

Technical Data Sheet ReAct™ 730

April 2006

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Product Description

Hernon® ReAct™ 730 is a high strength non-flammable structural adhesive. This adhesive provides a resilient and rapid cure at room temperature when used with **Hernon® EF® Activator 56** or **EF® Activator 59**. **ReAct™ 730** will provide high strength bonds on a variety of metals, ceramics, glass, and some plastics.

Typical Properties (Uncured)

Property	Value
Chemical type	Modified methacrylate
Appearance	Light yellow liquid
Viscosity @ 77°F (25°C), cP	45,000 to 90,000
Specific gravity	1.09
Flash point	See MSDS

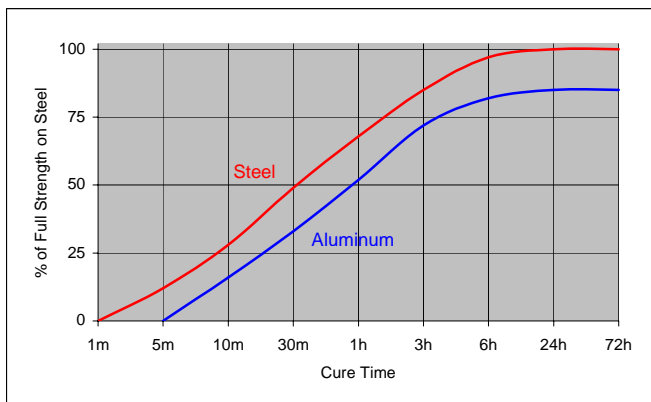
Typical Properties (Cured)

Property	Value
Coefficient of thermal expansion, ASTM D696 (K ⁻¹)	8 x 10 ⁻⁶
Coefficient of thermal conductivity, ASTM C 177, W/(m·K)	0.10
Specific Heat, kJ/(kg·K)	0.30
Hardness, Shore D	60
Temperature Range, °F	-60 to 250

Typical Curing Performance

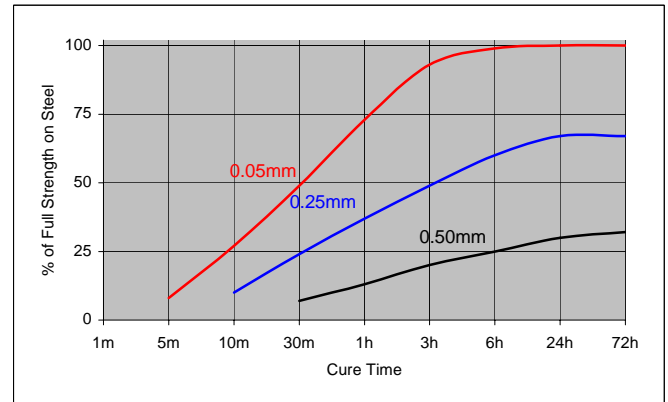
Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The graph below shows the shear strength developed with time on grit blasted steel lap shears and tested according to ISO 4587. (**EF® Activator 59** applied to one surface)



Cure Speed vs. Bond Gap

The rate of cure will depend on the bondline gap. The following graph shows shear strength developed with time on grit blasted steel lap shears at different controlled gaps and tested according to ISO 4587. (**EF® Activator 59** applied to one surface)



Typical Cured Performance

Cured 24 hours at 22°C. Grit blasted steel specimens. (**EF® Activator 59** applied to one surface)

Test Method	Property	Value
ISO 4587	Shear Strength, N/mm ² (psi)	20.7 (3000)
ISO 6922	Tensile Strength, N/mm ² (psi)	16.6 (2400)

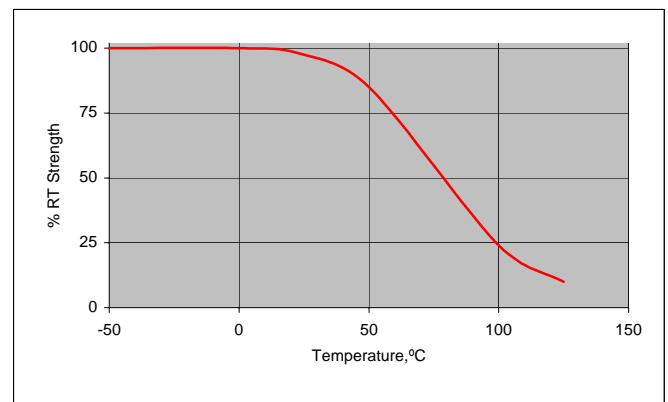
Typical Environmental Resistance

Cured for 1 week @ 22°C.

Grit blasted steel lap-shear specimens (**EF® Activator 59** applied to one surface), Shear Strength, ISO 4587

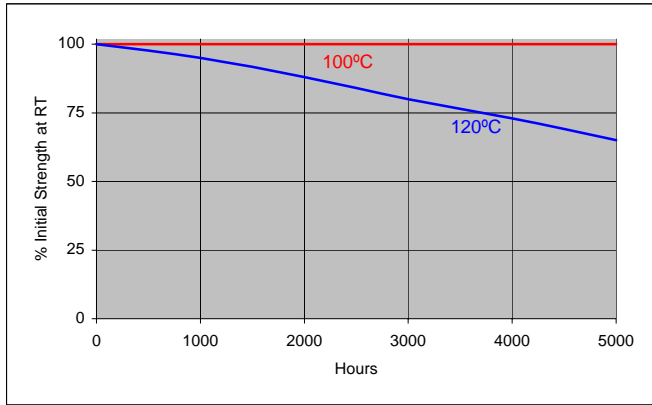
Hot Strength

Tested at temperature



Heat Aging

Aged at temperature indicated and tested at 22°C



Chemical/Solvent Resistance

Aged under conditions indicated and tested at 22°C.

Chemical/Solvent	Temp (°C)	% of Initial Strength	
		350 hours	720 hours
Water Glycol 50/50	87	60	60
Phosphate Ester	87	95	75
Acetone	22	10	10
Unleaded Gasoline	22	20	20
Motor Oil	87	90	70

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).

Where aqueous washing systems are used to clean the surfaces before bonding, it is important to check for compatibility of the washing solution with the adhesive. In some cases these aqueous washes can affect the cure and performance of the adhesive.

Directions For Use

1. For best performance bond surfaces should be clean and free from grease.
2. To ensure a fast and reliable cure, **EF® Activator 56 or 59** should be applied to one of the bond surfaces and the adhesive to the other surface. Parts should be assembled within 15 minutes.
3. The recommended bondline gap is 0.1mm. Where bond gaps are large (up to a maximum of 0.5 mm), or faster cure speed is required, **EF® Activator 56 or 59** should be applied to both surfaces. Parts should be assembled immediately (within 1 minute).

4. Excess adhesive can be wiped away with organic solvent.
5. Bond should be held clamped until adhesive has fixtured.
6. Product should be allowed to develop full strength before subjecting to any service loads (typically 24 to 72 hours after assembly, depending on bond gap, materials and ambient conditions).

Storage

ReAct™ 730 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.

These suggestions and data are based on information we believe to be reliable and accurate, but no guarantee of their accuracy is made. HERNON MANUFACTURING®, INC. shall not be liable for any damage, loss or injury, direct or consequential arising out of the use or the inability to use the product. In every case, we urge and recommend that purchasers, before using any product in full scale production, make their own tests to determine whether the product is of satisfactory quality and suitability for their operations, and the user assumes all risk and liability whatsoever, in connection therewith. Hernon's Quality Management System for the design and manufacture of high performance adhesives and sealants is registered to the ISO9001:2000 Quality Standard.