K0470 Europe Nov. 2007	Kraton® IR-401B latex	Data Document

Description

Kraton IR-401B latex is a water-based emulsion of an anionically polymerised polyisoprene with a high cis-1,4 content, high molecular weight and a high linearity. The emulsion also contains a non-staining antioxidant (typical level of 0.1% mass on solids) and a surfactant.

Kraton IR-401B latex is a synthetic rubber emulsion and can be used as an alternative to natural rubber latex in a variety of applications ranging from dipping to extrusion. It offers specific advantages such as light colour, consistency and low levels of impurities.

Kraton IR-401B latex is made under Good Manufacturing Practices, but additional requirements may apply to food contact, pharmaceutical and medical device applications using this material. Reference should always be made to the local legislation regulating these applications.

Sales Specifications

Property	Test Method	Units	Sales Specification Range
Finished latex			
Solids content	KM42	%	63 min.
pH	KM43		9.5 - 12
Brookfield viscosity	KM44	cPs	150 max.
Median particle size (Volume)	KM45	µm	1.8 max.
T.A.M.C at drumming	USP24 (61)	CFU/ml	1000 max.

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

Property	Test Method	Units	Typical Value
Antioxidant	KM31	% mass	0.3 max
Raw polymer			
Ash	ASTM D5667	%mass	0.1 max.
Cis- 1,4 content	KM32	%	90
Gel content		%	0
Limiting viscosity number	KM33	dl/g	6.5 - 9.0
Molecular weight	KM49	g/mol	1,500,000 - 2,500,000
Mooney viscosity	ASTM D1646		76
Finished latex			
Odour			neutral
Appearance			milky white
Specific gravity		g/ml	0.93
Freezing Temperature		deg C	0

Packaging

Kraton IR-401B latex is supplied in coated steel drums of about 169Kg or plastic Intermediate Bulk Containers (IBC) of about one cubic meter and is pasteurised before final packaging.

Storage:

Kraton IR-401B latex should be stored under the conditions typically applying to natural rubber latex. Store Kraton IR-401B latex in an adequate area where it will not be subjected to sunlight, extreme temperatures or sources of ignition. Kraton IR-401B latex does not significantly thicken when subject to temperatures below 15oC, however recommended minimum storage temperature is 5oC. If Kraton IR-401B latex is allowed to freeze, it will have been coagulated after freezing and consequently cannot be used anymore. We recommend a maximum storage temperature of 30oC, above which creaming becomes strong and difficult to reverse. Preferred storage temperature is 18oC; at this temperature stirring should be done every 3 to 4 days for approximately 1 hour. The stirrer must be a low speed, large displacement type. The latex can also be pumped to ensure homogenisation but the inlet should be below surface level to prevent skin formation and thus to avoid blockage of the pump lines. Drums should be fully inverted once a week. Tanks should be kept as full as possible to prevent skin formation in the top layer. Under these conditions Kraton IR-401B latex should have a storage life of at least twelve months from the date of drumming. Before filling tanks which previously have been used for natural rubber latex, it is advisable to disinfect equipment with formaldehyde and then rinse to ensure that bacteria and enzymes from natural rubber latex are controlled and will not affect the Kraton IR-401B latex quality. Containers should be filled with a hose below the latex surface to prevent foam formation. Leave the storage tank without agitation for at least 8 hours before tapping drums.

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

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