Kraton® FG

Kraton FG polymers are SEBS polymers with maleic anhydride (MA) grafted onto the rubber midblock. The commercial Kraton FG polymers have 1.0 to 1.7 wt. % MA grafted onto the block copolymer. The MA grafting improves the adhesion to nylon, polyester, ethylene vinyl alcohol, aluminum, steel, glass, and many other substrates. The FG polymers are very efficient impact modifiers in nylon and polyesters for making super tough engineering thermoplastic materials.

Kraton FG Selector

Use the dropdown to select your region and click on the arrows to sort the data. Download the Adobe Acrobat Reader. To browse a wider range of Kraton products, visit the Product Selector

Grade	Structure	% Styrene	Hardness	% Diblock	% Oil	Solution Viscosity	Melt Flow	Data Doc	MSDS
FG-1901	SEBS-gMA	30	71	-	0	5	5		
FG-1924	SEBS-gMA	13	49	-	0	19	11		

Properties Legend

Property	Units
%Styrene	wt%
Hardness	Shore A
%Diblock	wt%
%Oil	wt%
Solution Viscosity	Pa.s @ 25% in Toluene @ 25C
Melt Flow	grams/10 min @ 200C, 5 kg

K0127 North America Issued Apr. 2001	KRATON™ FG1901X Polymer	Data Document

Description

KRATON™ FG1901X is a clear linear triblock copolymer based on styrene and ethylene/butylene, with a polystyrene content of 30%. It is supplied from North America in the physical form identified below. The product code is N731N and the Material Safety Data Sheet number is 2898.

- FG1901X-05 supplied as a dusted pellet.

KRATON FG1901X is used as a modifier of bitumen and polymers. It is also suitable as an ingredient in formulating compounds for footwear applications and may be used in formulating adhesives, sealants and coatings.

Sales Specifications

Property	Test Method	Units	Sales Specification Range
Maleic Anhydride, Bound	BAM1026	%w	1.4 - 2.0
Melt Flow, 230°C/5000 g	BAM 903	gm/10 min.	14 - 28
Water	BAM 1024	ppmw	≤ 500

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

Property	Units	Typical Value
Tensile Strength	psi	5,000
Elongation	%	500
Hardness[a]	Shore A	71
Specific Gravity	gm/cc	0.91
Solution Viscosity, 25%w in toluene	cps	5,000
Melt Index, 230° C, 5 Kg	gms/10 min.	22
Styrene/Rubber Ratio	%	30/70

Packaging

KRATON Polymers 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 contact with food or in pharmaceutical applications, toys, and other human contact areas the relevant regulations should be observed. Detailed information is available from the supplier.

For food packaging, manufacturers of the final product should ensure that all ingredients used comply with the regulations. It should be noted that 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.

Restriction on Medical/Healthcare Applications

DO NOT USE KRATON™ POLYMERS PRODUCTS IN ANY DEVICES OR MATERIALS INTENDED FOR TEMPORARY OR PERMANENT IMPLANTATION IN THE HUMAN BODY. THE KRATON POLYMERS BUSINESS ALSO RESTRICTS THE USE OF ITS PRODUCTS IN OTHER MEDICAL/HEALTHCARE APPLICATIONS.

Please contact your KRATON Polymers Sales Representative for more details.

THE KRATON POLYMERS BUSINESS HAS NO SPECIFIC EXPERTISE IN THE MEDICAL/HEALTHCARE MARKET OR APPLICATIONS and does not intend to perform testing, clinical studies or other investigations of the suitability of its products for specific medical/healthcare applications. KRATON Polymers products are generally manufactured for use in a variety of commercial applications.

DO NOT USE THE TRADENAMES, TRADEMARKS, LOGOS OR OTHER SIMILAR IDENTIFYING CHARACTERISTICS OF THE KRATON POLYMERS BUSINESS IN THE MANUFACTURE, SALE OR PROMOTION OF MEDICAL DEVICES OR MATERIALS.

THE KRATON POLYMERS BUSINESS MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR PURPOSE (INCLUDING MEDICAL APPLICATIONS) FOR ITS PRODUCTS.

Each customer or user of KRATON Polymers products is solely responsible for determining the suitability of the materials they select for the intended purpose. With regards to medical/healthcare applications, each customer or user must conduct their own studies, registrations, and other related activities to establish the safety and efficacy of their products.

Safety and Handling Precautions

Read the Material Safety Data Sheet for KRATON Polymer products carefully and thoroughly before beginning any work with this product.Additional information relating to Health, Safety, Storage, Handling and Processing can be found in the KRATON Polymer HSE Fact Sheet (ref. K0155), available from your local KRATON Polymers representative.

KRATON Polymers and compounds can accumulate electrostatic charges when rubbed, chafed or abraded. Equipment should provide a means of dissipating any charges that may develop. Processing of KRATON Polymers and compounds in high shear equipment can cause the temperature to rise. Do not allow the temperature to exceed 225-230°C (437-446°F) for KRATON D Polymers and compounds and 280-285°C (536-545°F) for KRATON G Polymers and compounds. Maintain a fire watch if these temperatures are reached. KRATON Polymer 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 our knowledge, true and accurate, but any recommendations or suggestions which may be made are without guarantee, since the conditions of use are beyond our control. Furthermore, nothing contained herein shall be construed as a recommendation to use any product in conflict with existing patents covering any material or its use.

All products purchased from or supplied by the KRATON Polymers Business are subject to terms and conditions set out in the contract, order acknowledgement and/or bill of lading. The KRATON Polymers Business warrants only that its products will meet those specifications designated as such herein or in other publications.

All other information supplied by the KRATON Polymers Business is considered accurate but is furnished upon the express condition that the customer shall make their own assessment to determine the products' suitability for a particular purpose. **The KRATON Polymers Business makes no other warranty, either express or implied, including those regarding such other information, the data upon which the same is based, or the results to be obtained from the use thereof; that any products shall be merchantable or fit for any particular purpose; or that the use of such other information or product will not infringe any patent.**

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KRATON™ Polymers

K0127-DDa-01U
KRATON FG1901X Polymer

K0123 North America Apr. 2004	Kraton® FG1924X Polymer	Data Document

Description

Kraton® FG1924X is a clear linear triblock copolymer based on styrene and ethylene/butylene with a polystyrene content of 13%. It is supplied from North America in the physical form identified below.

- FG1924X-05 supplied as a dusted pellet

Kraton FG1924X is used as a modifier of bitumen and polymers. It is also suitable as an ingredient in formulating compounds for footwear applications and may be used in formulating adhesives, sealants and coatings.

Sales Specifications

Property	Test Method	Units	Sales Specification Range
Maleic Anhydride, Free	Othr Ametek	%w	0.3 max.
Maleic Anhydride, Bound	BAM 1026	%w	0.7 - 1.3
Dust content [a]	BAM 908	%w	0.15 min.
Water	BAM 1024	ppmw	500 max. as packaged

[a] Talc

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

Property	Test Method	Units	Typical Value
Styrene / Rubber ratio		%	13/87
Solution viscosity [b]		cps	19,000
Melt index 230°C, 5kg		gms/10 min	40
Specific gravity		gm/cc	0.90
Hardness [c]		Shore A (10s)	49
Tensile strength [d] [e]		psi	3,400
Elongation [e]		%	750

[b] 25%w toluene solution at 25°C

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

[d] Measured on films cast from a solution in toluene

[e] 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 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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FG1924X Polymer
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