive, electronics, and construction industries. OnFlex NHFR TPEs meet critical specifications, including UL 94 V-0. The formulation with non-halogenated flame retardants ensures compliance with environmental regulations and reduces smoke gas toxicity and density during combustion, making this technology a safer choice.

KEY CHARACTERISTICS

- Density: 1.13 to 1.15 g/cc
- Hardness: 52 to 92 Shore A
- Mechanical Properties:
 - Elongation at Break: 300% to 340% (parallel), 640% to 750% (perpendicular)
 - Tensile Strength at Break: 1.7 MPa to 6.1 MPa (parallel), 2.6 MPa to 8.4 MPa (perpendicular)

- Flame Characteristics: Achieves a UL94 V-0 rating at 1.6 mm and 3.0 mm thicknesses, with a Glow Wire Flammability Index (GWFI) of 960°C
- Non-halogenated formulations reduce smoke gas toxicity and density
- Fully compliant with REACH and RoHS standards, ensuring global market acceptance
- Provides a non-halogen alternative in markets increasingly moving away from halogenated solutions due to regulatory pressures

MARKETS & APPLICATIONS

This material can be used in industries such as:

- Automotive
- Electronics
- Building and Construction
- Consumer Appliances

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