



# RESINS & PLASTICS LTD.

## R-5101

### TECHNICAL DATA SHEET

**R-5101** Liquid Cycloaliphatic amine adduct curing agent.

#### Description:

R-5101 is liquid cycloaliphatic amine adduct curing agent, it is used in combination with unmodified/modified liquid epoxy resin for self-levelling top coat applications. It offers medium pot life, good wetting ability and high gloss coatings.

#### Application and Key Properties:

Suitable for formulating self-levelling top coats with various choice of resins.

Low color and color stability, High gloss in coatings, Low viscosity and good wettability.

#### Product specification:

##### R-5101

Sr. No	Specification	Units	Reference standard	Specification
1	Appearance	Visual	WI/QC/FG/A/2	Clear light yellow liquid
2	Colour	Gardener Scale	ASTM D1544	1 Max
3	Viscosity @25°C on B/F Spindle- 27, RPM- 100	cPs	ASTM D 2196	270 - 380
4	Amine Value	mg KOH/g	WI/QC/FG/B/25	300 - 320
5	Odour	-	NA	Amine
7	Density	g/cc	ASTM D-1475	1.02 - 1.04
8	AHEW	Eq/H+	NA	115

#### Product Performance Data:

##### Basic Properties:

Sr. No	Specification	Units	Typical value
1	Mix ratio with Epoxy EEW-190	-	60 gm Epoxy + 40 gm R-5101
2	Pot Life @25°C	Min	28 – 45

### Mechanical and Thermal properties:

Sr. No	Specification	Units	Reference standard	Result
1	Compressive strength	MPa	ASTM C 190-2023	68.8
2	flexural strength	MPa	ASTM C 348-2021	74.9
3	Tensile Strength	MPa	ASTM C 307-2023	51.2
4	Glass transition temperature	°C	DSC	75.71

**\*The neat cast were prepared as per respective standard and cured at Room Temperature for 7 days and then subjected to testing.**

### Chemical Resistance properties:

Properties	units	3 Days	7 Days	28 Days
Water	%	0.025	0.0352	0.0555
Methyl Ethyl Ketone	%	1.1903	2.4415	Destroyed
Xylene	%	0.0149	0.0151	0.0165
DI Water	%	0.0251	0.0308	0.0608
10% Acetic Acid	%	0.2277	0.3152	0.5839
70% H <sub>2</sub> SO <sub>4</sub>	%	0.0994	0.1051	0.1667
50% NaOH	%	0.0105	0.0179	0.397

**\*1cc of cast was prepared, cured for 7 days at Room Temperature , immersed in respective chemical and % weight change was recorded.**

### Storage Conditions:

Components should be stored away from light & heat. Partly emptied containers should be tightly closed immediately after use to avoid exposure to air and light. For information on waste disposal and hazardous products of decomposition in the event of a fire, refer to the material safety data sheets (MSDS) for these particular products. The shelf life is 12 months for all components.