

Technical Data Sheet Tuffbond® 304

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Product Description

Hernon® Tuffbond® 304 is a modified epoxy adhesive that provides a very fast room temperature cure. **Tuffbond® 304** exhibits very good moisture chemical and heat resistance. This very fast cure epoxy adhesive is specially formulated for rapid in-line assembly of loud speakers. **Tuffbond® 304** is also recommended for bonding metals, wood, ceramics, etc., and can be used for potting and encapsulation of electrical and electronic components.

Typical Applications

- Bonding voice coil to cone
- Bonding pole piece to magnet
- Bonding alnico magnet to base
- Rapid curing structural and electrical repair kit
- Rapid curing laminates and "gel" coats
- Potting electronic boards
- Encapsulating electrical and electronic components

Product Benefits

- Fast at room temperature (about 4 minutes)
- Low shrinkage
- 100% reactive, non-solvent system
- Easy mixing ratio of resin and hardener
- No fuming on gelation

Typical Properties (Uncured)

Property	Part A	Part B
Base	Epoxy	Amine
Appearance	Black	Yellow
Viscosity at 25°C, cP	10,000 to 16,000	18,000 to 25,000
Mix Ratio by Weight	1	1
Specific Gravity	1.17	1.13
Flash Point	See MSDS	See MSDS

Typical Properties (Cured)

Property	Value
Working Life at 22°C (100g), minutes	3 – 5 mins
Durometer Hardness, Shore D	80 - 90
Operating Temp., °C	-54 to 82

Typical Cured Performance

Room Temperature Cure

Shear Strength on Aluminum lap-shear specimens tested according to ASTM D1002.

Cure Time at 22°C	Shear Strength
24 Hours	2400 psi
30 Days	2600 psi

Chemical/Solvent Resistance

Shear Strength on Aluminum lap-shear specimens tested according to ASTM D1002. Cured for 24 hours at 22°C. Immersed in Chemical/Solvent for 30 days at 22°C.

Chemical/Solvent	% Strength Retention
10 % Sodium Chloride	83
Distilled Water	81
5% Acetic Acid	79
Petrolol 99	100
Hydrocarbon Test Fluid	94
Ethylene Glycol	100
Hydraulic Oil	99

General Information

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Material Safety Data Sheet (MSDS).

Storage

Tuffbond® 304 should be stored in a cool, dry location in unopened containers at a temperature between 46°F to 82°F (8°C to 28°C) unless otherwise labeled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused material, do not return any material to its original container.

Dispensing Equipment

Hernon® offers a complete line of semi and fully automated dispensing equipment. Contact **Hernon® Sales** for additional information.

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