

PRODUCT DESCRIPTION

MXBON® 12680 is designed for the bonding of cylindrical fitting parts. The product is a green color, medium viscous single component acrylic based material. The product could replace traditional bolts or fittings because of its easy assembling process, high efficiency and the quality. The product cures in the absence of air, the product can be further accelerated by the use of Activator 017649.

Technology	Acrylic
Chemical Type	Methacrylate ester
Appearance (uncured)	Green liquid
Fluorescence	Positive under UV
Components	One component – requires no mixing
Viscosity	Medium
Cure	Anaerobic
Secondary Cure	Activator
Application	Retaining
Strength	High

NSF International

Registered to NSF Category S5 for use as a retaining compounds 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.

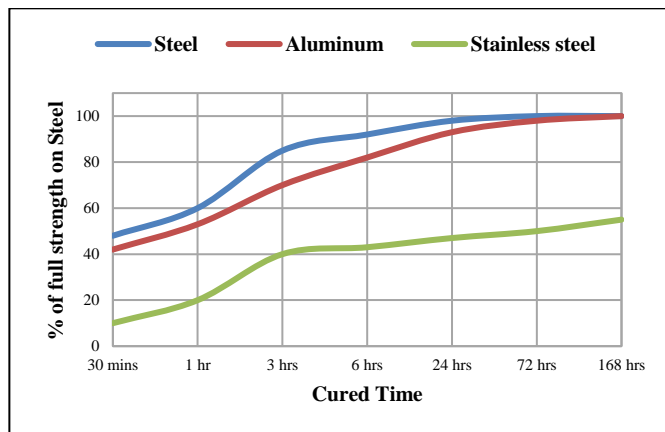
TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25 °C	1.1
Flash Point -	See SDS
Viscosity, Brookfield - RVT, 25 °C, mPa·s (cP)	
Spindle 3, 20 rpm	750 to 1,750
Shelf life	24 months unopened when stored at 8 to 24°C

TYPICAL CURING PERFORMANCE

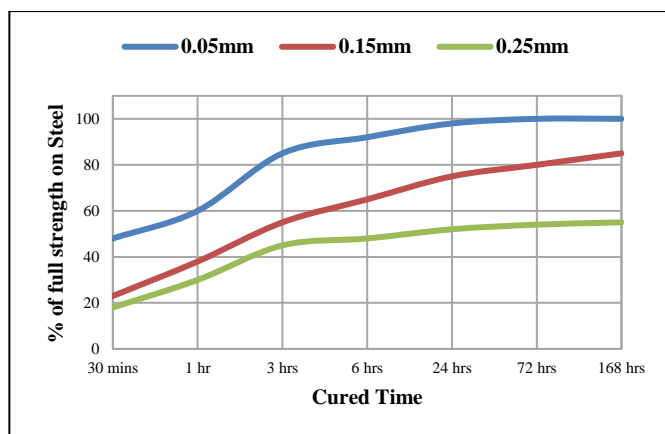
Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The graph below shows the shear strength developed with time on steel pins and collars compared to different materials and tested according to ISO 10123.



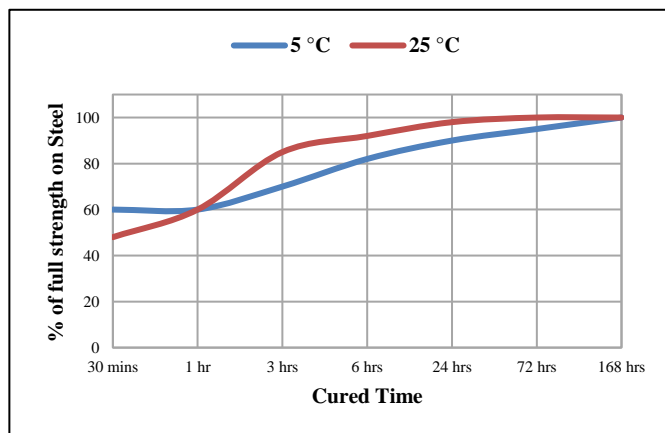
Cure Speed vs. Bond Gap

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.



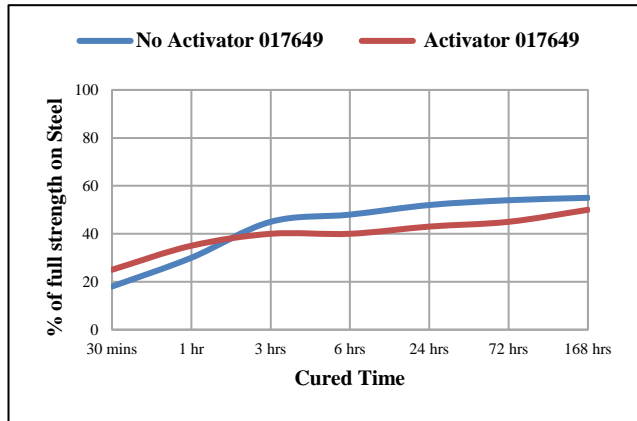
Cure Speed vs. Temperature

The rate of cure will depend on the temperature. The graph below shows the shear strength developed with time at different temperatures on steel pins and collars and tested according to ISO 10123.



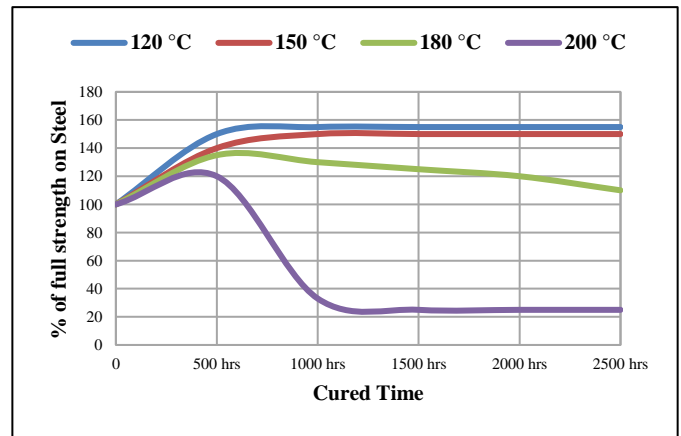
Cure Speed vs. Activator

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 shear strength developed with time on stainless steel pins and collars using Activator 017649 and tested according to ISO 10123.



Heat Aging

Aged at temperature indicated and tested @25 °C



TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties - Torque

Cured for 24 hrs @ 25 °C

Breakaway Torque, ISO 10964:

Bonding Identical Substrate	N.m	lb.in.
M10 steel nuts and bolts	35	308

Prevail Torque, ISO 10964:

Bonding Identical Substrate	N.m	lb.in.
M10 steel nuts and bolts	28	246

Adhesive Properties - Shear Strength

After 24 hours @ 25 °C

Compressive Shear Strength, ISO 10123:

	N/mm ²	psi
Steel pins and collars	≥ 19.3	2,799

After 1 hours @ 93°C, tested @ 25°C

Compressive Shear Strength, ISO 10123:

	N/mm ²	psi
Steel pins and collars	≥ 24.1	3,495

TYPICAL ENVIRONMENTAL RESISTANCE

Cured for 1 week @ 25 °C

Compressive Shear Strength, ISO 10123

Steel pins and collars

Chemical/Solvent Resistance

Aged under conditions indicated and tested @25 °C

Environment	% of initial strength			
	°C	100 h	500h	1000h
Unleaded Petrol	25	105	100	100
Water/ethylene glycol 50/50	87	105	110	100
IPA	25	100	100	95
Acetone	25	100	100	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

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