

PRODUCT DESCRIPTION

MXLOC® 11243 is designed for the sealing and locking of metal threaded fasteners. The product is a single component anaerobic, thixotropic, acrylic based product. The product cures when confined in the absence of air between close fitting metal surfaces and prevents leakage and loosening from vibration and shock.

Technology	Acrylic
Chemical Type	Dimethacrylate ester
Appearance (uncured)	Blue liquid
Fluorescence	Positive under UV light
Components	One component – requires no mixing
Viscosity	Medium, thixotropic
Cure	Anaerobic
Secondary Cure	Activator
Application	Threadlocking
Strength	Medium

NSF International

Registered to NSF Category P1 for use as a sealant where there is no possibility of food contact in and around food processing areas. Note: This is a regional approval. Please contact your local Technical Service Center for more information and clarification.

WRAS

Registered to WRAS material approval, it is suitable for contact with wholesome water for domestic purposes having met the requirements of BS6920-1:2000 and/or 2014 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'. The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use. Note: This is a regional approval. Please contact your local Technical Service Center for more information and clarification.

DVGW

Registered to DVGW greasing and sealing materials for metallic threaded joints in gas appliances, gas equipment and water heating equipment, not allowed in the gas installation according to DVGW-TRGI 2008. Note: This is a regional approval. Please contact your local Technical Service Center for more information and clarification.

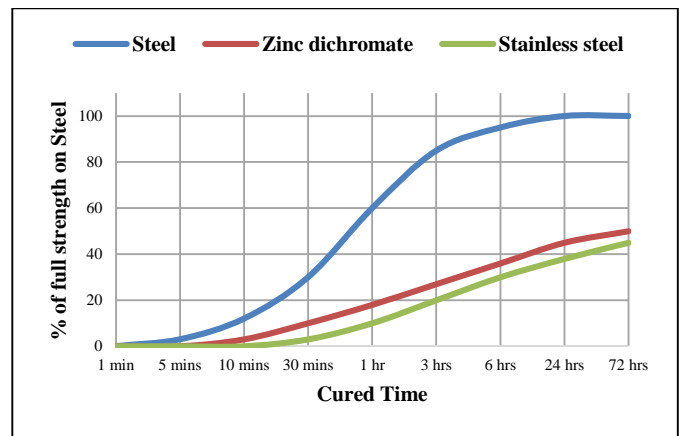
TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.1
Flash Point -	See SDS
Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP)	
Spindle 3, 20 rpm	1,300 to 3,000
Shelf life	24 months unopened when stored at 8 to 24°C

TYPICAL CURING PERFORMANCE

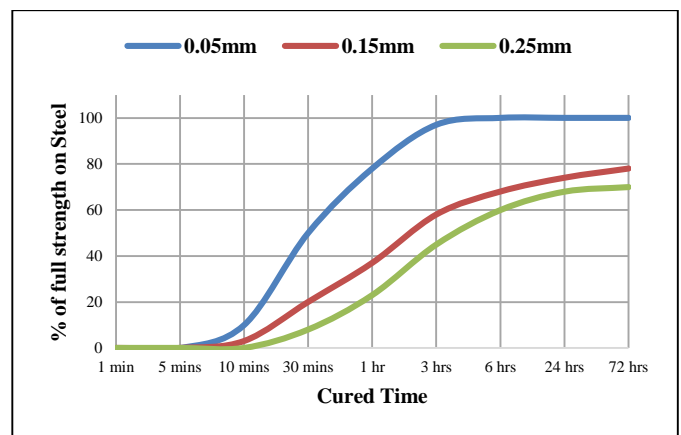
Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The graph below shows the breakaway strength developed with time on M10 steel nuts and bolts compared to different materials and tested according to ISO 10964.



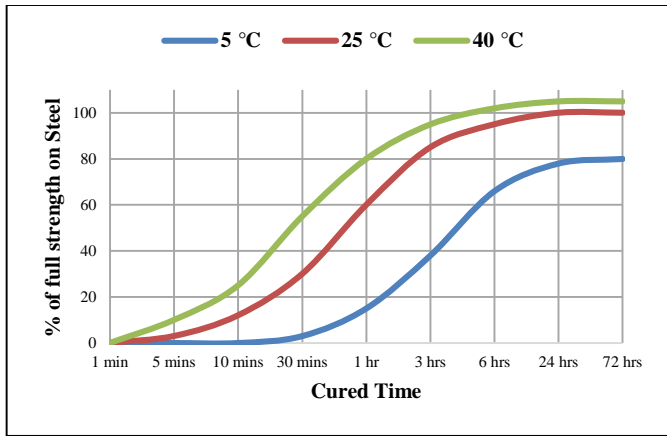
Cure Speed vs. Bond Gap

The rate of cure will depend on the bondline gap. Gaps in threaded fasteners depends on thread type, quality and size. The following graph shows shear strength developed with time on steel pins and collars at different controlled gaps and tested according to ISO 10123.



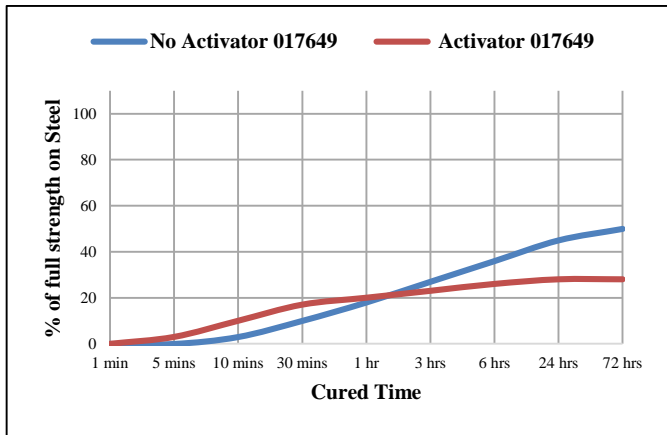
Cure Speed vs. Temperature

The rate of cure will depend on the temperature. The graph below shows the breakaway strength developed with time at different temperatures on M10 steel nuts and bolts and tested according to ISO 10964.



Cure Speed vs. Activator

Where cure speed is unacceptably long, or large gaps are present, applying activator to the surface will improve cure speed. The graph below shows the breakaway strength developed with time on M10 zinc dichromate steel nuts and bolts using Activator 017649 and tested according to ISO 10964.



TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties - Torque

Cured for 24 hrs @ 25 °C, Unseated

Breakaway Torque, ISO 10964:

Bonding Identical Substrate	N.m	lb.in.
M10 steel nuts and bolts	26	229

Prevail Torque, ISO 10964:

Bonding Identical Substrate	N.m	lb.in.
M10 steel nuts and bolts	5	44

Adhesive Properties - Shear Strength

After 24 hours @ 25 °C

Compressive Shear Strength, ISO 10123:

	N/mm ²	psi
Steel pins and collars	≥ 7.6	1,102

TYPICAL ENVIRONMENTAL RESISTANCE

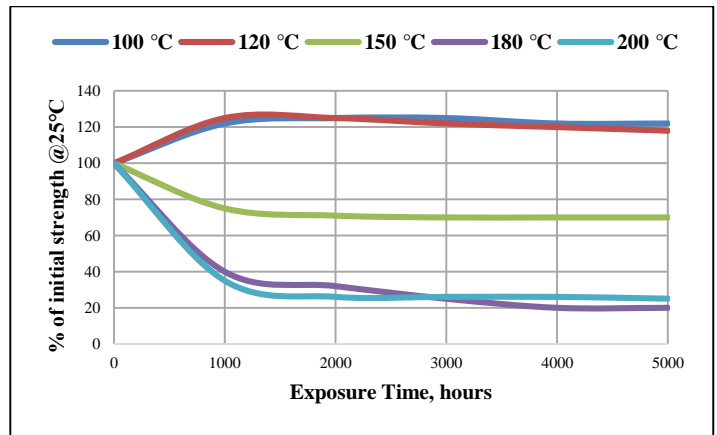
Cured for 1 week @ 25 °C

Breakloose Torque, ISO 10964, Pre-torque to 5 N.m

M10 zinc phosphate steel nuts and bolts

Heat Aging

Aged at temperature indicated and tested @ 25 °C



Chemical/Solvent Resistance

Aged under conditions indicated and tested @ 25 °C

Environment	°C	% of initial strength		
		100 h	500h	1000h
Unleaded Petrol	25	95	95	90
Water/ethylene glycol 50/50	87	105	100	90
IPA	25	95	90	80
Acetone	25	80	80	70

Breakloose Torque, ISO 10964, Pre-torque to 5 N.m

M10 Stainless steel nuts and bolts

Environment	°C	% of initial strength		
		500 h	1000h	5000h
Sodium Hydroxide, 20%	25	100	95	90
Phosphoric Acid, 10%	25	105	105	105

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be use with chlorine or other strong oxidizing materials. Where washing systems are used to clean the surfaces before bonding, it is important to check the compatibility of the washing solution with the adhesive. In some cases, these solutions can affect the cure and performance of the adhesive. This product is not recommended for use on certain plastics. Users are recommended to confirm compatibility of the product with such substrates.

Storage & Handling precaution

Keep adhesive in a cool and dry place. The storage temperature is recommended at 8 °C to 24 °C. For details, consult the Safety Data Sheet, (SDS). Shelf life is two years from the date of manufacture in the original container under the optimal conditions.

1. Avoid contact with skin and eyes.
2. If contact with skin, rinse with water.
3. If adhesive gets into eye, keep eye open and rinse with water thoroughly. Seek medical attention immediately.
4. Keep the material out of children's reach.

Directions for use

For assembly

1. The substrate surfaces must be clean and free of grease.
2. Shake the product thoroughly before use.
3. If the cure speed is too slow, consider using activator.
4. Apply several drops to the nut & bolt.
5. Assemble and tighten as required.
6. To prevent the clogging of the bottle nozzle, do not let the tip touch the metal surfaces during application.

For disassembly & cleanup

1. Use localized heat (250 °C) to nut and bolt, disassemble while hot.
2. Use a wire brush to clean the charred product.

Note

The data contained herein are furnished for informational purposes only and are believed to be reliable. However, Cartell Chemical Co., Ltd does not assume responsibility for any results obtained by persons over whose methods Cartell Chemical Co., Ltd has no control. It is the user's responsibility to determine the suitability of Cartell Chemical Co., Ltd's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Cartell Chemical Co., Ltd's products. Cartell Chemical Co., Ltd specifically disclaims all warranties express or implied, including warranties of merchantability or suitability for a particular purpose arising from sale or use of Cartell Chemical Co., Ltd's products. Cartell Chemical Co., Ltd further disclaims any liability for consequential or incremental damages of any kind including lost profits.