

**HERNON 746 / EF37173****THERMAL CONDUCTIVE ADHESIVE****PERFORMANCE**

**HERNON 746** is an excellent thermally conductive two-component adhesive with extremely fast curing. It offers effective thermal bonding of electronic components to heat sinks. The material has an outstanding bonding property so that mechanical devices are no longer required.

The adhesive comprises a paste-like adhesive and a fluid activator. The components are not mixed. Apply a small amount of the adhesive to the surface to be bonded and the activator to the other bonding surface. Press together to bond. Necessary corrections can be made within 15-30 seconds. The bond is secure after 5 minutes at room temperature and is fully cured within 24 hours.

Extensive tests are evidence of the excellent thermal and mechanical properties of **HERNON 746**.

**HERNON 746** fulfils the extremely strict requirements with regard to thermal, mechanical, chemical and environmental pollution.

Vibration tests of 10g show no negative effects. After performing extensive temperature, humidity and ageing tests, **HERNON 746** not only fulfils but actually exceeds by far the basic properties with regard to tensile strength and thermal conductivity.

**APPLICATION**

**HERNON 746** bonds heat sinks to components and parts. It also allows parts and components to be bonded reliably not only to vertical cooling surfaces but also to metallic housing surfaces and side panels without having to use clips, screws or other mechanical forms of fixture. Typical applications include the bonding of transformers, transistors, microprocessors and other heat-generating components to PCBs or coolers. **HERNON 746** is particularly suitable for bonding LED chips to heat sinks.

**HERNON 746** has numerous advantages compared to traditional adhesive bonds, e.g. thermal hot melt adhesive or epoxy adhesive. It ensures permanent use and reliably complies with the thermal and technical properties. The adhesive is easy to apply and thus considerably reduces both production costs and service repair times.

Surfaces to which **HERNON 746** adhesive and activator have been applied can be subjected to virtually unlimited pause times without the properties of the bonding surface deteriorating.

**HERNON 746** offers substantial cost advantages compared to mechanical fixtures or liquid adhesives which frequently necessitate extensive investments in the production process and equipment.

**HERNON 746 / EF37173**

**THERMAL CONDUCTIVE ADHESIVE**



The following values have been achieved by tests carried out by the manufacturer. A consistency of quality is guaranteed by continuous quality monitoring. Extensive testing is required for specific applications.

Property		Test-Method
Color	white	
Max. adhesive gap	[mm]	0.25
Shear strength	[N/mm <sup>2</sup> ]	5,5
Tensile strength	[N/mm <sup>2</sup> ]	15.2
Thermal expansion coefficient	[ppm/K]	110
Thermal conductivity	[W / m*K]	>0.76
Dielectric strength	[kV/mm]	26.78
Flammability	V-O	UL 94
Processing temperature	[°C]	20...28
Operating temperature	[°C]	-55 ... +150
Storage temperature	[°C]	8...28
Long-time-storage at 22°C	[Years]	min. 3
Standard packing quantity	[Pcs.]	10/50/100/500/1000

**APPLICATION HINTS**

We recommend using: Lint-free cotton cloth, cleaning agents [e.g. Toluene, Isopropyl alcohol]  
Please observe the safety regulations when using solvents. Wear gloves when working for long periods!

In order to ensure an optimum adhesive bond, the surfaces of the parts to be bonded must be dry and free from dust and grease. In particular, traces of *thermal conduction paste* or residue from *mould releasing agents* on plastic housings prevent reliable bonding.

Apply **HERNON 746** adhesive sparsely to one of the bond surfaces. Apply a thin film of **HERNON EF37173** activator to the other surface to be bonded.

Slightly turn the parts to be bonded and join by pressing down firmly for several seconds. The ideal processing temperature is 20 ... 28°C; the position of the parts can be corrected within 15-30 seconds.

Wait 5 minutes for the adhesive bond to reach approx. 70% of its final strength and 24 hours to reach 100% final strength. Excess adhesive that accumulates at the edges can be easily removed.

Note: Never apply pressure to the rotor of a fan! Only apply pressure to the fan frame!

**ORDER INFORMATION**

<b>HERNON 746-04</b>	Adhesive, tube with 4ml	950000001
<b>HERNON 746-10</b>	Adhesive, tube with 10ml	950000002
<b>HERNON 746-25</b>	Adhesive, tube with 25ml	950000003
<b>HERNON EF37173-10</b>	Activator, vial with closure with brush, 10ml	950000004
<b>HERNON EF37173-52</b>	Activator, vial with closure with brush, 52ml	950000005
<b>HERNON 746 SET-04</b>	thermally conductive two component adhesive, including <b>HERNON 746-04</b> and <b>HERNON EF37173-10</b>	950000007
<b>HERNON 746 SET-25</b>	thermally conductive two component adhesive, including <b>HERNON 746-25</b> and <b>HERNON EF37173-10</b>	950000009

Technical change without notice • 06/15