



K0091
North America
Dec. 2004

Kraton[®] D1111 Polymer

Data Document

Description

Kraton[®] D1111 is a clear, linear triblock copolymer based on styrene and isoprene with a polystyrene content of 22%. It is supplied from North America in the physical form identified below.

- D1111-16 supplied as a dusted porous pellet

Kraton D1111 is used as an ingredient in formulating adhesives, sealants and coatings. It may also find use as a modifier of bitumen or thermoplastics and in compound formulations. This product is also available as an undusted porous pellet (-00).

Sales Specifications

Property	Test Method	Units	Sales Specification Range
Polystyrene content	BAM 919	%w	20.0 - 24.0
Volatile matter	BAM 907	%w	0.7 max.
Dust content ^[a]	BAM 908	%w	0.25 - 0.45
Total extractables	BAM 905	%w	1.0 max.
Solution viscosity ^[b]	BAM 922	cps	950 - 1,450
Antioxidant content ^[c]	BAM 929	%w	0.10 - 0.60

^[a] Talc

^[b] 25%w toluene solution at 25°C

^[c] Non-staining phenolic antioxidant

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

Property	Test Method	Units	Typical Value
Styrene / Rubber ratio		%	22/78
Diblock content		%	15
Melt index 200°C, 5kg		gms/10 min	3
Specific gravity		gm/cc	0.93
Bulk density		lbs/ft ³	24
Hardness ^[d]		Shore A (10s)	45
Tensile strength ^{[e] [f]}		psi	2,900
Elongation ^{[e] [f]}		%	1,200
300% modulus ^{[e] [f]}		psi	200

^[d] Typical values on polymer compression molded at 300°F

^[e] Measured on films cast from a solution in toluene

^[f] ASTM D-412

Packaging

Kraton Polymers are available in a number of different package 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 manufacture, 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 selects 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 Material Safety Data Sheet for Kraton Polymers' products carefully and thoroughly before beginning any work with such products. Additional information relating to the health, safety, storage, handling and processing of Kraton Polymers' products can be found in the Kraton Polymer HSE Fact Sheet (K0155), available from your local Kraton Polymers Sales Representative. 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 (www.brma.co.uk).

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 by all accounts 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.

Kraton POLYMERS MAKES NO OTHER WARRANTIES REGARDING ITS PRODUCTS, WHETHER OF FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR OTHERWISE, AND NONE SHALL BE IMPLIED. FURTHER, Kraton POLYMERS MAKES NO REPRESENTATIONS AND ASSUMES NO RESPONSIBILITY WHATSOEVER WITH RESPECT TO FREEDOM FROM INFRINGEMENT OF ANY PATENT AND/OR COPYRIGHT RESULTING FROM ITS CUSTOMERS' USE OF Kraton POLYMERS' PRODUCTS OR INFORMATION.

For further information:

USA Tel (toll free): +1-800-4-Kraton (+1 800-457-2866)

USA Tel: +1-281-504-4950

USA Fax: +1-281-504-4953

In Europe / Africa

Europe Fax: +44-(0)1829-773-130

In South America

Fax: +55-(0)19-3874-7275

In Asia Pacific

Tel Japan +81-3-3769-5990

Hong Kong +852-250-80-657

Taiwan +886-2-2545-1538

China +86-21-5109-5212

South East Asia / India +91-11-628-4324

Australia +61-41-937-5055

Or contact your local Kraton Polymers Representative

Visit us at www.kraton.com

Email info@kraton.com



K0091 DDe-04U
D1111 Polymer
09/30/2004