

SABIC® VESTOLEN A RELY 5923R 10000 BLACK

HIGH DENSITY POLYETHYLENE

DESCRIPTION

SABIC® Vestolen A RELY 5923R 10000 is a grade which has a high density and a bimodal distribution of the molecular mass. Due to the extra low sag characteristics of this material it may be used for the production of thick walled (large diameter and low SDR) pipes for infrastructure and industrial applications and shows favorable processing behaviour. The grade is typically used for gas and drinking water piping. This material meets (inter)national standards for use in gas, drinking water and waste water piping. MRS class ISO 12162 MPa = 10.0 (PE 100).

This product is not intended for and must not be used in any pharmaceutical/medical applications.

TYPICAL PROPERTY VALUES

Revision 20260216

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Colour	Black	-	-
RAL number	9004	-	-
Melt Flow Rate (MFR)			
at 190 °C and 5 kg	0.2	dg/min	ISO 1133
Carbon black content	2.25	%	ISO 6964
Density	959	kg/m³	ISO 1183
MECHANICAL PROPERTIES			
Tensile test ^{(1) (2)}			
stress at yield	24	MPa	ISO 527-2
strain at yield	9	%	ISO 527-2
tensile modulus	1100	MPa	ISO 527-2
Charpy Impact Strength Notched			
at 23 °C	26	kJ/m²	ISO 179/1eA
at -30 °C	10	kJ/m²	ISO 179/1eA
Hardness Shore D	62	-	ISO 868
MRS classification	10	MPa	ISO 12162
OIT 210 °C	>20	Minutes	ISO 11357-6
THERMAL PROPERTIES			
Heat deflection temperature ⁽³⁾			
at 0.45 MPa (HDT/B)	45	°C	ISO 75-2
Vicat Softening Temperature			
at 10 N (VST/A)	72	°C	ISO 306
DSC test			
melting point	124 – 128	°C	DIN 53765

(1) Test specimen according to ISO 527-2 type 1BA, thickness 2 mm

(2) Speed of testing: 50 mm/min

(3) Conditioning of test specimen: temp. 23 °C, relative humidity 50 %, 24 hours

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CHEMISTRY THAT MATTERS™



STORAGE AND HANDLING

Polyethylenes resins (in pelletised or powder form) should be stored in such a way that it prevents exposure to direct sunlight and/or heat, as this may lead to quality deterioration. The storage location should also be dry, dust free and the ambient temperature should not exceed 50 °C. Not complying with these precautionary measures can lead to a degradation of the product which can result in colour changes, bad smell and inadequate product performance. It is also advisable to process polyethylene resins (in pelletised or powder form) within 6 months after delivery, this because also excessive aging of polyethylene can lead to a deterioration in quality.

ENVIRONMENT AND RECYCLING

The environmental aspects of any packaging material do not only imply waste issues but have to be considered in relation with the use of natural resources, the preservations of foodstuffs, etc. SABIC considers polyethylene to be an environmentally efficient packaging material. Its low specific energy consumption and insignificant emissions to air and water designate polyethylene as the ecological alternative in comparison with the traditional packaging materials. Recycling of packaging materials is supported by SABIC whenever ecological and social benefits are achieved and where a social infrastructure for selective collecting and sorting of packaging is fostered. Whenever 'thermal' recycling of packaging (i.e. incineration with energy recovery) is carried out, polyethylene -with its fairly simple molecular structure and low amount of additives- is considered to be a trouble-free fuel.

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