

**HERNON DISSIPATOR 746
HERNON AKTIVATOR EF37173
THERMAL CONDUCTIVE ADHESIVE**



DESCRIPTION

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.

APPLICATIONS

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.



TYPICAL PROPERTIES

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
Colour	White	
Max. adhesive gap [mm]	0.25	-
Shear strength [N/mm ²]	5.5	ISO 4587
Tensile strength [N/mm ²]	15.2	ISO 527
Thermal expansion coefficient [ppm/K]	110	ASTMD-412
Thermal conductivity W / m*K	>0.76	ASTM C 177
Dielectric strength [kV/mm]	-	
Flammability	V-O	UL 94
Processing temperature [°C]	20...28	
Operating temperature [°C]	-55 ... +150	
Shelf life at 22°C [years]	min. 3	
Storage temperature [°C]	8...28	
Standard Packing	10/50/ 100/50 0/1000	

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

HERNON 746-04	Adhesive, tube with 4ml	950000001
HERNON 746-10	Adhesive, tube with 10ml	950000002
HERNON 746-25	Adhesive, tube with 25ml	950000003
HERNON EF37173-10	Activator, vial with closure with brush, 10ml	950000004
HERNON EF37173-52	Activator, vial with closure with brush, 52ml	950000005
HERNON 746 SET-04	Thermally conductive two component adhesive, HERNON 746-04 and HERNON EF37173-10	950000007
HERNON 746 SET-25	Thermally conductive two component adhesive, containing 950000009 HERNON 746-25 and HERNON EF37173-10	