

Technical Data Sheet

PPA - 7115 X 70

PHENALKAMIDE (PHENALKAMINE MODIFIED WITH POLYAMIDE) EPOXY HARDENER

Phenalkamide **PPA** – **7115X70** is a Mannich base reaction product. It shows rapid cure with workable pot life, superior corrosion resistant properties & adhesion to damp surfaces. It has light colour, superior colour stability & longer pot life to card phenol based Phenalkamines. It offers superior resistance to humidity, acids, alkali, water, solvents & various chemicals.

Chemical Structure

$$\begin{matrix} OH \\ & \\ & \\ & \end{matrix} - CH2 - NH \quad \bigg[(CH_2)_2 - NH \bigg]_n CH_2 - \bigg[- CH2 - NH \quad \bigg[(CH_2)_2 - NH \bigg]_n CH_2 - \bigg[- CH2 - NH \\ & \\ & \end{matrix} \bigg]_n CH_2 - \bigg[- CH2 - NH \quad \bigg[- (CH_2)_2 - NH \bigg]_n CH_2 - \bigg[- (CH_2)_2 - NH \\ & \\ & \\ & \\ & \\ & \end{matrix} \bigg]_n CH_2 - \bigg[- (CH_2)_2 - NH \bigg]_n CH_2 - \bigg[-$$

R = H, ALKYL, ARYL

R' = MONOMERIC, DIMERIC OR POLYMER OF FATTY ACID

Features

- Rapid cure even at low temperatures
- Good chemical solvent & water resistance
- Very good compatibility with
 - i) Epoxy resin based on bis- phenol A
 - ii) Epoxy resin based on bis- phenol F
 - iii) Epoxy resin based on novolacs
 - iv) Most of the organic solvents & their combinations
- Non-critical mixing ratios
- Excellent curing under humid & damp conditions
- Good adhesion to mechanically cleaned, damp surfaces
- Superior corrosion resistance
- Very good flexibility
- Workable pot life
- Light colour
- Colour stable on heat & U.V. exposure
- Easy handling at low temperatures

Applications

- Pipeline & tank coatings
- Surface tolerant primers for metallic substrates
- Marine, protective & industrial coatings

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Typical Properties

Sr. No.	Properties	Unit	Typical Properties
i)	Appearance	Visual	Pale Yellow Viscous Liquid
ii)	Colour	Gardner	10 Max
iii)	N.V.M	%	70 ±2
iv)	Amine Value	mg KOH / g	150 – 200
v)	Viscosity @ 25° C	cPs	500 – 1500
vi)	Density @ 25° C	g / cm³	0.97 – 0.99
vii)	Flash Point (Closed Cup)	°C /°F	32 / 89.6
viii)	AHEW	g /eq.	314
ix)	Recommended PHR (EEW -190)		165

Curing Properties

Formulation

Liquid Epoxy Resin (EEW - 190)	100
Paladin PPA - 7115X70	165

Optimum Curing Schedule 7 days at 25° C

Gel Time (100g @ 25° C) Mixing	6 - 7 hrs

B.K Drying Recorder, set time, (200 microns) 8 mil (Liquid Epoxy Resin EEW - 190)

@ 25° C	3 - 4 hrs
@ 5° C	15 - 20 hrs
@ 0° C	-

Storage & Stability

Hardener **PPA - 7115X70** should be stored in a cool dry place at 18 - 25° C in the sealed containers to achieve shelf life of minimum one year. Product can react with moisture & carbon dioxide in the air. This may result in increased viscosity & reduced activity.

Handling Precautions

May be harmful if ingested or absorbed through the skin & can cause sensitization. Will cause severe inflammation in contact with eye & skin. Wash thoroughly after handling. Adequate ventilation is essential during application. Containers should be tightly closed when not in use or during transportation. Do not inhale mist or vapours. It is recommended to use gloves, safety glasses & protective clothing for safe handling.

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First AID

In case of

Inhalation : Remove to fresh air & give oxygen if breathing is difficult.

Ingestion: Give plenty of water. Do not induce vomiting. Contact a physician. **Contact with eyes**: Flush eyes with plenty of clean water for at least 15 minutes.

Contact with skin: Immediately wash with mild soap & water.

Declaimer

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