

COATING RESINS

TECHNICAL DATA

CRAYAMID 115X(70%)

SALES SPECIFICATION

Non-volatile content, % @ 150°C (ISO 3251)	68 - 72
Viscosity in CPS at 40°C	1200 - 1800
Colour, Gardner scale (ISO 4630)	≤ 11
Acid value, mg KOH/g (ISO 3682)	NA
Amine value, mg KOH/g (HCL Method)	205 – 220

OTHER PROPERTIES

Volatile	Xylene
Flash point, °c (Iso3679)	24 (Typical)
Density at 20°C	0.97
Typical hydrogen Equivalent Weight	240

Note: Amine Value relative to solid resin

PRODUCT INFORMATION :

CRAYAMID 115X is a general purpose liquid amino polyamide resin supplied at 70% solid content in xylene. It is used in conjunction with suitable epoxy resins to produce both top coats and primers for wide variety of substrates. The main characteristics are its excellent resistance properties and adhesion to metallic substrates. It is compatible with many synthetic resins, varnishes, oils and other media.

RECOMMENDATIONS FOR USE :

The selection of a particular grade of epoxy will depend upon the end use of the product. It is recommended that for high build coating it is always recommended to use low molecular weight epoxy. In solvent based coatings medium molecular weight and unmodified liquid epoxy resins may be used, while for adhesive applications either the unmodified or modified liquid epoxy resins are recommended. While the mixing ratio using **CRAYAMID** polyamides is not critical, optimum performance of the coating is achieved by stoichiometric mixing of the epoxy resin and **CRAYAMID 115X**. The mix ratio is calculated on the basis of one Active Hydrogen Equivalent weight of the polyamide resin, will react with each epoxy group in the base resin. The AHEW of the polyamide resin **CRAYAMID115X** is typically 240 on solid resin. Considering that each epoxy reacts with one active hydrogen the mix ratio of **CRAYAMID115X** and an epoxy resin with epoxide equivalent approx. 500 is calculated as follows;

Resin	Mass of solid Resin	Mass of Resin Solution
CRAYAMID115X	240g	343g
75% Epoxy resin 1	500g	667g

65:35 based on solid resin. Excess polyamide in a coating will impart flexibility and adhesion at the expense of solvent resistance.

CURE RATE:

A 65:35 epoxy resin : **CRAYAMID115X** blend on solid resin will reach a tack free time in 30 mins. At 25°C. Film will obviously dry more rapidly if higher molecular weight epoxy resins are used. An induction period to ensure complete compatibility is recommended. Cure of epoxy: polyamide can be accelerated by the addition of catalysts and in particularly Tris (dimethylaminomethyl) phenol types which are recommended for use at a level of 1 – 5 % (calculated by weight on total resin). It should be noted, that when catalysts are employed pot life will be reduced and there may be an adverse effect on flexibility and colour.

POTLIFE :

Reaction between the epoxy resin and **CRAYMID 115X** will commence as soon as the reactants are mixed . A65:35 epoxy: **CRAYAMID115X** mixture on solid resin will have a limited pot life. Solvents will have a considerable effect on pot life e.g. alcohols tend to reduce its pot life where as 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.

ADHESIVES:

CRAYAMID 115X : epoxy resin systems demonstrate excellent adhesion to a wide variety of surfaces, such as glass, wood, ceramics, masonry, leather and plastic substrates. The pot life of a **CRAYAMID 115X** : epoxy resin adhesives will cure at ambient temperature but cure time can be reduced by heating to elevated temperature.

CRAY VALLEY

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The resulting epoxy:polyamide mix ratio in this case is approx.

NOTES:

1. Epoxy resins epoxide equivalent approx. 500
Araldite 6100 - Cieba Geigy limited.
2. Unmodified epoxy resin epoxide equivalent 200
Epikote 828 - shell Chemicals.
3. Modified epoxy resins epoxide equivalent approx. 200
Epikote 915 - Shell Chemicals