

Three Bond 1216E

RTV-Silicone Liquid Gasket

1. Outline

Three Bond 1216E is a single-component, solventfree and non-acid RTV (Room Temperature Vulcanizing) silicone liquid gasket with low odour. Within a very short time it forms a rubber-like highly elastic gasket completely adapted to the surface structure of the flange faces. Three Bond 1216E has been designed specifically for use as an automotive flange sealant with excellent chemical resistance to high-grade oils, initial pressure resistance and mechanical properties.

2. Characteristics

- Excellent oil resistance.
- Improved initial pressure resistance
- High elongation type with excellent mechanical properties
- Excellent high and low temperature performance, maintaining rubber elasticity over a broad temperature range -60°C to 200°C (momentarily 250°C)

3. Applications

- Automotive engine sealant for oil pans, chain cases and other flange surfaces

4. Properties

Property	Result	Unit	Test method
Appearance	Grey paste		3TS - 201 - 02
Reaction mechanism	Oxime	-	-
SOD-Viscosity at 25°C	200	Pa·s	3TS - 210 - 08
Specific gravity at 25°C	1.41	-	3TS - 213 - 02
Tack free time	6	minute	3TS - 219 - 04
Thick film curability	2.8	mm/24h	3TS - 222 - 94

5. Characteristics

5.1 Physical properties of cured material

Property	Result	Unit	Test method
Hardness	57	Shore A	3TS - 215 - 01
Elongation	300	%	3TS - 320 - 01
Tensile strength	3.2	MPa	3TS - 320 - 01
Shear strength Al / Al	2.3	MPa	3TS - 301 - 23

Standard hardening condition: (23°C x 55% RH) x 7 days

5.2 Engine oil resistance (tested against 5W-30)

Property	Result	Unit	Test method
Hardness	33	Shore A	3TS - 215 - 01
Elongation	297	%	3TS - 320 - 01
Tensile strength	3.6	MPa	3TS - 320 - 01
Shear strength Al / Al	2.3	MPa	3TS - 301 - 23

Standard dipping condition: 150°C x 100 hours

6. Initial Pressure Resistance – Blow Out Test

Clearance	Result	Unit	Test method
0.1 mm	0.49	MPa	JIS K6820
0.2 mm	0.25	MPa	JIS K6820
0.5 mm	0.10	MPa	JIS K6820

*1 Test method

Flange: Al width 10mm i.d. 50mm

Pressurised at 10kPa increments and held for 15 seconds

Environmental condition: 25°C x 55% RH

7. Instructions

- Keep the original container tightly closed and store it in a dark, dry, sufficiently ventilated and cool place at a temperature of 10 ~ 25°C.
- The formation of skin and the thickness hardenability of silicone varies depending upon the thickness of the layer, the ambient temperature and the relative air humidity.
- In order to obtain optimum results, remove grease, oil, dirt and other impurities from the fitting surfaces. Whilst the presence of a small amount of oil on the fitting surfaces does not effect the practical bonding strength, in order to fully utilise the performance of the sealant, it is recommended to eliminate oil and dirt from the work. Oil and grease can be effectively removed by cleaning with organic solvent, which can be sprayed, wiped or dip applied and must be dry before sealant is applied.
- According to the nature of the joints (width, surface roughness, unevennesses) apply an appropriate quantity of silicone uniformly on one of the fitting surfaces and assemble the parts within 5 minutes.
- If the liquid gasket is applied by means of our OLGS (On Line Gasket System), this always provides, even in the case of complicated shapes, a uniform, clean and reliable dispensed bead with a minimum consumption.
- Silicone once transferred into another container should not be returned to the original container. Excess sealant can be easily wiped off with a cloth.
- For industrial use only. Keep out of reach of children.
- Avoid excessive skin contact or inhalation of vapour.
- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- After contact with skin, wash immediately with plenty of soap and water.
- Refer to the relevant Material Safety Data Sheet for further information regarding precautions for use.

8. Packing

310 ml cartridges and 20 kg pails (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.