



K0020 Europe 9/15/2009	Kraton® IR307 Polymer	Data Document
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K0020 DDc-11E

Description

Kraton IR307 polymer is a solution polymerized polyisoprene with a high cis-1,4 content. It has a high molecular weight as indicated by its limiting viscosity number of 7.75 dl/g.

A non-staining stabilizer is added at the typical value of 0.1%.

Kraton IR307 Polymer is used as a replacement for natural rubber in a wide range of compounds, offering advantages of light color, uniformity and low levels of impurities. Its good flow characteristics produce improvements in mixing and molding behavior. It is used for food and pharmaceutical packaging and seals, baby bottle teats and health care, adhesives, chemical derivatives of rubbers and very light colored or transparent articles.

Kraton IR307 polymer is manufactured to the highest standards but special requirements apply to certain sensitive applications such as food contact and pharmaceuticals. Reference should always be made to local legislation regulating these applications.

Test formulations (ISO 2303)	Parts by mass
Polymer	100.00
IRB7 industry reference oil furnace carbon black	35.00
Zinc Oxide	5.00
Sulphur	2.25
Stearic Acid	2.00
N-tert-butyl-2-benzothiazile sulphenamidine (TBBS)	0.70

Sales Specifications

Property	Test Method	Units	Sales Specification Range
Stabilizer	KM 31	%m	0.06 to 0.12
LVN	KM 33	dL/g	6.7 to 9.2
1,4-Cis	KM 32	%m	≥ 90
Volatile Matter	ASTM D5668	%m	≤ 0.5
Ash	ASTM D5667	%m	≤ 0.1
Tensile Strength	ISO 37	Mpa	>21.6 ^a
300% Modulus	ISO 37	MPa	8.6 to 13.5 ^a
Elongation at Break	ISO 37	%	≥428 ^a

^aCure: 40mins at 135°C

Packaging

Kraton IR polymer is supplied in bales weighing approximately 25 kg. Bales are wrapped in 80 micron polyethylene film. Twenty-one bales (nominal 525 kg) are packed in a wooden crate (flotainer).

Storage

Kraton IR polymer should be stored in an adequately ventilated area where it will not be subjected to sunlight, extreme temperatures or sources of ignition. Under correct conditions, Kraton IR polymers should have a storage life of at least 30 months from the date of production.

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 Devices, 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). No customer of Kraton Polymers LLC and/or any of its direct or indirect subsidiaries ("Kraton Polymers"), or any other party, shall, without the express written consent of Kraton Polymers for each specific, individual application, be permitted to manufacture, use, sell, process, or otherwise supply, directly or indirectly, any Kraton Polymers Product, or any compound containing or made from any Kraton Polymers Product, in any of the following applications.

1. Cosmetics (exclusive of packaging or delivery applications);
2. Drugs and other Pharmaceuticals (exclusive of packaging or delivery applications);
and
3. Medical devices; provided, that any medical device that satisfies any one of the following definitions shall not be deemed to fall within the foregoing medical device restriction: (a) any medical device falling within the definition of either a Class I or Class II medical device, as defined in any federal law or regulation of the United States or Canada, or (b) any medical device falling within the definition of a Class I or Class II(a) medical device, as defined by any applicable regulation of the European Union or any member state thereof.

No customer of Kraton Polymers, or any other party, shall be permitted to use any of Kraton Polymer's trade names, trademarks, logos or other similar identifying marks or characteristics for the manufacture, sale, or promotion of its cosmetics, drugs, pharmaceutical products/materials, or medical devices.

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. 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. 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, since the conditions of use and storage are beyond Kraton Polymers' control. The customer understands that it shall make its 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. All products purchased from or supplied by Kraton Polymers are subject to the terms and conditions set out in the applicable contact, order acknowledgement and/or bill of lading. Kraton Polymers warrants only that its products will meet those specifications designated therein.

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