



PARALOID™ KM-5000 Acrylic Impact Modifier for Vinyl Building Products

For Window Profile, Siding & Fence Applications

Regional Product Availability

- North America
- South America

Description

PARALOID™ KM-5000 is an all acrylic weatherable impact modifier (WIM) intended to meet the needs of the vinyl building products extrusion and compounding industry. This 100% core shell impact modifier offers excellent impact resistance and rheological properties with the flexibility of formulating with individual process aids enabling outstanding performance in profiles, fence and siding applications. This product delivers a wide processing latitude and excellent low temperature drop dart impact, while maintaining the weatherability expected in an all acrylic impact modifier.

Chemical/Physical Description

PARALOID™ KM-5000 Impact Modifier is a 100% acrylic co-polymer that is a free flowing white powder.

Applications and Uses

Extruded Vinyl products such as windows, fence, and deep embossed systems such as in siding substrates are considered to be excellent applications for PARALOID™ KM-5000 Impact Modifier where drop dart or drop weight impact is critical.

Product Performance

Laboratory testing under stressed conditions exhibiting brittle and fully ductile impact shows that PARALOID™ KM-5000 Impact Modifier delivers exceptional performance.

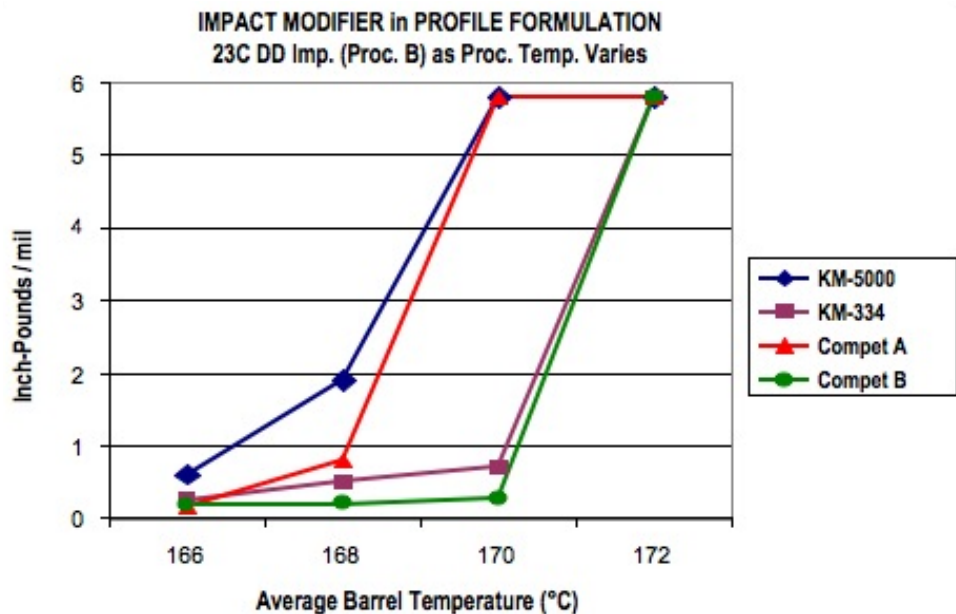


Figure 1: PARALOID™ KM-5000 widens the processing window maintaining the higher Gardner impact over a range of temperatures (KM-334 at 5 phr, others at 4 phr).

UNRESTRICTED – May be shared with anyone

©™ Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

PARALOID™ KM-5000 Acrylic Impact Modifier for Vinyl Building Products/Dow Plastics Additives Form No. 874-00001-0810

Product Performance (Continued)

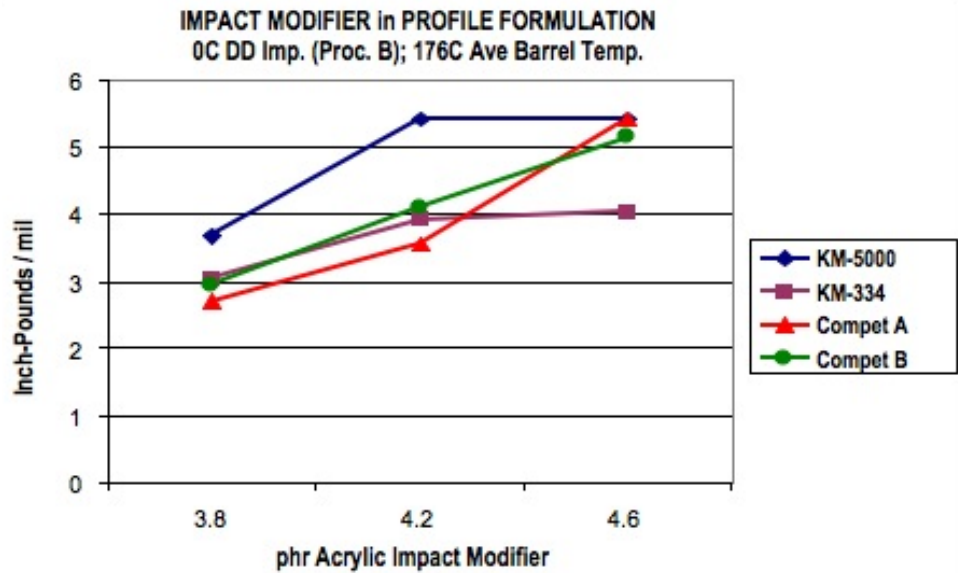


Figure 2. PARALOID™ KM-5000 shows excellent low temperature impact performance.

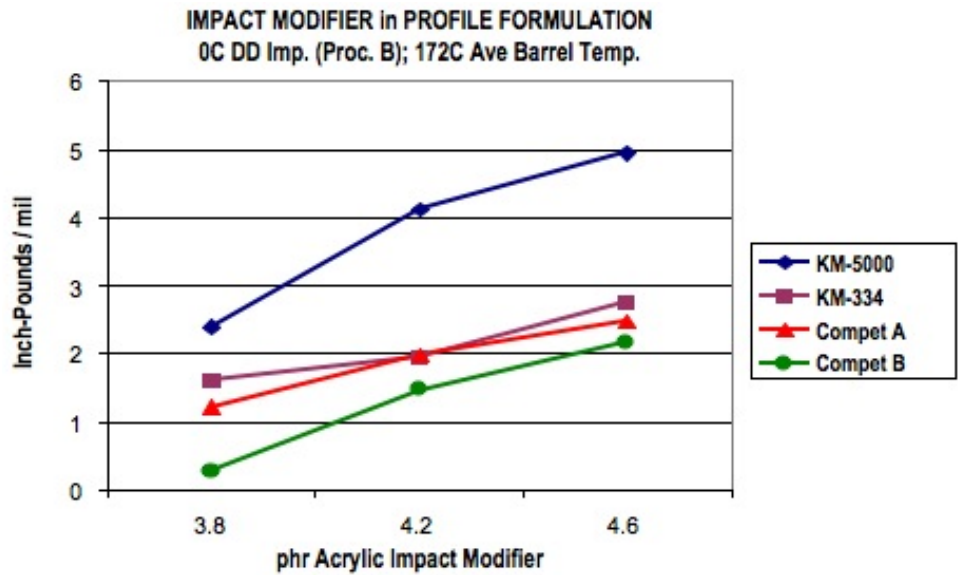


Figure 3. Even at lower processing temperatures, PARALOID™ KM-5000 exhibits excellent efficiency.

Product Performance (Continued)

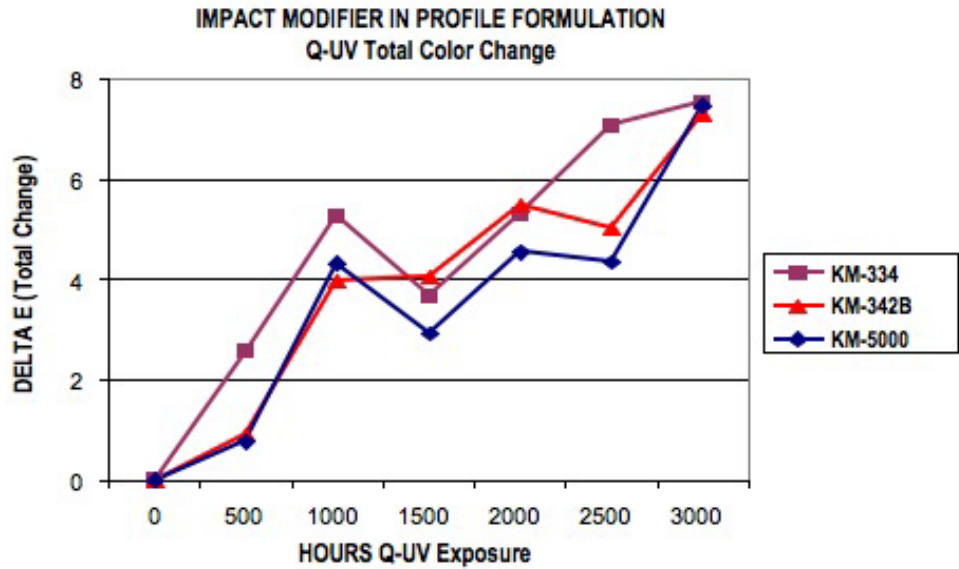


Figure 4. PARALOID™ KM-5000 demonstrates good weatherability.

Brabender Fusion Properties⁽¹⁾

Test Compound Formulation							
PVC (K66)	ADVASTAB™ TM-181	ADVALUBE™ B-3314	TiO2	CaCO3	PA	Lube PA	WIM
100	1.2	2.7	9	3	0.8	0.5	as shown
Modifier		PARALOID™ KM-5000	Compet A	Compet B	PARALOID™ KM-940		
	phr	4.0	4.0	4.0	5.0		
Fusion Time, seconds		54	58	54	52		
Fusion Torque, M-gms		2865	2930	2635	2755		
Equil. Torque, M-gms		1790	1785	1710	1775		
Equil. Temp., C		208	209	209	208		

Note: ⁽¹⁾Bowl Conditions: 185°C, 60 RPM, 60 Gram Charge

UNRESTRICTED – May be shared with anyone

©™ Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

PARALOID™ KM-5000 Acrylic Impact Modifier for Vinyl Building Products/Dow Plastics Additives Form No. 874-00001-0810

Chemical Control Law Status:

AICS	Australia. Industrial Chemical (Notification and Assessment) Act	Y = OK	All Components OK
DSL	Canada. Environmental Protection Act	Y = OK	All Components OK
IECSC	China. Inventory of Existing Chemical Substances	Y = OK	All Components OK
EINECS	EU. EINECS	Y = OK	All Components OK
ENCS	Japan. Kashin-Hou Law List	U = Unk	Treat as Not OK
KECI	Korea. Toxic Chemical Control Law (TCCL) List	Y = OK	All Components OK
PICCS	Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	Y = OK	All Components OK
TSCA	U.S. Toxic Substances Control Act	Y = OK	All Components OK

Legend:

Y	All intentional components are listed on the inventory, are exempt, or are supplier certified.
N	The product contains an intentional component that is not on the inventory.
U	The inventory status of an intentional component is unknown.
R	The product contains an intentional component that is subject to a restriction. Production and/or use is limited by the conditions of the restriction.
D	Dow has submitted a PMN or a new substance notification on an intentional component of this product. It is not yet on the inventory, but will be added. When the substance is approved, only Dow can manufacture or import the product containing it until it is added to the inventory.
F	The product is used in a food, drug or cosmetic application and is subject to the applicable regulation. It contains a component exempt from inventory listing requirements. Because an intentional component of the product is not on the inventory, the product may only be used in the exempt application.
A – FIFRA	This product is subject to regulation under the US Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and is therefore exempt from U.S. Toxic Substances Control Act (TSCA) Inventory listing requirements.
A	The product is used in a biocide application and is subject to the applicable regulation. It contains a component exempt from inventory listing requirements. Because an intentional component of the product is not on the inventory, the product may only be used in the exempt application.
Z	The product meets the definition of an article and is exempt from inventory requirements.
P – TSCA	The product contains a polymer that is the subject of a US polymer exemption. The polymer is not on the TSCA inventory.
P – JAPAN	All intentional components are listed on the inventory, are exempt, or are supplier certified.

Disclaimer

This information relates specifically to this product. We believe this information to be accurate and reliable as of this date.

We recommend that our customers make their own determination on the suitability of this product for their particular application.

We cannot guarantee that the status of this product will remain unchanged indefinitely; therefore we recommend that you periodically verify its status.

Handling Precautions

Before using this product, consult the Material Safety Data Sheet (MSDS)/Safety Data Sheet (SDS) for details on product hazards, recommended handling precautions and product storage.

CAUTION! Keep combustible and/or flammable products and their vapors away from heat, sparks, flames and other sources of ignition including static discharge. Processing or operating at temperatures near or above product flashpoint may pose a fire hazard. Use appropriate grounding and bonding techniques to manage static discharge hazards.

CAUTION! Failure to maintain proper volume level when using immersion heaters can expose tank and solution to excessive heat resulting in a possible combustion hazard, particularly when plastic tanks are used.

Storage

Store products in tightly closed original containers at temperatures recommended on the product label.

Chemical Registration

Many countries within the Asia-Pacific region require the registration of chemicals, either imported or produced locally, prior to their commercial use. Violation of these regulations may lead to substantial penalties imposed upon the user, the importer or manufacturer, and/or cessation of supply. It is in your interests to ensure that all chemicals used by you are registered. Dow does not supply unregistered products unless permitted under limited sampling procedures as a precursor to registration.

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.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Plastics Additives Technical Representative for more information.

Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

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. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

Contact:

North America: 1-800-447-4369
Asia-Pacific: (+86) 21-3851-2881
Europe: (+33) (0)1-4921-7878
South America: (+57) 53-75-8064
<http://www.dow.com>

Notice: No freedom from any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries. Dow assumes no obligation or liability for the information in this document. References to "Dow" or the "Company" mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.



UNRESTRICTED – May be shared with anyone

©™ Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

PARALOID™ KM-5000 Acrylic Impact Modifier for Vinyl Building Products/Dow Plastics Additives Form No. 874-00001-0810