K0011 Europe / Africa August 2004	Kraton® D-1186 polymer	Data Document

Description

Kraton® D-1186 polymer is a clear branched block copolymer based on styrene and butadiene, with bound styrene of 30% mass. It is supplied from Europe in three physical forms, identified as follows in the grade nomenclature:

- D-1186CS supplied as porous pellets dusted with an amorphous silica
- D-1186CM supplied as powder dusted with an amorphous silica
- D-1186AF / EF supplied as "fluffy" crumb dusted with an amorphous silica

Kraton D-1186 polymer is used as a modifier of bitumen in roofing felt coating compounds, roads and pipe coating. It may also be suitable for use in formulating adhesives, sealants and coatings and in the modification of polymers.

Sales Specifications

Property	Test Method	Units	Sales Specification Range
Bound styrene	KM03	%mass	29 - 31
Volatile matter	KM04	%mass	0.3 max. (S,M) 0.5 max. (F)
Ash	ISO 247-B	%mass	0.4 max. (S) 2.5 - 5.0 (M) 1.0 max. (F)
Total extractables	KM05	%mass	1.4 max.
Solution viscosity [a]	KM06	Pa.s	1.00 - 1.40
Antioxidant content [b]	KM08	%mass	0.14% min.

[a] 15%w toluene solution at 25°C

[b] Only refers to primary antioxidant content

Typical Properties (These are typical values and may not routinely be measured on finished product)

Property	Test Method	Units	Typical Value
Melt flow rate 200°C/5kg	ISO 1133	g/10 min	<1
Specific gravity	ISO 2781		0.94
Bulk density	ASTM D1895 method B	Mg/m^3	0.4 (S,M) 0.3 (F)
Hardness	ISO 868	Shore A (30s)	74
Tensile strength	ISO 37	MPa	24
Elongation at break	ISO 37	%	800
300% modulus	ISO 37	%	3.0

Packaging

Kraton Polymers' products are available in a number of different pack types. For information specific to this grade please contact your local Kraton Polymers representative.

End Use Requirements

If the finished article is intended for use in food contact and packaging applications, toys, or human contact areas, manufacturers of the final product should observe all relevant regulations. Some of these regulations require tests to be carried out on the final product, e.g. migration. These are the responsibility of the final product manufacturer.
Information on the food packaging clearances of individual products is available from Kraton Polymers.

Medical, Healthcare and Cosmetic Applications and Trademark Usage

Kraton Polymers products should not be used in any devices or materials intended for implantation in the human body as defined by the U.S. Food and Drug Administration under 21 CFR 812.3(d) and 21 CFR 860.3(d).
Kraton Polymers products may, in certain circumstances, be used in the following products or applications with prior written approval for each specific product or application:
(a) Cosmetics (exclusive of packaging or delivery applications).
(b) Drugs and other Pharmaceuticals (exclusive of packaging or delivery applications).
Kraton Polymers trade names, trademarks, logos or other similar identifying characteristics should not be used in the manufature, sale, or promotion of cosmetics, drugs, and pharmaceutical products or other medical/healthcare applications or materials.
Kraton Polymers has no specific expertise in these markets and applications, and does not intend to perform testing, clinical studies or other investigations of the suitability of its products for specific applications.
Each customer or user of Kraton Polymers products is solely responsible for determining the suitability of the materials it selets for the intended purpose and acknowledges that it has not relied on any representations of Kraton Polymers regarding suitability for use in its intended cosmetics, drugs, pharmaceutical products or materials.
Please contact your Kraton Polymers Sales Representative for more details before using our products in these specific applications.

Safety and Handling Precautions

Read the Safety Data Sheet carefully and thoroughly before beginning any work. Additional information relating to the health, safety, storage, handling and processing of Kraton Polymers products can be found in "Health and Safety Aspects of Kraton D and Kraton G Polymers" (Document K0155), available from your local Sales Representative or the company website. Kraton Polymers also recommends that customers or users consult other sources of safety information, for example, the current edition of the "Code of Practice on the Toxicity and Safe Handling of Rubber Chemicals," British Rubber Manufacturers Association Limited.
Kraton Polymers products and compounds can accumulate electrostatic charges when rubbed, chafed or abraded. Processing and storage equipment for use with Kraton Polymers products should provide a means of dissipating any charges that may develop.
When processing Kraton Polymers products, maintain a fire watch if the material reaches 225°C (437°F) for Kraton IR and Kraton D (polymers and compounds), and 280°C (536°F) for Kraton G (polymers and compounds). The temperatures listed above are indicated only for safety reasons (risk of fire and product degradation) and are not necessarily recommended for processing. Degradation of the polymer (polymer breakdown) will start at lower temperatures depending on the specific processing conditions. Therefore, operating below these temperatures does not guarantee the absence of product degradation.
Kraton Polymers products (the neat resin or the base product) are high molecular weight polymers which are non-toxic and biologically inactive.

Warranty

The information contained in this publication is, to the best of Kraton Polymers' knowledge, true and accurate, but any recommendations or suggestions that may be made are without guarantee or warranty of any kind whatsoever, since the manufacturing conditions to which Kraton Polymers' products will be subject are beyond Kraton Polymers' control. Customers of Kraton Polymers must make their own assessment to determine the suitability of a Kraton Polymers product for a particular purpose. Further, nothing contained herein shall be construed as a recommendation to use any Kraton Polymers product in conflict with existing patents of Kraton Polymers or any third party. All products purchased from or supplied by Kraton Polymers are subject to the terms and conditions of sale set out in the applicable contract, order acknowledgement and/or bill of lading. Kraton Polymers warrants only that its products will meet the specifications designated in any such contract, order acknowledgement or bill of lading.
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D-1186 polymer