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ThreeBond Co., Ltd.

Technical Data

ThreeBond 1227D

Dealcoholized type one-part cold-curing silicone-based sealant (for FIPG)

1. Outline

ThreeBond 1227D is a dealcoholized type one-part cold-curing silicone-based sealant for FIPG.

Since this sealant is dealcoholized, it does not generate methyl ethyl ketoxime (MEKO). It excels in engine oil resistance and long-life coolant resistance and suitable for sealing from oil- and water-based liquids.

2. Features

- (1) Excellent engine oil resistance
- (2) Excellent long-life coolant resistance
- (3) Dealcoholized type sealant not generating MEKO
- (4) Excellent thermal resistance and cold resistance. It keeps rubber elasticity in a wide temperature range from -60 to 200°C.
- (5) Non-sagging type

3. Use

Sealing surfaces of vehicle engine oil pans, chain cases, etc.

4. Properties

Table 1 Properties

Item	Unit	Measurement	Test method
Appearance	-	Black	3TS-201-02
Viscosity	Pa·s	200	3TS-210-08
Specific gravity	-	1.46	3TS-213-02
Tack-free time	min	90	3TS-219-04
Thick film curability	mm/day	2.0	3TS-222-94
Initial pressure resistance (air pressure)	Clearance: 0.2mm	Mpa	0.19
	Clearance: 0.1mm	Mpa	0.40 or more
			Flange width: 15 mm After 5 min

5. Characteristics

5.1 Physical characteristics

Table 2 Physical characteristics

Item	Unit	Measurement	Test method
Hardness	-	A33	3TS-215-01
Elongation	%	410	3TS-320-01
Tensile strength	MPa	2.3	3TS-320-01
Tensile shear bond strength Al	MPa	2.2	3TS-301-23
Tensile shear bond strength Fe	MPa	2.3	3TS-301-23

* Standard curing conditions: (25°C, 55%RH) for 7 days

5.2 Engine oil resistance

Table 3 Physical characteristics after immersion

Item	Unit	Measurement	Test method
Hardness	-	A14	3TS-215-01
Elongation	%	380	3TS-320-01
Tensile strength	MPa	2.1	3TS-320-01
Tensile shear bond strength Al	MPa	1.3	3TS-301-23
Tensile shear bond strength Fe	MPa	0.6	3TS-301-23

* Immersion conditions: 150°C for 100 hours

Immersion liquid: Engine oil 5W-20 SL

5.3 Long-life coolant resistance

Table 4 Physical characteristics after immersion

Item	Unit	Measurement	Test method
Hardness	-	A33	3TS-215-01
Elongation	%	360	3TS-320-01
Tensile strength	MPa	1.9	3TS-320-01
Tensile shear bond strength Al	MPa	1.4	3TS-301-23
Tensile shear bond strength Fe	MPa	1.4	3TS-301-23

* Immersion test: 120°C for 100 hours

Immersion liquid: Long-life coolant diluted by 50%

6. Usage

Completely remove moisture, oil and other contaminants from the surfaces to be joined.

Fit the surfaces as soon as possible after applying the sealant.

7. Instructions for use

- (1) The sealant is harmful to the health. Do not touch it directly or inhale its vapor.
- (2) If it gets in the eyes, wash them with clean water for more than 15 minutes, and get medical attention.
- (3) Before washing the eyes, remove the contact lenses.
- (4) Never use it for medical implant products.
- (5) Before using the sealant, sufficiently confirm whether the method of application and the purpose of use are appropriate.
- (6) Ascertain in advance whether or not it affects the parts to be sealed with it. If any problem occurs, do not use it.
- (7) This product is an insulating material. Take care that it will not adhere to electric contacts.
- (8) The product is flammable. Do not use it near fire.
- (9) To prevent deterioration and entry of foreign matter, fit the cap tightly after using it.
- (10) The sealant contains harmful components. Do not use it for drinking water or hot water supply piping.
- (11) Use it in a well-ventilated place.
- (12) Use and store the product out of reach of children and infants.
- (13) When using it, wear appropriate protective clothing (respiratory protective device, protective goggles, protective gloves and protective clothes).
- (14) If it adheres to the skin, wipe it away with a cloth, and wash the skin with soap.
- (15) If any abnormality is found in the body, stop using it, and get medical attention.
- (16) Do not use it near fire. Doing so may cause a fire.
- (17) It is a product for industrial use. Do not use it for household products.
- (18) For hazard and toxicity information not mentioned herein, see the MSDS (material safety data sheet).

8. Storage

To prevent deterioration and entry of foreign matter, store the product in a dark dry place at 10 to 25°C avoiding direct sunlight.

9. Disposal

Treat the product as industrial waste.

10. Cautions

For industrial use only

(Do not use it for household products.)

This product has been developed for general industrial use. Before using the product, you must accept the following sales terms.

- The technical data given herein are not guaranteed values, but examples of experimental values obtained by our specified test methods. We do not guarantee that the uses introduced herein do not conflict with any intellectual property right.
- Users are asked to evaluate the validity and safety of the use of the product for the relevant purpose prior to use and bear all responsibilities and hazards involved in its use.
Never use the product for medical implants that will be implanted or injected into the body or may be left in the body.
- We are not liable for personal injury or property damage caused by improper handling of this product.
If the properties and use of the relevant product are unknown, never use it.
- For detailed information on product safety, see the material safety data sheet (MSDS).
To obtain the MSDS, contact our sales department or customer service office.
- This document is subject to change at our discretion.