CRAYAMID®195X-60

ARKEMA COATING RESINS

Product Application details

CRAYAMID® 195X-60 is a general-purpose amino polyamide curing agent designed for use with epoxy resin to produce both topcoats and primers for a wide variety of substrates. A unique characteristic of this product is its excellent compatibility with liquid epoxy resins, making it particularly suitable in the formulation of defect free low VOC coating systems without the need for lengthy induction periods. Coating based on CMD 195X have extremely fast surface dry, excellent resistance properties and adhesion to metallic substrates which makes them useful in marine and heavy duty industrial coatings.

Polymer Type

- Amino-polyamide Resin

Sales Specifications

% Solid Content at (125°C, 1gm, 1hr) ISO 3251	58 - 62
Viscosity in Poise at 40°C,	30 – 60
Colour, Gardner scale (ISO 4630)	Max 8
Amine value, mg KOH/g (Perchloric Method)	240 - 270

Other Characteristics[1]

Volatile	Xylene
Density / Specific Gravity at 20°C, g/ml (ISO 2811)	0.95
Typical Active Hydrogen Equivalent weight	240

Note: Amine value and typical active hydrogen equivalent weight are relative to solid resin

The data provided for these properties are typical values, intended only as guides, and should not be construed as sales specifications

Formulation Guidelines

RECOMMENDATION FOR USE

Paints based on CRAYAMID® 195X-60 have considerably faster surface drying times than hose based on conventional polyamides or their adducts, and do not require any induction period. The fast set-up time of coatings based on CRAYAMID® 195X-60 reduces the risk of hardener migrating when curing at low temperature. Consequently, film defects such as greasiness are much reduced or totally eliminated. CRAYAMID® 195X-60 is compatible with both solid and liquid epoxide resins, thereby giving greater flexibility in paint formulation. Fast surface curing, in conjunction with improved epoxide resin compatibility, gives improved performance when cure takes place under adverse conditions such as high humidity. Whilst the mix ratio when using CRAYAMID polyamides is not critical, optimum performance of a coating is achieved by Stoichiometric mixing of the epoxy and CRAYAMID® 195X-60:

The mix. ratio is calculated from the active Hydrogen equivalent weight (AHEW) since each epoxy group in the base resin will react with one active hydrogen present in the polyamide.

The AHEW of CRAYAMID 195X-60 is typically 240 on solid resin. Considering that each epoxy reacts with one reactive hydrogen, the mix ratio of CRAYAMID 195X - 60 and an epoxy resin with epoxide equivalent approx.500 (1) is calculated as follows;

Resin	Mass of solid resin (g)	Mass of resin solution (g)
CRAYAMID® 195X-60	240	400
75% epoxy resin	500	667

CURE RATE

A 65:35 epoxy resin (1) : CRAYAMID® 195X-60 blend on solid resin will reach a tack free time of 50 minutes at 25°C. Films will touch dry more rapidly if higher molecular weight resins are used. An induction period to ensure complete compatibility is recommended.

POT LIFE

Reaction between the epoxy resin and CRAYAMID® 195X-60 will commence as soon as the reactants are mixed. A 65:35 epoxy (1) : CRAYAMID® 195X-60 mixture on solid resin will have a pot life of approx. 10 hours (where pot life is determined as the time taken for a 200g mass of resin at 25°C to double its initial viscosity). Solvents have a considerable effect on pot life, e.g. alcohols tend to reduce pot life, whereas esters and ketones tend to extend it. Since ketones and esters form complexes with amino polyamides on storage, these solvents should only be incorporated into the epoxy resin component.

COMPATIBILITY

CRAYAMID®195X-60 is compatible with many synthetic resins, varnishes, oils and other media.

Notes: (1) Araldite® 6100 (Huntsman) or Epikote™1001 (Momentive), (2) Ancamine® K54 (Air Products)

Product Safety

Please refer to the corresponding Safety Data Sheet.

Storage & Handling

CRAYAMID®195X-60 should be stored indoors in the original, unopened and undamaged container, in a dry place at a temperature not exceeding 30°C. Exposure to direct sunlight should be avoided.

In the above mentioned storage conditions the shelf life of the resin will be 12 months from the date of manufacturing.

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