

TB1133E

Anaerobic Liquid Gasket

Three Bond 1133E is a solventless one-component, anaerobic type liquid gasket with low odour and irritation. The product will cure when compressed between two metallic surfaces and isolated from oxygen, and an elastic gasket is formed within a very short time being completely adapted to the surface structure of the fitting surfaces. The product exhibits many advantages over previous types, including lower irritation and good low temperature curing. Three Bond 1133E has been developed specifically as an automotive flange sealant, the cured gasket exhibiting flexibility comparable to that of silicone based gaskets, excellent adhesion to substrates, high temperature and chemical resistance, making this product suitable for sealing aluminium parts and castings as well as rigid steel parts.

1. Features

- Superior chemical resistance after curing.
- Flexibility comparable to that of silicone based products.
- Superior pressure resistance.
- Low temperature curing.
- Improved maintenance and removability capabilities.
- Superior high temperature performance.
- High adhesive strength.
- Lower irritation.

2. Applications

- Automotive engine sealant for oil pans, transmission cases and other flange surfaces.
- Aluminium gear casings, engine castings.

3. Properties

Property	Result	Unit
Colour	Transp. blue	
Viscosity at 25°C	100	Pa·s
Density at 25°C	1.12	g/cm ³
Max. tolerance of joints	0.5	mm
Shore-hardness (after UV curing)	47 D	
Elongation (after UV curing)	100	%
Tensile strength (after UV curing)	18.6	MPa
Shear strength Al/Al after 72 h	6.1	MPa
Effective temperature range	- 50 ~ 150	°C
Shelf life at 25°C	6	months

4. Shear Strength (Al/Al) vs. Curing Time

[MPa]	15 min	30 min	1 h	3 h	6 h
5°C	1.33	1.54	1.76	2.12	2.52
25°C	3.14	3.55	5.25	5.81	5.92

5. Shear Strength (Al/Al) vs. Fluid Immersion

Condition	Result	Unit	Fluid Grade
Engine oil (150°C x 240 h)	11.7	MPa	5W-30 SH
ATF (120°C x 240 h)	9.5	MPa	Dex III
Gear oil (120°C x 240 h)	7.4	MPa	75W-90

Test Method: Substrates: Aluminium lap shear pieces to JIS.H.4000 provisions. Size 1.6 x 25 x 100mm
Overlap: 10mm. Pulling speed: 10mm/minute. Result: average of 5 pulls.

6. Pressure Resistance

Property	Result	Unit
5 minutes after assembly Fe / Fe	> 0.6	MPa
100 cycles (- 30°C x 1 h 130°C x 1 h) Fe / Al	> 0.6	MPa

Test Method: Control equipment: In accordance with JIS K 6820
Compression torque: 14.7 Nm M10 x 8 P1.5 pieces. Completed accuracy: 12S
Pressure increase: 0.1 MPa / minute

7. Maintenance

- Once the flange is pulled apart, the remaining gasket material may be sprayed with Three Bond PANDO 391D gasket remover. The material will swell and become easily removable.

8. Handling

- Keep the liquid gasket in the original container tightly closed and store it in a dark, dry sufficiently ventilated and cool place at 5 ~ 25°C.
- In order to obtain optimal results, remove grease, dirt and other impurities from the fitting surfaces.
- According to the nature of the joints (width, surface roughness, unevennesses, etc.) apply an appropriate quantity of Three Bond 1133E uniformly on one of the fitting surfaces and assemble the parts within 5 minutes.
- When applying the liquid gasket by means of our OLGS (On Line Gasket System), always a uniform, clean and reliable dispensing even in case of the most complicated shapes will be resulting ensuring at the same time a minimum consumption.

9. Packing

310ml cartridge (special packing on request).

Data given here were compiled to the best of our knowledge and are based on experiments and tests of our Company. We cannot guarantee the results obtained through the use of our products, and all products are sold and samples given without any warranty, expressed or implied, of fitness for any particular purpose or otherwise and upon condition that the user shall make his own tests to determine the suitability of the product for his purpose.