

# **RAVASAFE®**



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## **Ravasafe® ZH TPU 85A R112M EV**

**Description:** Halogen free flame retardant polyether based thermoplastic polyurethane having outstanding UV and hydrolysis resistance, excellent mechanical properties, low temperature flexibility, and high resistance to micro-organisms designed for cable jacketing applications.

**Application:** Wire & Cable, EV Charging Cables

### **Typical Properties**

PROPERTIES	TEST METHOD	UNITS	VALUES
Hardness	ISO 868	Shore A	87
Density	ISO 1183-1 A	g/cm <sup>3</sup>	1.12
100% modulus	ISO 37	MPa	6.15
300% modulus	ISO 37	MPa	10.20
Tensile strength	ISO 37	MPa	35
Elongation at break	ISO 37	%	680
Tear strength	ISO 34-1 B/b	N/mm	95
Abrasion Resistance	ISO 4649	mm <sup>3</sup>	50
Charpy Impact Strength (-40°C - Notched)	ISO 179/1A	kJ/m <sup>2</sup>	No Break
Flammability	UL94	-	V2 (1.6 mm)
Limiting Oxygen Index	ISO 4589-2	%	23

Properties have been tested on injection molded plaques conditioned 24 hours at room temperature before testing.

## Aging Results

<b>1 week 110°C Thermal Aging</b>	<i>% Change in Tensile Strength at Break</i>	-4.5
	<i>% Change in Elongation at Break</i>	19.7
<b>1 week 121°C Thermal Aging</b>	<i>% Change in Tensile Strength at Break</i>	-19.5
	<i>% Change in Elongation at Break</i>	21.3
<b>1 week 136°C Thermal Aging</b>	<i>% Change in Tensile Strength at Break</i>	-26.5
	<i>% Change in Elongation at Break</i>	-18.6
<b>1 week 100°C Oil (IRM 902) Aging</b>	<i>% Change in Tensile Strength at Break</i>	-7.1
	<i>% Change in Elongation at Break</i>	6.9
<b>42 Days 80°C Water Aging</b>	<i>% Change in Tensile Strength at Break</i>	-23.5
	<i>% Change in Elongation at Break</i>	-2.1

Properties have been tested on extruded tapes conditioned 24 hours at room temperature before testing following ISO 37-DIN 53504 standards

Before processing, the pellets have to be dried at 80-90 °C for 2-4 hours. Maximum moisture content should be below 0.02%.

### Application Guideline (Extrusion)

Nozzle (°C)	Zone 3 (°C)	Zone 2 (°C)	Zone 1 (°C)
185-205	195-215	195-215	185-205

**Disclaimer:** The information provided here is for reference only. We request that customers test our products in their application. We guarantee that our products will meet our written specifications. The customers are welcome to contact our customer and our technical service department in case of question about our products.



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