Technical Data Sheet

PARALOID™ BTA-751U Impact Modifier

Description

PARALOID™ BTA-751U Impact Modifier is an MBS polymer with a core-shell structure. Its high level butadiene core is well suited for low temperature toughening.

Applications

PARALOID™ BTA-751U Impact Modifier, can be used as an impact modifier in opaque PVC formulations, as well as CPVC formulations. Such systems may be extruded, such as conduit, pipe, or sheet, calendered, such as sheet or film, or injection-molded, such as fittings, electrical boxes and other objects. It is for opaque applications, but is not inherently weatherable for outdoor applications.

Additionally, PARALOID™ BTA-751U Impact Modifier may be used as a toughener for epoxy or acrylate-based thermoset formulations.

Regional Product Availability

- Global

Typical Properties

	PARALOID™ BTA-751U Impact Modifier
Physical appearance	White, free-flowing powder
Bulk density aerated (g/cm^3)	0.37 to 0.43
Volatiles (% max)	<1%

[1] Typical properties, not necessarily specifications

Key Attributes

- Excellent sub-ambient temperature impact modification capability
- Excellent efficiency for ambient temperature impact modification
- Due to production using “Spheroid” coagulation isolation process, is a low dust, excellent free-flowing powder, giving no compaction.
- Not for outdoor weatherable applications
- Amenable to a wide range of PVC K-value formulations, as well as to CPVC formulations.

Test Formulation used for Physical Properties Data presented below.

TEST FORMULATION	PHR
PVC, K-value 66	100
High Tin Thioglycolate Thermal Stabilizer	2
Internal Lubricant Blend	0.7
External Lubricant Blend	0.3
PARALOID™ K-120ND Processing Aid	1.2
PARALOID™ K-175 Processing Aid	0.5
MBS Impact Modifier	10

Performance in high K-value PVC formulation, compared to a well-known historical Dow MBS Impact Modifier

Impact and Physical Properties compared to PARALOID™ BTA-753ER Impact Modifier, a well-known historical, but discontinued, PARALOID™ Impact Modifier. PVC K-value K66.

PARALOID™ Impact Modifier	BTA-751U	BTA-753 ER
Izod Impact, Ft-Lb/In, 23°C	22.5	24.3
Izod Impact, Ft-Lb/In, 10°C	17.2	8.8
Izod Impact, Ft-Lb/In, 0°C	3.3	1.8
Tensile Strength (Type V), psi	9260	9450
% Elongation at Break, %	215	219
DTUFL (264 psi flexural load), °C	64.7	65.9
Flexural Strength, psi	10620	10870
Flexural Modulus, psi	40100	40300

Izod Impact Performance in low K-value PVC injection molding formulation

Izod Impact Properties compared to PARALOID™ BTA-753ER, a well-known historical, but discontinued, PARALOID™ Impact Modifier. PVC K-value K56 (injection molding).

TEST FORMULATION	PHR
PVC, K-value 56	100
High Tin Thioglycolate Thermal Stabilizer	2
Internal Lubricant Blend	0.7
External Lubricant Blend	0.3
PARALOID™ K-120ND Processing Aid	1.2
PARALOID™ K-175 Processing Aid	0.5

12.5phr of PARALOID™ Impact Modifier	BTA-751U	BTA-753 ER
Izod Impact, Ft-Lb/In, 23°C	18.7	21.4
Izod Impact, Ft-Lb/In, 10°C	17.2	16.4
Izod Impact, Ft-Lb/In, 0°C	14.2	2.3
Izod Impact, Ft-Lb/In, -10°C	2.7	1.4
10phr of PARALOID™ Impact Modifier	**BTA-751U**	**BTA-753 ER**
Izod Impact, Ft-Lb/In, 23°C	16.9	19.6
Izod Impact, Ft-Lb/In, 10°C	3.8	2.2
Izod Impact, Ft-Lb/In, 0°C	1.9	1.4
Izod Impact, Ft-Lb/In, -10°C	1.2	0.9
7.5phr of PARALOID™ Impact Modifier	**BTA-751U**	**BTA-753 ER**
Izod Impact, Ft-Lb/In, 23°C	2.4	2.2
Izod Impact, Ft-Lb/In, 10°C	1.6	1.2
Izod Impact, Ft-Lb/In, 0°C	1.3	0.8
Izod Impact, Ft-Lb/In, -10°C	0.8	0.6

Product Packaging

The standard package is either a unitized pallet of 20-25 kg bags or 500-900 kg super sacks/big bags/FIBC bags.

Please consult a Dow representative for specific package availability for this product.

Quality management system

The Dow Chemical Company (Dow) and its subsidiaries have implemented a comprehensive quality management system pursuant to Good Manufacturing Practices (GMP) and various quality management standards including ISO 9001. An overview of **The Dow Quality Management System Manual** can be obtained at the following Internet web site – http://www.dow.com/en-us/about-dow/our-company/beliefs-and-culture/quality-culture. As part of that system, the Dow Plastics Additives business maintain ISO 9001 registration for most of our manufacturing plants. A copy of these certificates available upon request.

Storage and handling precautions

Store unopened in original packaging at ambient temperature. If material is opened, it should not be left exposed and should be used within one month. When stored correctly in the original packaging, the shelf life is 3 years from date of manufacture.

Before using this product, consult the Safety Data Sheet (SDS) for details on product hazards, recommended handling precautions and product storage. Contact Dow for copies of the SDS and for more information on this product. Information contained in a TDS document cannot substitute a SDS.

Disposal considerations

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

Medical Applications Restrictions

Dow prohibits sale into certain medical applications. Please check with Dow if you believe your application could be in violation of this policy.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. The customer is solely responsible for determining the suitability of the Dow product for the uses contemplated by customer. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow and available online at www.dow.com.

Regulatory Information

If your application includes a sensitive application such as food contact or drinking water requirements or if you need other regulatory information, please contact your local Dow representative.

Contact information:

If you should have any questions regarding this notice, please contact your local Dow Representative or www.dow.com/contact