

# Torggler

## Adhesives

# SITOL<sup>®</sup> MARINE

**Fast hardening adhesive-sealant based on hybrid polymers with high initial adhesion.**



- UV-, weather-, chemical- and saltwater-resistant
- Adheres to wet and immersed substrates
- Free of solvents and isocyanates. It does not require training according to Annex XVII of Regulation (EC) 1907/2006
- Compatible with marine industry materials on deck/main deck and below deck



### APPLICATION AREAS

Typical sealing and bonding on yachts and boats on deck/hull and below deck on wall, floor and ceiling.

- bonding and sealing of all deck/main deck accessories and equipment
- panels bonding and sealing
- deck-hull connections bonding and sealing
- hatches and portholes bonding
- natural or synthetic teak deck bonding on deck, where greater initial bonding strength is required
- bumpers bonding

### FEATURES

Sitol<sup>®</sup> Marine is a high-quality, professional adhesive-sealant based on hybrid polymers, certified by IMO MED. It hardens by reaction with moisture to form a permanently elastic mass. It has rapid hardening and high initial adhesion, permanent elasticity from -40 to +100 °C. Absorbs vibrations and acoustically insulates bonded elements. It is resistant to UV radiation, ageing in general, chemicals and salt water. It does not shrink, it does not crumble. Solvent and isocyanate free. It adheres without primer to typical materials of the marine industry, natural and synthetic, smooth and porous, even wet, provided they are clean, degreased and compact. It adheres

to wet or immersed substrates. Sitol<sup>®</sup> Marine complies with the MED Directive and is certified by IMO Resolution MSC.307 (88) – Fire Testing Procedures Code (FTP Code 2010) – An. 1, part 5.

It also meets the European requirements for CE marking of sealants for applications on exterior and interior envelopes, pedestrian walkways and in environments constantly exposed to water.

- EN 15651-1 F INT-EXT CC 20 HM
- EN 15651-3 XS3 /
- EN 15651-4 PW EXT-INT 20 HM

## INSTRUCTIONS FOR USE

The application temperature of both environment and materials can vary between +5 °C and +40 °C (ideal temperature between +15 °C and +25 °C). The substrates must be solid, clean and free of oil or dust.

### As an adhesive:

1. Insert the cartridge into the cartridge gun, possibly with reinforced transmission, open it, screw on the nozzle and cut it according to the quantity to be extruded.
2. Apply the adhesive in a thin layer, but still in sufficient quantity to cover the bonding area, avoiding air entrapment.
3. The material can be spread and evened out with a toothed trowel.
4. Bring the materials into position and bond them together before the surface film forming.
5. Due to its high initial adhesion, it normally does not require external mechanical fastening during hardening – for vertical installation – but for the bonding of particularly heavy elements it may be recommended.
6. In any case, carry out preliminary adhesion tests and priming in the case of stressed substrates.

### As a sealant:

1. Stretch an adhesive tape along the sides of the joint.
2. Insert the cartridge into the cartridge gun, open it, screw on the nozzle and cut the tip so that the opening is proportionate to the size of the joint.
3. Inject plenty of sealant, avoiding air entrapment.
4. Smooth with a construction trowel moistened with Smooth within 5 minutes of application and in any case before film formation, exerting some pressure so as to eliminate any air pockets.
5. Remove the adhesive tape and smooth it out again with a hand moistened with Smooth.
6. Sitol<sup>®</sup> Marine can be overpainted (carry out preliminary paint compatibility tests).

### Tools cleaning

In the plastic status of the sealant, using acetone or other solvent; after hardening, only mechanically.

## TECHNICAL SPECIFICATIONS

PARAMETER AND METHOD	VALUE
Density (ISO 1183-1)	1.65 g/ml
Application temperature	+5 to +40°C
Surface cross-linking time (MIT 33*)	20
Hardening speed from outside to inside at 23 °C (MT 32*)	3 mm in 24 h
Operating temperature	-40 to +100, with short peaks at +120
Surface hardness (ISO 868)	Shore A 50
Elongation at break (DIN 53504)	270 %
Tensile strength at break (DIN 53504)	2.6 MPa
Modulus of elasticity at 100 % (DIN 53504)	1.8 MPa
Maximum working elongation (ISO 11600)	20 %
Odour after cross-linking	None


\* Torggler Internal Methods are available on request.

Color	Black, Grey, White
Packaging	cartridge
Packaging size	12x290 ml
Pallet	130 cartboards

### STORAGE

Sitol® Marine must be stored in a dry and cool environment. Under these conditions, storage stability is at least 12 months. Avoid humid environments, heat sources and direct exposure to sunlight. Cartridges that are not completely used can be stored for about 3 months if closed tightly.

### CERTIFICATIONS

			
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Torggler S.r.l., Via Prati Nuovi 9, I – 39020 Marleno (BZ) DoP n° 0225/23 EN 15651-1:2012 EN 15651-3:2012 EN 15651-4:2012 NB n° 2538			
EN 15651-1:2012: Façade sealant for indoor and outdoor application also suitable for use in cold climates (F-EXT/INT-CC 20 HM) EN 15651-3:2012: Joint sealant for non-structural use in health care areas (XS3) EN 15651-4:2012: Non-structural sealant for pedestrian walkways for indoor and outdoor use, also suitable for use in cold environments. (PW-EXT/INT 20 HM)			
Reaction to fire		E	EN 15651-1:2012 EN 15651-2:2012 EN 15651-3:2012 EN 15651-4:2012
Release of substances hazardous to health and the environment		NPD	
Durability		Test passed	
Water and air tightness	Flow/slip resistance	≤ 3 mm	
	Volume loss	≤ 10%	EN 15651-1:2012 EN 15651-3:2012 EN 15651-4:2012
	Tensile properties (i.e. elongation): under maintained extension conditions after immersion in water at 23 °C	NF	EN 15651-1:2012 EN 15651-3:2012

	Tensile properties (i.e. under conditions of maintained extension at -30 °C)	NF	EN 15651-1:2012 EN 15651-4:2012
	Tensile properties under conditions of maintained extension	NF	EN 15651-4:2012
	Tear resistance	NF	
	Adhesion/bonding properties under maintained extension conditions after 28 days immersion in water	NF	
	Adhesion/bonding properties under maintained extension conditions after 28 days immersion in salt water	NF	
	Microbiological growth	4	EM 15651-4:2012

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