



ACRYLIGARD™ CS-132 Acrylic Capstock Resin

Description

ACRYLIGARD™ CS-132 Acrylic Capstock Resin is an acrylic copolymer designed to be compounded with PVC, and associated PVC formulation ingredients, to yield a final formulated capstock compound with a superior performance profile. A 50:50 PVC / ACRYLIGARD™ CS-132 Acrylic Capstock Resin compound will offer near acrylic-like weathering properties, but with melt processing very similar to PVC. Such a compound will provide physical properties much closer to PVC than pure acrylic or ASA resins.

ACRYLIGARD™ CS-132 can be formulated and compounded as a pure acrylic capstock, if desired. However, the optimal overall balance of final physical properties and cost/performance is achieved by formulating and compounding with PVC.

Applications

Formulated compounds of PVC / ACRYLIGARD™ CS-132 Acrylic Capstock Resin can be co-extruded over PVC for any exterior application. Siding, cladding, window profile, fence, decking, railing, and roof shingles are all potential applications areas for such a formulated compound.

ACRYLIGARD™ CS-132 is biased for greater hardness and scratch resistance versus ACRYLIGARD™ CS-134 Acrylic Capstock Resin. However, ACRYLIGARD™ CS-134 Acrylic Capstock Resin offers better water-whitening resistance in formulated PVC blend compounds, compared to ACRYLIGARD™ CS-132. While formulating and embossing can be used to tune final gloss, ACRYLIGARD™ CS-132 is biased to produce higher final gloss, than ACRYLIGARD™ CS-134.

Regional Product availability

- North America
- Latin America
- Asia Pacific

Typical Properties

	ACRYLIGARD™ CS-132 Acrylic Capstock Resin
Physical appearance	White, free-flowing powder
Bulk density aerated (g/cm ³)	0.36 to 0.44
Volatiles (% max)	<1%

¹ Typical properties, not necessarily specifications

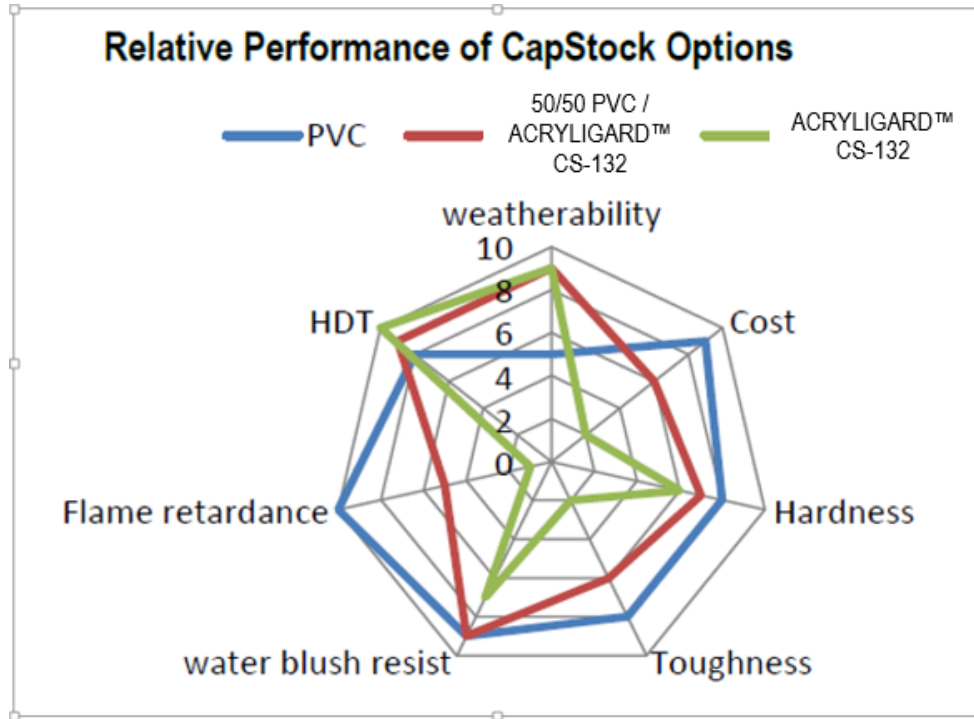
Key attributes

- Excellent formulation flexibility with PVC and typical PVC formulation ingredients
- Excellent weatherability, when formulated with PVC and typical PVC formulation ingredients
- Strong, well-balanced physical performance profile of final compound.
- Preferred blend ratio for optimal performance is 40-60% PVC and 40-60% ACRYLIGARD™ CS-132 Acrylic Capstock Resin



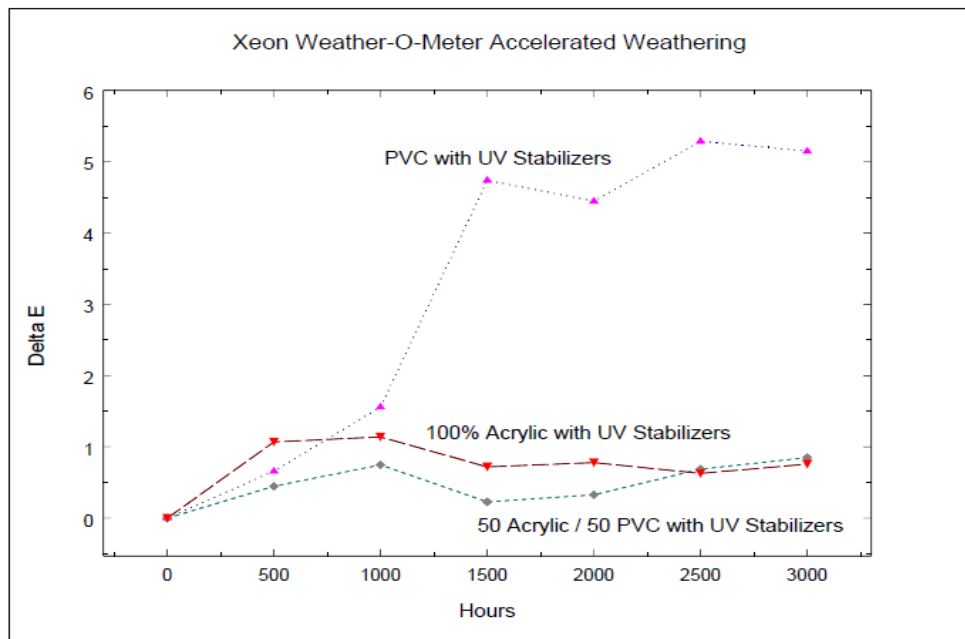
Overall Relative Performance

Formulating ACRYLIGARD™ CS-132 Acrylic Capstock Resin with PVC will yield a compound that has physical properties superior to 100% acrylic.



Accelerated Weathering Performance

Compounds of 100% ACRYLIGARD™ CS-132 Acrylic Capstock Resin, 50:50 PVC / ACRYLIGARD™ CS-132, and 100% PVC, all fully formulated, were extruded and subjected to Xenon WOM accelerated weathering. The 50:50 PVC / ACRYLIGARD™ CS-132 Capstock system exhibits accelerated weathering similar to 100% ACRYLIGARD™ CS-132 Acrylic Capstock Resin.





Blending PVC with ACRYLIGARD™ CS-132 Acrylic Capstock Resin improves physical properties versus pure Acrylic.

Hardness - Improved

Polymer	Shore D	Taber (mg/1000 cycles)
PVC	82	9
50:50 CS-132/PVC	74	18
ACRYLIGARD CS-132	68	25

Toughness- IMPROVED

Polymer	Dart (in-lb/40 mils)
PVC (5 phr AIM)	125
50 CS-132 / 50 PVC (No AIM)	90
ACRYLIGARD CS-132	30

HDT- INCREASED

Polymer	Vicat Heat Distortion Temperature (°C)
PVC (5 phr AIM)	80
50 CS-132 / 50 PVC (No AIM)	94
ACRYLIGARD CS-132	100

Water whitening resistance- MUCH BETTER THAN TYPICAL ACRYLIC

Polymer	Water resistance, ΔE 18hrs@70C
PVC	0.5
50:50 CS-132/PVC	0.8
ACRYLIGARD CS-132	1.0
Typical pMMA	5.0

Melt Viscosity: Blending of PVC and ACRYLIGARD™ CS-132 Acrylic Capstock Resin delivers melt viscosity in the range of a PVC Compound.

Polymer	Viscosity (Pa-sec) 190 °C/(100/sec)
PVC K65	3300
50:50 CS-132/PVC	3270
ACRYLIGARD CS-132	2300

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.



Technical Data Sheet

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

NOTICE: No freedom from infringement of 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 his 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.