

IRS 2112 Fast Curing General Purpose Epoxy Adhesive



Description

IRS 2112 Fast Curing General Purpose Epoxy Adhesive is a popular, rapid curing, general purpose two-part epoxy adhesive. It has excellent adhesion to a wide variety of substrates, including metal, glass, composites, GRP, glass fibre, ceramic, ferrite, wood, rigid plastic and many other common substrates. It can be used for structural bonding and sealing.

IRS 2112 cures to handling strength in minutes (even in smaller mass applications), and typically reaches full cure in 6-12 hours. Mixed, it has a viscosity like syrup, and cures to a hard, glossy, almost-clear finish.

Key Properties

- Versatile, general-purpose adhesive
- Fast curing
- Excellent electrical properties
- Convenient packaging
- Non-toxic
- RoHS compliant

Typical Properties

Property	
Mix ratio	1:1
Mixed viscosity	27,000 cps
Gel time (room temperature)	4-5 minutes
Hardness, Shore D	75-80
Specific gravity (mixed)	1.15
Temperature resistance	-55°C to +100°C
Tracking resistance (CTI)	>600 V
Volume resistivity	15 ¹⁰ ohm.cm
Dielectric strength (2mm)	20 kV/mm
Dielectric constant	4.1 50Hz
Dielectric loss factor Tan delta	0.8 50Hz
Colour	Clear/Amber



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Cure Schedule

Bondline Temperature	Working Life	Gel Time	Light Handling	Full Cure
2g mass @ RT*	3 minutes	5 minutes	60 minutes	12 hours
10g mass @ RT*	2 minutes	4 minutes	10 minutes	6 hours

*Room temperature = 20-25°C

Cure time will depend on cross sectional area, ambient conditions, and mixing method. The above data is given as a guide only. Hotter temperatures may be used for faster cure but will result in higher post cure shrinkage and higher cure exotherm. Experimentation and testing is suggested to avoid side effects.

Storage and Shelf Life

24 months between 15 - 25 °C

Many epoxy resin systems are prone to crystallization as epoxy resin is a super-cooled fluid. This condition may give the product a gritty or grainy appearance (or hazy in clear products). Products in this state will not usually cure to normal and expected properties. In extreme cases it may appear solid and cured. Fluctuating temperatures (within 5 to 50 °C) aggravate this phenomenon. Heating the individual component to 50 to 60 °C while stirring can usually restore products to original state.

Health and Safety

Epoxy resin systems may cause sensitisation by skin contact or inhalation may be corrosive, harmful or toxic. It is therefore strongly recommended that skin and eye contact is avoided by the using of appropriate personal protective equipment such as gloves, safety glasses or goggles and overalls.

Wash any contamination from the skin immediately and thoroughly and do not eat, smoke or drink in the working vicinity. Under normal working conditions a good source of ventilation is adequate, however if the material is heated, or where vapour levels are likely to exceed the occupational exposure limits appropriate respiratory protection must be worn.

Local exhaust ventilation (LEV) may be required especially for curing ovens or where large volumes of material are curing.

The above is given as a guide only; please refer to IRS2112 safety data sheet individual/specific advice.

Useful Resources

[Product webpage](#)

Warranty

Statements, technical information and recommendations contained herein are based on tests we believe to be reliable but they are not to be construed in any manner as warranties expressed or implied. The user shall determine the suitability of the product for his intended use and the user assumes all risk and liability whatsoever in connection therewith.