ADINOX®
METAL BONDING SOLUTIONS

Technical Data Sheet
ADINOX® MS40
TDS-MS40-001
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Hybrid Adhesive Sealant

Description

ADINOX® MS40 is a high-quality multipurpose adhesive sealant formulated with modified silane polymer (MS Polymer). It is isocyanate-free, solvent-free, and silicone-free, making it non-corrosive. It cures through atmospheric moisture, transforming into a highly stable elastomer that is resistant to UV rays and ozone, with excellent adhesion to most materials used in the body shop, automotive, and construction industries.

ADINOX® MS40 is a fast-curing hybrid polymer system that is odorless, bubble-free, and shrink-free. It can be applied to damp surfaces, even underwater, and is non-corrosive to metals.

Applications

Bonds and seals the most common substrates including:

Metals: Aluminum, stainless steel, carbon steel, galvanized steel, brass

Construction: Wood, concrete, glass, concrete and clay tiles, stone

Plastics: Polyester, PVC, fiberglass, ABS, and more

Typical Applications: Joint sealing in construction, structural bonding in automotive and body shop industries, marine applications, expansion joints, general repairs.

PHYSICAL PROPERTIES OF UNCURED PRODUCT

Color	White, Gray, Black
Consistency	Paste
Density	1.42 g/ml (11.85 lb/gal)
Viscosity (Brookfield, 73°F)	280,000 ± 50,000 mPa
Solids Content	100%
pH:	Not applicable
Flash Point	>212°F
Cure System	Atmospheric moisture cure

Application times

Skin Formation: 20 min approx.
Time until the surface is tack-free to touch

Handling Time: 4 hours
Minimum time before subjecting to gentle movements

Cure in Depth: 0.12 in/24 h (3 mm/24 h)
Cure rate from surface toward interior

Functional Cure (50%): 24 hours (for 0.12 in / 3 mm thickness)
Time to reach 50% of mechanical properties

Full Cure (100%): 48-72 hours
Time to achieve 100% of properties (depending on thickness and humidity)

Physical properties of cured product

Skin Formation, Surface Cure	20 min approx. at 73°F and 55% R.H.
Cure Rate	0.12 in/24 h (3 mm/24 h) at 73°F and 55% R.H.
Shrinkage	None
Allowable Deformation	20 %
Shore A Hardness (DIN 53505)	40 approx.
Modulus at 100% (DIN 53504)	94 psi approx.
Tensile Strength (DIN 53504)	223 psi approx.
Elongation (DIN 53504)	350 % approx.
Temperature Resistance	-40°F to 212°F

Chemical resistance

Resistance to Acids and Bases	Excellent
UV Resistance	Excellent
Resistance to Water and Saltwater	Excellent

Substrate compatibility

Substrate	
Concrete	✔
Wood	✔
Aluminum	✔
Carbon Steel	✔
Stainless Steel	✔
Polycarbonate	O
PVC	O
Acrylic	O
Carbon Fiber	✔
Ceramic	✔

Marble	✔
Porcelain	✔
Copper	O
Bronze	O
Galvanized Steel	✔

✔ Recommended O Average performance, primer recommended ✘ Not recommended

Storage and shelf life

In its original unopened container, stored in a cool, dry pla-ce between 41°F and 77°F, the product will last up to 15 months after the production date.

Packaging options

Standard Cartridges: 10.3 fl oz
Compatible with standard caulking gun

Sausages (Foil Packs): 20.3 fl oz (600 ml)
Requires pneumatic or manual sausage gun

Available Colors: White, Gray, Black (custom colors available upon request)

Coverage/yield

Ø Applicator Tip Dia. (in)	1/8	3/16	1/4	5/16	3/8
Per 10.3 oz cartridge (ft)	43	15	11	6	3
Per 20.3 oz sausage (ft	83	29	21	11	6

Directions for use

Application conditions:
Application Temperature: Between 41°F and 104°F (ambient and surface)

Surface preparation:
1. Surfaces must be clean, dry, dust-free, grease-free, and contaminant-free
2. Thoroughly degrease the surface with acetone or isopropyl alcohol
3. Use an appropriate brush to remove any loose particles
4. Ensure proper joint dimensions for correct movement absorption

Recommended joint dimensions

For Joint Sealing
Joint Width: Minimum 0.24 in (6 mm) | Optimum 0.39-0.59 in (10-15 mm) | Maximum 0.98 in (25 mm)
Joint Depth: Minimum 0.24 in (6 mm) | Optimum 0.31-0.47 in (8-12 mm) | Maximum 0.59 in (15 mm)

Paintability

After skin formation, ADINOX MS40 offers optimal compatibility with emulsion paints.

However, synthetic paint systems may dry slowly. If painting is intended, for best results:

We recommend lightly sanding the ADINOX MS40 and adjacent areas with an abrasive pad, then thoroughly degreasing with isopropyl alcohol and painting immediately afterward.

Cleanup

- **Uncured Material:** Remove from surfaces and tools with acetone or isopropyl alcohol
- **Cured Material:** Can only be removed mechanically (cutting, sanding).
- **Cartridge Nozzle:** Clean after each use or cut off the hardened tip on next use.

Limitations and recommendations

Not suitable for permanent immersion under continuous hydrostatic load or structural expansion joints. Not suitable for PE, PP, PTFE, neoprene, or bituminous surfaces. For PC and PMMA use ADINOX +217 primer.

Discoloration may occur under certain conditions, such as direct contact with chemicals, applications in dark rooms/spaces, or plasticizer migration from the surface.

Applied Test Methods

DIN 53504
Rubber Testing – Determination of Tensile Strength, Tensile Stress at Yield, Elongation at Break, and Stress Values in Tensile Testing.

DIN 53505
Rubber Testing – Shore A and Shore D Hardness Test. Method used to determine material hardness.

Health and safety

Avoid prolonged skin contact. If uncured material comes into contact with eyes, rinse with plenty of water and consult a physician. The product safety data sheet is available upon request.

Legal information and disclaimer

The data is provided for informational purposes only and in accordance with conducted studies. The data shown here is obtained by following application instructions and under optimal product conditions.

Warranty Limitation
ADINOX warrants that its products meet published specifications at the time of sale when stored and applied correctly according to these instructions. ADINOX assumes no responsibility for:

- Defects caused by improper storage
- Application outside specified conditions
- Use in non-recommended or prohibited applications
- Incompatibility with materials not previously tested
- Results from mixing with products from other manufacturers
- ADINOX's liability is limited to the value of the supplied product. ADINOX shall not be liable for consequential damages, production losses, or loss of profits.

USER RESPONSIBILITY

- Conduct preliminary tests under actual conditions before large-scale applications
- Verify compatibility with all project-specific substrates
- Evaluate adhesion and behavior in the specific environment
- Evaluate adhesion and behavior in the specific environment
- Determine if the product is suitable for the intended application
- Ensure all users are trained in proper handling

Intellectual Property

Units of measurement and glossary

International system / imperial equivalents

1 MPa (Megapascal)	= 145.04 PSI
1 PSI (lb/in²)	= 0.00689 MPa
1 N/mm²	= 1 MPa = 145.04 PSI
1 kg/cm²	= 14.22 PSI = 0.098 MPa
1 mm	= 0.0394 in (inches)
1 in (inch)	= 25.4 mm
1 ml	= 0.0338 fl oz
1 fl oz	= 29.57 ml
1 g/ml	= 8.345 lb/gal
°C to °F	°F = (°C × 9/5) + 32

Acronyms glossary

PSI	Pounds per Square Inch
MPa	Megapascal (SI pressure unit)
cP / mPa·s	Centipoise / Millipascal second (viscosity)
R.H.	Relative Humidity
UV	Ultraviolet
VOC / COV	Volatile Organic Compounds
MS Polymer	Modified Silane Polymer
MMA	Methyl Methacrylate
DIN	German Institute for Standardization
ISO	International Organization for Standardization
ASTM	American Society for Testing and Materials
NOM	Official Mexican Standard
NMX	Mexican Standard (voluntary)

Technical terms

Open Time	Time period to assemble before polymerization
Working Time	Time without moving parts to achieve adhesion
Skin Formation	Time until tack-free to touch
Elongation	% of stretch before rupture
Modulus at 100%	Stress needed to elongate 100%
Shore A Hardness	Penetration resistance in elastomers (0-100)
Tensile Strength	Maximum force before rupture when stretching
Cohesive Failure	Rupture within the adhesive (good adhesion)
Substrate Failure	Material rupture, not adhesive
Thixotropic	Does not drip at rest, flows when applied