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# **Technical Data Sheet**

## **E-SEAL 811      Pipe & Thread Sealant**

### **Description**

Anaerobic curing adhesive for sealing of metal thread joints.

Approved for:

Gas ( DVGW, DIN-EN 751-1),

High pressure gas and LPG (Australian Gas Association - Approval No. 5048) for working pressure up to 26 Bars.

Approved for use with gaseous oxygen up to 10 Bars and 60°C (BAM 1432/95 4-755).

Approved for potable water (WRC). Instructions for use with potable water: apply product on male threads only, wait 24 hrs. after assembly.

Meets NSF requirements for use as a sealant in and around food processing areas (Registration no. 141234 - Category P1)

It replaces PTFE tape and yarn and gives instant sealing against moderate pressure.

It seals against gas, water, LPG, hydrocarbons, oils and other chemicals.

Suitable for use with ethanol & methanol based petroleum products

Thixotropic property prevents migration from thread of the sealant before or during curing.

Shocks and vibrations resistant, unaffected sealing properties in the temperature range from -50 to +150°C.

### **Physical properties**

* Composition:	anaerobic methacrylate
* Colour::	yellow
* Fluorescence::	under blue light
* Viscosity (25°C - mPa.s):	20.000 – 70.000 HT thixotropic
* Specific weight (25°C - g/ml):	1,1
* gap filling:	M80 / 2" / 0,30 mm
* friction coefficient $\mu$ :	about 0,10
* Flash point:	> 100°C
* Shelf life 25°C:	2 years

### **Curing performance**

Curing rate depends on the assembly clearance, material surfaces and temperature.

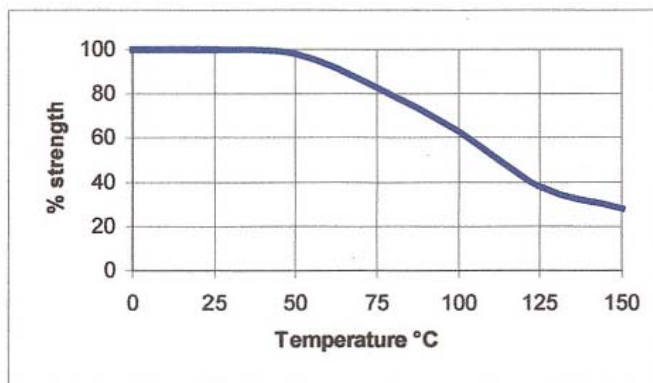
Functional strength is usually reached in 1 – 3 hours and full curing takes 24 – 36 hours.

In case of passive surfaces and/or low temperature a fast cure can be obtained using E-SEAL Pipe Sealant Activator

### **Environmental resistance**

The graph below shows the mechanical strength vs. temperature

Steel specimen ASTM 1002 / DIN 53283



### **Curing properties**

Bolt M 10 x 20 - quality 8.8 - Nut h = 0,8.d at 25°C:

- Handling cure time: 15 - 30 minutes
- Functional cure time: 1 - 2 hours
- Full cure time: 3 - 6 hours
- Shear strength(ISO 10123): 6 - 13 N/mm<sup>2</sup>
- Locking torque (ISO 10964):
  - breakaway: 18 - 24 N.m
  - prevailing: 7 - 14 N.m
- Temperature range: -55 +150°C

**\*\*Note: locking seal test for 24 hours at 230° C on 1 ½" zincate fittings**

### **Chemical Resistance**

Aged under conditions below after 24 hours from polymerisation at indicated temperature.

Substance	°C	Resistance after 100 h	Resistance after 1000 h	Resistance after 5000 h
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Motor oil	125	discrete	discrete	discrete
Gear box oil	125	discrete	discrete	discrete
Gasoline	25	excellent	excellent	excellent
Water/glycol 50%	87	excellent	Good	slight
Brakes oil	25	excellent	excellent	excellent

### **Directions for use**

- The product is recommended for use on metal surfaces.
- Clean and degrease parts before bonding with E-SEAL Pipe Sealant Degreaser / Cleaner
- Apply product to fill completely the gap, assemble parts and hold on for curing time.
- Liquid product can damage coating, some plastics and elastomers and late stress-cracking events might be induced if used with some thermoplastics.
- For application on non metal materials, contact MDM Technical Service.
- For disassembly, use normal tools and eventually heat pieces at 150/250°C, remove any residue of cured product mechanically and clean parts with Acetone

### **Storage**

Keep product in a cool and dry room at no more than +25°C. To avoid contaminations do not refill containers with used product. For further information on applications, storage and handling contact MDM Technical Service

### **Safety and handling**

Consult Material Safety Data Sheet

### **Note**

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