



SABIC® Vestolen A 6060R 10000

High density polyethylene for Pipe extrusion

Description.

SABIC® Vestolen A 6060R 10000 (black) is a grade which has a high density and a bimodal distribution of the molecular mass. Due to an improved profile of properties this material offers additional security when used for gas and drinking water piping. The material is further characterised by a significantly higher resistance to long-term loading and has a very high resistance to rapid crack propagation. Owing to a special stabilisation package, good organoleptic properties are ensured with grade 6060R 10000. 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).

The product mentioned herein is in particular not tested and therefore not validated for use in pharmaceutical/ medical applications.

Typical data.

Revision 20100303

Properties	Units SI	Values	Test methods
Polymer properties			
Colour	-	Black	-
RAL number	-	9004	-
Melt flow rate (MFR)			ISO 1133
at 190 °C and 2.16 kg	g/10 min	0.1	
at 190 °C and 5 kg	g/10 min	0.3	
Carbon black content	%	2.25	ISO 6964
Density	kg/m ³	959	ISO 1183
Mechanical properties			
Tensile test			ISO 527-2
stress at yield	MPa	24	
strain at yield	%	9	
tensile modulus	MPa	1050	
Charpy impact notched			ISO 179/1eA
at 23 °C	kJ/m ²	23	
at -30 °C	kJ/m ²	9.2	
Hardness Shore D	-	59	ISO 868
MRS classification	MPa	10	ISO 12162
OIT 210 °C	min	> 20	EN 728
Thermal properties			
Heat deflection temperature			ISO 75-2
at 1.80 MPa (HDT/A)	°C	43	
at 0.45 MPa (HDT/B)	°C	72	
Vicat softening temperature			ISO 306
at 50 N (VST/B)	°C	71	
DSC test			DIN 53765
melting point	°C	124 - 128	

1) Compression moulding conditions of test specimen (according to ISO 293) :
moulding temp: 160 °C, cooling rate: 40 °C/min
2) Conditioning of test specimen: temp, 23 °C, relative humidity 50 %, 24 hours
3) Speed of testing: 50 mm/min
4) Test specimen according to ISO 527-2 type 1BA, thickness 2 mm



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General information.

These products are produced in a Zielger-Natta slurry process, which is operated as a cascade. A particular characteristic of the SABIC® Vestolen A pipe products is their bimodal molecular weight distribution, which enables to gain higher long-term strength. Moreover besides the production of PE 80 it is possible to produce a PE 100 with this kind of distribution.

SABIC® Vestolen A pipe grades especially have been designed for the high requirements of pressure pipes. Depending on their specific profile they are suited for the extrusion of pressure pipes for water, gas and sewage, for helically wound pipes and containers and for sheets.

The product complies with the requirements of the European standards EN 1555-1 and EN 12201-1.

Health, Safety and Food Contact regulations. Detailed information is provided in the relevant Material Safety Datasheet and or Standard Food Declaration, available on the Internet (www.SABIC-europe.com). Additional specific information can be requested via your local Sales Office.

Quality. SABIC Europe is fully certified in accordance with the internationally accepted quality standard ISO 9001-2000. It is SABIC Europe's policy to supply materials that meet customers specifications and needs and to keep up its reputation as a pre-eminent, reliable supplier of e.g. polyethylenes.

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 Europe 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 Europe 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.

Disclaimer. The information contained herein may include typical properties of our products or their typical performances when used in certain typical applications. Actual properties of our products, in particular when used in conjunction with any third party material(s) or for any non-typical applications, may differ from typical properties.

It is the customer's responsibility to inspect and test our product(s) in order to satisfy itself as to the suitability of the product(s) for its and its customers particular purposes. The customer is responsible for the appropriate, safe and legal use, processing and handling of all product(s) purchased from us.

Nothing herein is intended to be nor shall it constitute a warranty whatsoever, in particular, warranty of merchantability or fitness for a particular purpose.

SABIC Europe as referred to herein means any legal entity belonging to the SABIC Europe group of companies.