Hysol

ECCOBOND 24
Optically Clear, Two Component Epoxy Adhesive

Key Feature:	Benefit:
• Optical clarity	• Bonding of transparent materials
• Low viscosity	• Ease of dispensing and use
• General purpose	• Bonds well to glass, metal and plastic substrates

Product Description:

ECCOBOND 24 is a two component, general purpose, water white, low viscosity epoxy adhesive which can be cured at room temperature. It has a degree of flexibility which makes it useful in joining materials with dissimilar coefficients of thermal expansion. ECCOBOND 24 Part A may also be cured with Catalyst 23 LV for applications that require additional lap shear strength.

Applications:

ECCOBOND 24 is designed for bonding transparent materials such as glass and where a thin glue line is desired. It is also recommended for many plastics such as polystyrene, polysulfone, rigid polyvinyl chloride, polycarbonate, polyvinylidene dichloride and epoxies.

Instructions For Use:

Thoroughly read the information concerning health and safety contained in this bulletin before using. Observe all precautionary statements that appear on the product label and/or contained in individual Material Safety Data Sheets (MSDS).

To ensure the long term performance of the bonded assembly, complete cleaning of the substrates should be performed to remove contamination such as oxide layers, dust, moisture, salt, and oils which can cause poor adhesion or corrosion in a bonded part. For information on proper substrate preparation, refer to the reprint “Good Adhesive Bonding Starts With Surface Preparation” available from Emerson & Cuming.

Accurately weigh resin and hardener into a clean container in the recommended ratio. Weighing apparatus having an accuracy in proportion to the amounts being weighed should be used.

Blend components by hand, using a kneading motion, for 2-3 minutes. Scrape the bottom and sides of the mixing container frequently to produce a uniform mixture. If possible, power mix for an additional 2-3 minutes. Avoid high mixing speeds which could entrap excessive amounts of air or cause overheating of the mixture resulting in reduced working life.

Apply the adhesive to all surfaces to be bonded and join together. In most applications only contact pressure is required.

Properties of Material As Supplied:

Property	Test Method	Unit	ECCOBOND 24 Part A	ECCOBOND 24 Part B	Catalyst 23 LV
Chemical Type			Epoxy	Amine	Amine
Appearance	Visual		Clear liquid	Clear liquid	Clear liquid
Density	ASTM-D-792	g/cm^3	1.2	1.0	1.01
Brookfield Viscosity	ASTM-D-2393	Pa.s cP	8 8,000	0.03 30	0.02 20

Properties of Material As Mixed:

Property	Test Method	Unit	24 Part B	23 LV
Mix Ratio - Amount of Part B per 100 parts of Part A		By Weight	28	30
Working Life (100 g @ 25°C)	ERF 13-70	minutes	30	120
Density	ASTM-D-792	g/cm^3	1.17	1.15
Brookfield Viscosity	ASTM-D-2393	Pa.s cP	0.8 800	0.4 400

Cure Schedule:

Cure at any one of the recommended cure schedules. For optimum performance, follow the initial cure with a post cure of 2 - 4 hours at the highest expected use temperature. Alternate cure schedules may also be possible. Contact your Henkel Corp. Technical Representative for further information.

Temperature	Cure Time (hours)	
°C	24 Part B	23 LV
25	24	24
45	4	4
65	2	2

Properties of Material After Application:

Property	Test Method	Unit	24 Part B	23 LV
Tensile Lap Shear Strength aluminum to aluminum @ 25°C	ASTM D-1002	mPa psi	12.4 1,800	31 4,500
Temperature Range of Use		°C	-65 to +105	-65 to +95
Dielectric Strength	ASTM-D-149	kV/mm V/mil	16.5 420	15.7 400
Volume Resistivity @ 25°C	ASTM-D-257	Ohm-cm	10^{14}	10^{15}

Storage and Handling:

The shelf life of ECCOBOND 24 Parts A and B is 12 months at 25°C. For best results, store in original, tightly covered containers. Storage in cool, clean and dry areas is recommended. Usable shelf life may vary depending on method of application and storage conditions.

Certain resins and hardeners are prone to crystallization. If crystallization does occur, warm the contents of the shipping container to 50-60°C until all crystals have dissolved. Be sure the shipping container is loosely covered during the warming stage to prevent any pressure build-up. Allow contents to cool to room temperature before continuing.

Health and Safety:

The ECCOBOND 24 Part A, like most epoxy compounds, possesses the ability to cause skin and eye irritation upon contact. Certain individuals may also develop an allergic reaction after exposure (skin contact, inhalation of vapors, etc.) which may manifest itself in a number of ways including skin rashes and an itching sensation. Handling this product at elevated temperatures may also generate vapors irritating to the respiratory system.

The ECCOBOND 24 Part B and Catalyst 23 LV are classified as corrosive materials. Direct contact with unprotected eyes or skin can cause severe burns. Certain individuals may also develop an allergic skin or respiratory reaction after exposure. These reactions may manifest themselves in a number of ways including skin rashes, itching sensation and breathing difficulties. Handling these products may also generate vapors irritating to the respiratory system.

Good industrial hygiene and safety practices must be used when handling this product. Proper eye protection and appropriate chemical resistant clothing must be worn to prevent contact. Consult the Material Safety Data Sheet (MSDS) for detailed recommendations on the use of engineering controls, personal protective equipment and first aid procedures.

This information is only a brief summary of the available safety and health data. Thoroughly review the MSDS for more complete information before using this product.

Attention Specification Writers:

The values contained herein are considered typical properties only and are not intended to be used as specification limits. For assistance in preparing specifications, please contact Henkel Corporation Quality Assurance for further details.

Note

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