



TECHNICAL DATA

COPPER SEAL

Anaerobic Adhesive

(Pipe Bonder & Thread Locking Compound)

Copper Seal is an innovative single component adhesive for sealing and securing metal pipes and fittings.

Copper Seal is especially developed for solder-free bonding of copper pipes and fittings in process-water and hot water lines.

Copper Seal possesses good resistance against chemicals, solvents, gas, liquid gas, water and hydrocarbons and is extremely resistant against heat and vibrations.

Description:

- High-quality fourth generation product for quick and easy assembly of water lines and for use in confined spaces and fire-prone areas.
- Excellent alternative to time-consuming and dangerous soldering.
- Universal product for bonding fittings and for securing metallic threads on water heating installations up to 85°C.
- Recommended as a sealant for factory-applied threaded joints in gas appliances and components.

Special Features:

- Approved and certified for use in contact with drinking water.
- Reduces oxidisation, is very economical in use and shortens assembly and repair time by around 75%.
- Possesses an excellent strength of 1,000 psi (69 bar).

Adhesive Properties:

| | |
|------------------------------------------------|------------------------------|
| Composition: | Modified Methacrylate Ester |
| Colour: | Black |
| Viscosity: (Brookfield RVT Spindle 3 @ 20 rpm) | 500 to 800 cps @ 77°F / 25°C |
| Specific Gravity: | 1.11 |
| Diameter Ø of Thread: | 1½" (M36) |
| Gap Filling: | 0.15 mm |
| Flash Point: | > 100°C |

Curing Properties:

| | |
|-----------------------|-----------------|
| Handling Cure Time: | 2 - 4 minutes |
| Functional Cure Time: | 30 – 40 minutes |
| Full Cure Time: | 24 hours |
| Recommended Pressure | up to 20 bar |
| Temperature Range: | -55 to +150°C |

Physical Properties:

| | | |
|--------------------------------------|------|---------------------|
| Coefficient of Thermal Expansion: | k.A. | ASTM D 696, K-1 |
| Coefficient of Thermal Conductivity: | k.A. | ASTM C 177, W/(m·K) |
| Specific Heat, kJ/(kg·K): | k.A. | |



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Chemical Resistance:

| Material | Temperature | % Initial Strength Retained | |
|------------------|-------------|-----------------------------|----------|
| | | 500 hrs | 1000 hrs |
| Acetone: | 22°C | 100 | 95 |
| Ethanol: | 22°C | 100 | 100 |
| Motor Oil: | 125°C | 100 | 100 |
| Petrol/Gasoline: | 22°C | 100 | 100 |
| Brake Fluid: | 22°C | 100 | 100 |
| Water/Glycol: | 87°C | 85 | 85 |

Instructions for use:

The surface should be clean, dry and free of contaminants such as oil or grease. Shake product well before use. **Pipes and Fittings:** Roughen the parts to be bonded with grain 100/80 sanding paper, so that there is enough surface for the adhesive. A solvent-based cleaning product (acetone etc.) is recommended to remove existing dirt and dust. The product should be applied to the pipe fully and as a small adhesive ring to the fitting. The adhesive ring serves equally as a lubricant. **Pipe Threads:** Apply the product to the thread in a 360° ring, while leaving the first thread free. Ensure that the spacing between the threads is sufficiently filled. For coarse threads it is also recommended to apply the product to the internal thread. Tighten the connection as usual and remove any product residue. Properly tightened connections have an immediate sealing effect against low pressures. **Disassembly:** Heat the joint locally to approx. 250°C and disassemble while warm. **Storage:** Anaerobic products must be stored unopened in a cool and dry room at a temperature between 8°C to 28°C. The shelf-life of these products is at least 1 to 2 years (in accordance with the above mentioned storage conditions). Product residues should never be filled back into the original container in order to maintain the original product properties.

Additional Information: 1.) Finally assembled connections should not be realigned. Should it be necessary to remove the fitting, the joint should be removed and cleaned completely. The joint can then be re-assembled with a new product application. This product, along with other liquid or anaerobic sealants on the market, is not allowed in Germany for gas housing installations as per DVGW-TRGI 2008, as a realignment of pre-assembled threaded joints is not possible. Identification: Not allowed in Germany for gas housing installations. 2.) These products are not suitable for pure oxygen and/or oxygen systems and should not be used as a sealant for chlorine or strong oxidizing media. Cracks can occur when used on thermoplastic materials. It is recommended to check the compatibility with such materials.

General information: The information contained herein serves merely as an indication and is given to the best of knowledge. The users must test the suitability of the product for her/its/their respective application independently however. All products purchased from or supplied by Nohtec are subject to terms and conditions set out in the contract. Nohtec warrants only that its product will meet those specifications designated as such herein or in other publications. All other information supplied by Nohtec is considered accurate but are furnished upon the express condition the customer shall make its own assessment to determine the product's suitability for a particular purpose. Nohtec makes no other warranty, either express or implied, including those regarding such other information, the data upon which the same is based, or the results to be obtained from the use thereof; that any product shall be merchantable or fit for any particular purpose; or that the use of such other information or product will infringe any patent.