

LOCKING 343– TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

Anaerobic adhesives are stable when in contact with oxygen in the air. When the product is Decoupled between two interlocking metal parts and the contact with oxygen ends, the polymerization reaction begins, forming a strong, vibration- and pressure-resistant layer.

PRODUCT USAGE AREA

Thanks to its thixotropic formula, the product is prevented from flowing before joining the parts. It is easily applied to threaded parts and can be easily disassembled with hand tools. Thanks to its special formula, the 5543 Pipe Sealing Element can be used in applications requiring high compressive strength and/or resistance to oils. The product shows resistance to very high pressures after completely curing.

TECHNICAL SPECIFICATIONS

Resistance : <i>Medium</i>
Viscosity: <i>Medium and thixotropic</i>
Color: <i>Blue</i>
Appearance (uncured): <i>Liquid</i>
Basic ingredient: <i>Methacrylate ester</i>

PHYSICAL PROPERTIES

Specific gravity Conditions: 22°C: <i>1.030</i>
Flash point Method: ASTM D56-05: <i>>93°C</i>
Temperature December: <i>from -50°C to +150°C</i>
Corrosion property: <i>Not corrosive</i>
Gap filling: <i>up to 0.20mm</i>
Viscosity: <i>7000- 15000 cPs (@20</i>

Room Temperature Curing

The curing times of the adhesive on various surfaces are indicated below. Please note that the results may vary depending on the temperature and the amount of Decoupling between the surfaces to be bonded.

Samples: M10x25 Bolt and suitable nut

Conditions: 22°C

Curing speed on different surfaces

The curing speed of the anaerobic adhesive largely depends on what material the surface to be glued is made of. The curing rate that occurs over time is determined by measuring the breakaway torque of the samples of bolts and nuts. The graphs showing the test details and results are given below.

Test method: ISO 10964

Bolt and nut samples

Conditions 22°C

The curing rate according to the distance between the surfaces

The distance between the two surfaces to be bonded can seriously affect the curing speed of the adhesive. Dec. The curing rate formed over time was determined by measuring the shear stress on the surface of the sample. The graphs showing the test details and results are given below.

Physical properties after curing

Coefficient of thermal expansion (α) Method: ISO 11359-2	$4 \times 10^{-7} \text{ K}^{-1}$	
Heat conduction coefficient (k) Method: ISO 8302	0.34 W/(m.K)	
Specific Heat Method: ISO 11357-4	0.21 kJ/(kg.K)	

24-hour curing in an unloaded assembly

Test method: ISO 10964 (22OC)

Samples: Different kinds of pins and rings

Sample type	Breakaway Torque (TBA)	Prevailing Torque (TP)
Zinc coated M10	15 N.m	3 N.m
Zinc coated M6	12 N.m	2 N.m
Stainless steel M10	17 N.m	4 N.m

Environmental resistance of the adhesive after curing

The environmental resistance of the cured adhesive was measured by applying the ISO 10964 preloaded assembly test at different temperatures after curing took place.

Test method ISO 10964

Bolt and nut samples: Zinc plated, M10x25

Curing conditions and duration: 22°C, 1 week

Torque test conditions (excluding high temperature resistance test): 22°C

Torque type: Stripping torque (TBL)

High temperature resistance

Temperature resistance has been studied at various temperatures. The reference value of "full strength in zinc coating" is taken from the 24-hour curing values given in the previous sections

INSTRUCTIONS FOR USE

- Before joining the male and female parts, clean them with an absorbent cloth or handkerchief to thoroughly clean the cutting oil.
- Apply the adhesive 360 degrees to the first teeth of the pipe connection male and female parts.
- Wipe off the excess product in the direction of the teeth with an absorbent cloth or handkerchief.
- Assemble the parts and leave them at 22- 24°C for 24 hours to make sure that complete curing has taken place.
- To disassemble, use hand tools when separating the joined parts. If disassembly is not possible at room temperature, apply district heating until it reaches 250°C and disassemble while it is hot. Then, if there is any remaining cured adhesive, mechanically clean it and replace the parts with a suitable solvent, (e.g. clear acetone)

Storage and shelf life

Keep the product in its original container at 22°C and do not expose it to direct sunlight. Storage at temperatures less than 5°C and more than 30°C may adversely affect product properties. The product removed from its original container may become contaminated during use, which may affect the adhesion performance and shelf life of the product. Therefore, do not return the contaminated product to its original container. Metsan does not accept responsibility for products that have been contaminated or stored differently from the specified storage conditions. Shelf life: 24 months at 22°C

FIRST AID MEASURES

The product contains methacrylate ester. For more detailed information, please check the Safety before use Please apply to the Information Form (SDS)

DISPOSAL INFORMATION

The product must be disposed of in accordance with official regulations. Do not allow the product to be disposed of together with household garbage.

It is strictly forbidden to mix the product into sewers and underground waters. In such cases, inform the official authorities.

TRANSPORTATION INFORMATION

THE APPROPRIATE UN TRANSPORT NAME AND UN NO	<i>There is no hazard class under the ADR legislation.</i>
SYMBOL	
TRANSPORTATION HAZARD CLASS	
PACKAGING GROUP	
CLASSIFICATION CODE	
LABELING NO	
HAZARD IDENTIFICATION NO (HIN NO)	
TUNNEL RESTRICTION CODE	

NOTE:

For safety information, see the safety data sheet (MSDS).

The information has been prepared based on laboratory studies and applications.

Our company is not responsible for the problems that may arise from applications made in adverse conditions.

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