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TURBO SEAL - SERIES 51
RED GASKET ELIMINATOR FLANGE SEALANT

TURBO SEAL SERIES 51 is an anaerobic gasket sealant, which develops medium strength in a short time. The compound cures in the absence of air between close fitting surfaces. Provides resistance to low pressure immediately after assembly of flanges.

Part Numbers for this TDS: 51-050, 51-300

Applications:

- Typically used as a form-in-place rigid flange connections.
- Excellent chemical resistance.
- Typical uses are engine casing and gearboxes.
- Thixotropic nature reduces the migration of liquid product after application.

ADHESIVE PROPERTIES

Composition	Dimethacrylate ester
Appearance	Red
Viscosity cP	800,000 – 3,750,000 cps Thixotropic (Brookfield RVT @ 25°C Spindle 7 @ 20 rmp)
Specific Gravity	1.13
Flash Point	> 93°C
Solvent Content	None

CURING PROPERTIES

Handling Cure Time – Unprimed Surfaces	4 – 24 Hours
Handling Cure Time – Primed Surfaces	30 Minutes - 4 Hours
Compressive Shear Strength	> 5 N/mm^2 > 725 psi (ISO 10123 >24 hours @ 22°C Steel Pins & Collars)
Lap Shear Strength	7.5 N/mm^2 1,100 psi (ISO 4587 Steel - grit based)
Tensile Strength	8.5 N/mm^2 1200 psi (ISO 6922 Steel - grit based)
Temperature Range	-65 to 300°F

PHYSICAL PROPERTIES

Coefficient of Thermal Expansion	$80x10^{-6}$	ASTM D 696, K-1
Coefficient of Thermal Conductivity	0.10	ASTM C 177 W/(m.K)
Specific Heat	0.30	kJ/(kg.K)

CHEMICAL RESISTANCE

Chemical	Temperature	% Initial Strength Retained 500 Hours	1000 Hours
Acetone	22°C	100	95
Ethanol	22°C	90	85
Motor Oil	125°C	160	140
Gasoline	22°C	60	55
Brake Fluid	22°C	95	95
Water/Glycol	87°C	100	90

Directions for Use:

- For best results, clean all surfaces (external and internal) with a cleaning solvent and allow the solvent to evaporate.
- If the material is an inactive metal or the cure speed is too slow, spray with an Activator and allow to dry.
- Apply manually as a continuous bead or by screen-painting to one of surface flanges.
- Low pressure can be used when testing to confirm a complete seal immediately after assembly.
- Flanges should be tightened as soon as possible after assembly to avoid shimming.

Storage:

Anaerobic adhesives are ideally stored in a cool, dry place in unopened containers at room temperature, 46°F to 86 °F. Do not return unused material to its original container.

PRECAUTIONS: This product and the auxiliary materials normally combined with it are capable of producing adverse health effects ranging from minor skin irritation to serious systemic effects. None of these materials should be used, stored, or transported until the handling precautions and recommendations as stated in the Material Safety Data Sheets (MSDS) for this and all other products being used are understood by all persons who will work with the Warranty: All products purchased from or supplied by Palm Labs Adhesives are subject to terms and conditions set out in the contract. Palm Labs Adhesives warrants only that its product will meet those specifications designated as such herein or in other publications. All other information supplied by Palm Labs Adhesives is consider 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. Palm Labs Adhesives 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 nor infringe any patent.

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