



ROGER TECHNOLOGIES LIMITED

TECHNICAL DATA SHEET

Halogen Free Low Smoke Flame Retardant Compound

(HFFR/ZHFR/LSZH)

Product Description: R-ZHFR-3305 is a thermoplastic RoHS Compliance, Halogen Free, Flame Retardant, UV resistance Low Smoke, moisture resistance (HFFR/LSZH) cable compound. It combines low smoke density with very good flame retardancy. The compound is based on Non-toxic and Non corrosive elements and it has excellent mechanical & electrical properties.

Specifications: The cables manufactured with R-ZHFR-3305 is meets the following specifications;

* IEC 332-1 / IEC 332-2, * BS 7655: Section 6.1, * VDE 0207 PART 24 HM2 & HM4, * EN 50363-7:2005, * 3m³ smoke density chamber test to IEC 61034-2, BS EN 50290-2-27 for type HM2 and HD 604 for type HM4 & GR TEC 89010:2021

Applications : R-ZHFR-3305 is intended for Sheathing of Power cables up to 40 mm cable outer diameter, data cable & Optical fiber Cables . It can also be used in areas to low smoke / low corrosive and low toxic combustion products.

Technical Parameters :

Sr. no.	Parameter	Test Method	Unit	Typical Value
01	Density	ASTM D 792	gm/cc	1.48
02	Melt Flow Index (160°C/21.6 kg)	ASTM D 1238	gm/10 minute	> 5
03	Tensile Strength at Break	ASTM D 638	Mpa	12
04	Elongation at Break	ASTM D 638	%	200
05	Tear Strength	BS 6469	N/mm	8
06	Tensile Strength after ageing for 7 days at 100°C	ASTM D 638	%	<20
07	Elongation after ageing for 7 days at 100°C	ASTM D 638	%	<20
08	Hardness	ASTM D 2240	Shore-D	51
09	Limiting Oxygen Index (LOI)	ASTM D 2863	%	33
10	Temperature Index	ASTM D 2863	°C	>280
11	Smoke Density	ASTM D 2843	%	<10
12	HCl gas generation	IEC 60754-1	%	Nil
13	pH	IEC 60754-2	pH	> 5
14	Conductivity	IEC 60754-2	Micro s/mm	<7
15	Pressure test at 90°C @ 4 hrs	IEC 60881-3-1	%	23

***Mechanical properties on 1 mm extruded tape**



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Colorability:

R-ZHFR-3305 is available in natural color, but it is a colorable compound with EVA/PE base colour master batch.

Shipment:

R-ZHFR-3305 is supplied in the form of free-flowing granules in 25 kg moisture proof poly bags.

Processing Guidelines:

- R-ZHFR-3305 can be processed using low C/R screw instead of regular PE screw extruder. The actual temperature profile for extrusion will depend on the machine characteristics but the following can be taken as a guideline; Temperature Profile: 135-145-155-160-165° C
- To obtain smooth and glossy cable surface, it is recommended for pre-drying at 70°C for 2 to 4 hours.

Storage and Handling:

- The material should be stored to prevent a direct exposure to sunlight and/or heat.
- The storage area should also be dry and preferably don't exceed 50°C. RTL would not give warranty to bad storage conditions which may lead to quality deterioration such as color change, bad smell and inadequate product performance.

It is advisable to process goods within 1 year after manufacturing.