



PCA® 303LF

TECHNICAL DATA SHEET

Issue / Revision No
002/04

Revision Date
01.12.2025

Product - Trade Name

PCA® 303LF

Classification

Cross Linking Agent
Melamine Formaldehyde Resin
Modified Melamine Formaldehyde Resin
Methylated Melamine Formaldehyde Resin

Composition

Hexamethoxy Methylmelamine (HMMM)
1,3,5-Triazine -2,4,6-triamine, polymer with formaldehyde, methylated

Product Description

PCA® 303LF is an amino resin type crosslinking agent. It is basically hexamethoxy methylmelamine supplied in liquid form. It contains more than 98% of non-volatile matter. A wide range of water borne or organo-soluble polymeric materials can be cross-linked with this material. The polymeric materials should contain functional groups e.g. hydroxyl, carboxyl or amide and would include alkyds, polyesters, acrylic, epoxy, urethane, and cellulose.

Physical properties

Form : Clear, Viscous
Sp. Gr. @ 25°C(Typical) : 1.20 ± 0.05

Chemical Properties

| Parameters | Specification | Test Method ASTM/RCPL |
|-----------------------------|---------------|--------------------------|
| Non-volatile, % by weight* | 98.0 Min. | D-4903/ T17-A |
| Refractive index | 1.510-1.530 | D-1218 |
| Free formaldehyde, weight % | 0.09 Max. | ISO11402/ D-1979 |
| Viscosity (cP) @ 23°C | 3000 - 8000 | D-1417 |

* As determined by Foil Method, 45 minutes at 45°C

Solubility Characteristics

PCA® 303LF resin is soluble in most commonly used organic solvents, e.g., aromatic hydrocarbons, alcohols, esters, and ketone solvents. Though the solubility of PCA 303LF resin in water is limited, when blended with most other water-reducible resins, tolerates dilution in water.

Reactivity and Catalysis

PCA® 303LF resin with hydroxyl, carboxyl and amide functionalities on other polymers is typically catalyzed by the presence of a strong acid catalyst (pKa value of <1). Because of its high functionality and low tendency to self-condense, PCA® 303LF resin is a very effective crosslinking agent. When used with polyester resins, in particular, it can provide films with high flexibility and formability. To optimize the quantity of PCA® 303LF, loading to be established experimentally.

Stabilization

Solvent based coating formulations containing PCA 303LF resin can be stabilized by adding either alcohol solvents or amines. For many high solids formulations, a combination of both is desired. For a water borne system, pH should be kept at >8 for optimum stability.

Advantages

- Economical
- Wide compatibility and solubility
- Solvent-free & Excellent stability
- Excellent hardness-film flexibility
- Fast catalyzed cure response

Application Areas

- Automotive finishes
- Container coatings & Coil coatings
- High solids finishes
- Water borne finishes
- General metals finishes & Inks

Health and Safety Information

Refer MSDS for complete details

REACH Compliance:

Material is meeting the REACH compliance.

Storage properties

Stable for one year, when stored tightly at normal room temperature.

Packaging

200/225/240 kgs in MS Drums/1200 kgs. IBC/Tanker
Note:

Information in this publication is believed to be accurate and is given in good faith, but it is for the customer to satisfy itself of the suitability for its own particular purpose. RCPL gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that law prevents such exclusion.

RAJSHA CHEMICALS PRIVATE LIMITED

Plant:

Block No.: 637&634P, Lamdapura Road, At. Manjusrar
PO: Lamdapura, Ta: Savli, Dist. Vadodara 391 775, India
Tel – +91 9662049271
Email – office@rajsha.com

TWC Corporate Office:

Hi Tech Chambers, 5th Floor, 84/1B Topsia Road (S)
Kolkata 700 046, India
Tel – 2285 1278 / 1279. Fax - +91 33 2285 1280
E mail – info@twc.in, W:www.twc.in