

Instant Bonding Adhesive Sealant

Description

ADINOX® S70 is a high-performance instant bonding adhesive sealant formulated from modified silane polymer (MS Polymer). It is free of isocyanates, solvents, and silicone, making it non-corrosive. It cures with ambient moisture, becoming a highly flexible elastomer resistant to UV rays, ozone, and weathering.

ADINOX® S70 is a fast-curing hybrid polymer system that is odorless, bubble-free, and shrink-free. It can be applied on wet surfaces, even underwater, and is non-corrosive to metals. It offers extremely high initial adhesion (≥ 400 kg/m²), allowing instant fixation without the need for supports or mounting tapes.

Applications

Bonds and seals the most common substrates including:

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

Construction: Wood, mortar, concrete, glass, ceramic, marble, granite, natural stone

Plastics: PVC, polyester, acrylic (PMMA)*, polycarbonate (PC)*, PET* (*with primer +217)

Typical Applications: Instant fixation of panels, profiles, moldings, and baseboards. Structural bonding in automotive, coach-building, and marine industries. Installation of mirrors and glass. Construction of facades and ducts. Adhesion in structures subject to vibration.

Physical properties of the product

Color	White, Gray, Black
Consistency	Paste
Density	1.52 g/ml
Viscosity (Brookfield, 73°F)	300,000 ± 50,000 mPa
Solids Content	$\geq 95\%$
Flash Point	>212°F
pH	Not applicable
Curing System	Atmospheric moisture

Application times

Skin Formation: 10-15 min approx.
 Time until surface is tack-free

Handling Time: 2-4 hours
 Minimum time before subjecting to gentle movements

Cure Depth: 2-3 mm/24 h
 Cure speed from surface inward

Functional Cure (50%): 24 hours (for 3mm thickness)
 When 50% of mechanical properties are reached

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

Physical properties of cured product

Skin Formation, Surface Cure	10-15 min approx. at 73°F and 50% R.H.
Cure	2-3 mm/24 h at 73°F and 50% R.H.
Shrinkage	None
Allowable Deformation	20-25%
Shore A Hardness (DIN 53505)	60-70 approx.
Modulus at 100% (DIN 53504)	≥ 1.30 MPa approx.
Tensile Strength (DIN 53504)	1.60 MPa approx.
Elongation (DIN 53504)	100-200% approx.
Temperature Resistance	-40°F to +194°F

Chemical resistance

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

Material compatibility

Aluminum	✓
Stainless steel	✓
Carbon steel	✓
Galvanized steel	✓
Brass	✓
Copper	○
Bronze	○
Wood	✓
Concrete	✓
Cement	✓
Glass	✓
Ceramic	✓
Marble	✓
Granite	✓
Natural stone	✓
Polycarbonate (PC)	○
PVC	✓
Polyester	✓
Acrylic (PMMA)	○
PET	○
Silicone	✗
Polypropylene (PP)	✗

✓ Recommended ○ Medium performance, primer recommended ✗ Not recommended

Storage and shelf life

In its original unopened container, stored in a cool, dry place between +41°F and +77°F, the product will last up to 12 months after the production date.

Presentations

Standard Cartridges: 290 ml - Compatible with standard gun

Sausages: 600 ml - Requires pneumatic or manual gun

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

Yield

Applicator Tip Ø (mm)	2	3	4	5	6	7	8	9	10
Per 290 ml cartridge(m)	92	41	23	14	10	7	5	4	3
Per 600 ml sausage (m)	190	83	46	29	21	15	11	7	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. Degrease the surface thoroughly with acetone or isopropyl alcohol
3. Use an appropriate brush to remove any loose particles
4. Ensure proper joint dimensions for correct movement absorption

Adhesive application

For adhesive applications, apply the material in continuous vertical beads with 10 to 20 cm spacing between beads. Do not apply in dabs or dots. The ideal adhesive thickness between surface and material should be 2 to 3 mm. The fixation is instantaneous, so it does not require mounting tapes or additional supports. Press firmly to ensure uniform contact with the surface.

The adhesive bond strength depends on the amount of surface area that comes into direct contact with the adhesive. Firm pressure is recommended to obtain proper bonding with the surface.

ADINOX® S70 has broad adhesion compatibility, but extremely porous and non-porous surfaces with minimal adhesion must be pretreated with ADINOX +217 primer.

Recommended joint dimensions

For Joint Sealing

Joint Width: Minimum 6 mm | Optimum 10-15 mm | Maximum 25 mm

Joint Depth: Minimum 6 mm | Optimum 8-12 mm | Maximum 15 mm

For Adhesive Application

Bead Thickness: Optimum 2-3 mm (minimum 2 mm, maximum 10 mm)

Paint compatibility

After skin formation, ADINOX® S70 offers optimal compatibility with emulsion paints.

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

We recommend lightly sanding the ADINOX® S70 and adjacent parts with an abrasive pad, then thoroughly degreasing with isopropyl alcohol and painting immediately afterward.

Cleaning

- **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 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 due to direct contact with chemicals, applications in dark rooms/spaces, or release of plasticizer from the surface.

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 liability disclaimer

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

Warranty limitation

ADINOX guarantees 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 applications not recommended or prohibited
- Incompatibility with materials not previously tested
- Results from mixtures with products from other manufacturers
- ADINOX's liability is limited to the value of the product supplied.
- ADINOX will not be liable for consequential damages, production losses, or loss of profit.

Test methods applied

DIN 53504

Rubber testing - Determination of tensile strength at break, tensile stress at yield, elongation at break, and stress values in tensile testing

DIN 53505

Rubber testing - Shore A and Shore D hardness testing. Method used for hardness determination

Preliminary testing recommendation

USER RESPONSIBILITY:

- Conduct preliminary tests under real conditions before large-scale applications
- Verify compatibility with all project-specific substrates
- 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

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Units of measurement and glossary

International system / imperial equivalents

1 MPa (Megapascal)	= 145.04 PSI
1 PSI (lb/in ²)	= 0.00689 MPa
1 N/mm ²	= 1 MPa = 145.04 PSI
1 kg/cm ²	= 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

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

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)