

Product: Genflam® OH-R
Gendon Code: 2617 (Black)



Revision Date: Dec 17, 2019

Genflam® OH-R thermoplastic flame retardant low smoke zero halogen (LSZH) sheathing compound have been designed specifically for use as an outer covering for armoured cable. This material has been designed to provide the wire and cable industry with a jacketing material made specifically for both indoor and outdoor applications. This unique formulation provides a good balance of physical, chemical and low temperature properties for superior performance in demanding applications. The material has also been designed for ease of processing, allowing for maximum extruder outputs while minimizing manufacturing costs.

Key Features:

- High flame retardancy
- Excellent processing
- No heavy metals or halogens
- High Resistance to Scuffing
- UV stabilized
- RoHS and REACH compliant

Physical Properties:

Density:	1.51 g/cm ³		
Tensile:	2000 psi (typical)		
Elongation:	200% (typical)		
Tear:	40 lbf/in (typical)		
Durometer:	95 Shore A		
Low Temp. Brittle Point:	-53°C		
Deformation, 2000g:	49.0%@121°C	32.2%@100°C	7.5%@90°C

Combustion Properties:

Limited Oxygen Index (LOI):	39%		
Acid Gas:	0.2%		
Smoke Index (ASTM E662):	D _{s4}	D _{m20}	
• Flaming	0	101	
• Non-Flaming	15	416	
Cone Calorimeter (ASTM E1354):			
• Time to Ignition (s)	51		
• Peak Heat Release (kW/m ²)	190		
• Time to Peak Heat Release (s)	275		
• Total Smoke Release (m ² /m ²)	471		

Heat Aging:

	7d@100°C	7d@121°C	10d@110°C	30d@110°C	70d@110°C
Tensile Retention	103%	98%	108%	100%	106%
Elongation Retention	88%	76%	91%	80%	76%

Fluid Resistance:

	IRM 902 – 4h@70°C	Diesel – 24h@25°C	IPA – 24h@23°C
Tensile Retention	73%	56%	99%
Elongation Retention	97%	62%	102%

Weathering:

	<u>720 Hours under QUV Testing</u>
Tensile Retention	101%
Elongation Retention	87%

Suggested Running Conditions:

Extruder L/D:	20:1 or 24:1	Comp. Ratio:	1.25:1	Screen Pack:	20 Mesh or none
Screw Type:	Single Flight metering, without mixing section				
Feed Zone:	250°F	Center Zone:	300-340°F	Head/Die:	340°F
Screw Cooling:	165°F	Die Cooling:	Not recommended		
Gradient Cooling:	Not recommended	Color Concentrate:	EVA Binder preferred		

Processing Techniques:

The Genflam OH-R jacket has been formulated to process easily on standard extruders used in the production of wire and cable products. This material is designed to process similar to elastomeric compounds, attaining maximum output levels at relatively low shear rates. Care should be taken to ensure that screw compression ratio levels are below 1.5:1, and flow restrictions in the crosshead are kept to a minimum. Melt temperature values above 370°F (185°C) should be avoided.

The material can be extruded using either pressure or sleeving techniques. For generation of optimum physical properties, a draw down ratio of 1.25:1 can be used.

All materials are supplied as free flowing pellets, packaged in sealed foil lined boxes and do not need to be dried prior to use. It is recommended that the foil liners be resealed after use to prevent outside contamination or water absorption during storage. If the material has been exposed to a high humidity environment, or the foil liner has not been sealed, it is recommended the material be dried for a minimum of 4 hours at 140°F (60°C) in a standard desiccant style dryer prior to use.
