

Piccolastic™ A5 Hydrocarbon Resin

Piccolastic™ A5 hydrocarbon resin is a very low molecular weight, light colored, polar, hydrocarbon resin derived from pure styrene monomer. Indicated for use in adhesives, coatings, plastics modification and rubber compounding, particularly as a plasticizer or softener. Using Piccolastic™ A5 in an adhesive system can improve flexibility at low temperatures. In styrenic block copolymer-based systems Piccolastic™ A5 associates strongly with the styrene endblocks, reducing melt viscosity and cohesion without greatly affecting tack and adhesion properties. Piccolastic™ A5 is compatible with EVA grades with up to 30% vinyl acetate and will improve low temperature flexibility and reduce the melt viscosity of the system.

- Light color
- Liquid
- Made from purified aromatic monomers
- Non-migrating plasticizer

Property	Typical Value	Unit	Method ¹
Ring and Ball Softening Point	Liquid @ 25°C		ASTM E 28
Color, Gardner	2 (neat)		ASTM D 6166
MMA cloud point	-6	°C	from 1:2 mixture of methylcyclohexane and aniline
OMS (odorless mineral spirits) cloud point	-29	°C	from Stoddard solvent
Molecular Weight, Mn	300	g/mol	GPC using polystyrene standards, elution with THF
Molecular Weight, Mw	360	g/mol	
Molecular Weight, Mz	560	g/mol	
Polydispersity (Mw/Mn)	1.3		
Melt Viscosity at 25°C	1000	poise	Brookfield
Melt Viscosity at 30°C	100	poise	
Melt Viscosity at 45°C	10	poise	
Refractive Index at 25°C	1.57		

¹ internal method based upon the specified norm

Applications

Caulks and Sealants, Graphics, Labels, Other Construction Applications, Protective coatings, Speciality tapes, Tapes, Waterproofings

Compatibility and Solubility

Compatible with a wide variety of paraffin and microcrystalline waxes, alkyd resins, drying oils, epoxy resins, rosin and modified rosins, rosin esters, and vinyl resins, non-migrating where compatible. Compatible at all ratios, or in limited but practically useful proportions, with a wide variety of materials, including styrene-butadiene rubber (SBR) and SBR block copolymers; neoprene, nitrile, polybutadiene, and acrylic polymers; chlorinated rubber; EVA resins (ethylene-vinyl acetate copolymers); styrenated, vinylated, and drying oil alkyds; rosin resins; and EHEC (ethyl hydroxyethyl cellulose), as well as modifying the styrenic endblocks of all styrene-containing block copolymers.

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Soluble in useful proportions in aromatic, aliphatic, and chlorinated hydrocarbons; ketones; pyridine; carbon disulfide; ethyl and butyl acetates; and turpentine. Insoluble in alcohols and glycols. For low or zero VOC systems Piccolastic A5 is soluble in the VOC exempt solvents t-butyl acetate and perchlorobenzene tetrafluoride (PCBTF) and will tolerate some acetone and/or methyl acetate as a diluent in solvent systems based on TBA and/or PCBTF. VOC exemptions and environmental regulations vary regionally and compliance with local standards should be verified before any claims about VOC content are made.

Packaging

Liquid, in heavy-gauge metal drums (420 lbs, 190.5 kg, net wt) or bulk tank truck.

Storage

Resins are prone to gradual oxidation, some more so than others. This could result in darkening and/or it could have an adverse effect on the solubility of the resin in organic solvents or on its compatibility with polymers. Accordingly, it is recommended that strict control of inventory be observed at all times, taking care that the oldest material is used first. Hydrocarbon resins have been stored for up to two years with no observable change in properties. For storage periods exceeding two years the material should be re-tested to verify compliance with product specifications, but there is no indication that these products cannot be stored for many years without affecting performance.