

AKRELON[®] IM 405 / Acrylic Impact Modifier

DESCRIPTION

AKRELON IM 405- Acrylic impact modifier (AIM) is based on a unique “Core - Shell” acrylic molecular composition that imparts excellent impact strength, proven weatherability, flawless surface finish and ease of processing to outdoor and highly durable Vinyl applications. It is optimized to ensure required impact strength in compounds formulated with lead, tin and calcium-zinc or other mixed metal stabilizers, exhibiting lower melt viscosity and less die swell thanks to its perfectly balanced formulation and “Core – Shell” structure.

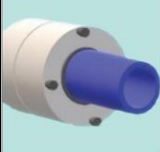
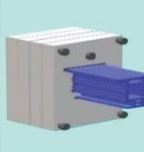
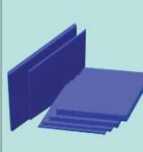
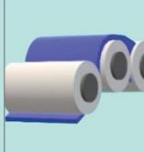
Fusion properties of **AKRELON IM 405** are balanced to give PVC compounds an optimum ease of processing and excellent surface gloss. It helps to maintain an improved dimensional precision with its minimized die swell and post extrusion shrinkage properties.

Thanks to its excellent weathering characteristics, it is highly suitable for outdoor applications, as it does not cause impact strength loss and discoloration under prolonged UV exposure.

PHYSICAL PROPERTIES

Chemical Description	Acrylic Core-Shell structured polymer
Physical Form	White free-flowing powder
Bulk Density (g/cm³)	0.40 – 0.55
Ash Content %	<1.0 %
Volatile Content (wt.%)	1 ± 0.2%
Sieve Analysis	20 mesh/850 µm (on %) ~nil
	325 mesh/45 µm (pass%) – 2.10%
	450 mesh/32 µm (pass %) - 0.70%
Packaging	20 kg PE bag
Shelf Life	3 years from date of manufacturing

APPLICATION CHART

								
UPVC Pipes & One pack	UPVC Fittings & One pack	CPVC Pipes & Super pack	CPVC Fittings & Super pack	Window Profiles	Rigid PVC Sheet/ Laminates / Marble /Liner	Transparent Rigid Sheet	WPC, SPC and Panels	PVC Edge Band
+++	+++	N/A	N/A	+++	+++	N/A	+++	++

+++	Strongly Recommended
++	Recommended
N/A	Not Applicable

PERFORMANCE

1. OVERALL PERFORMANCE SUMMARY

- Excellent impact strength
- Lower melt viscosity and improved ease of processing
- Optimized fusion properties
- Low post extrusion shrinkage and die swell
- Proven weatherability
- Impact strength and color retention under various weather conditions

3. RHEOLOGY COMPARISON

	Fusion Time (s)	Fusion Torque (Nm)
AKRELON IM 405	42	28.7
Competitor A	42	28.3
Competitor B	52	27.6
Competitor C	61	26.6

2. IMPACT STRENGTH

	Impact Strength (J/m)
AKRELON IM 405	99
Competitor A	99
Competitor B	49
Competitor C	69