Description

ADINOX® C95 is a medium-viscosity instant adhesive formulated for bonding plastics, rubbers, and natural fibers. Its improved formula reduces the blooming effect and offers low odor during application. Complies with military specification MIL-PRF-46050 Type II Class 2 (formerly MIL-A-46050C).

Physical Properties — Liquid (Uncured)

Property	Value
Chemical base	Ethyl cyanoacrylate
Appearance	Colorless liquid
Viscosity (Brookfield) @ 25 °C (77 °F), Spindle 1 @ 20 rpm	70 – 95 cP
Specific gravity	1.06 g/cc
Flash point (TCC)	185 °F
Shelf life (refrigerated, unopened)	12 months

Curing Mechanism

Moisture present on the surface initiates the curing process. The adhesive will continue curing for at least 24 hours to develop full strength. Handling resistance is achieved in a short period and may vary depending on environmental conditions and the substrates being bonded.

Cure Performance

The adhesive layer thickness affects cure speed. Gaps slow down curing. Activators may be applied to improve cure speed, although they may impact the overall performance of the adhesive. Recommended bond gap: 0.001 – 0.005 in (25 – 125 µm).

Physical Properties — Cured

Property	Value
Appearance	Solid, colorless
Softening point	329 °F
Refractive index	1.49
Lap shear strength (carbon steel/carbon steel)	3,190 PSI
Service temperature range	0 to 199 °F
Full cure time	24 hours
Dielectric strength	11.6 KV/mm
Dielectric constant (@1 kHz)	5.4
COE	2.27 × 10^{-4} mm/mm/°C
Solubility	Nitromethane, acetone, dimethylformamide

Cure Times by Substrate

Conditions: 23 °C (73 °F), 50% RH. Time to handling strength. Fixture time is defined as the time required to achieve a shear strength of 0.1 N/mm².

Substrate	Time
EPDM	1 – 3 sec
Balsa wood	1 – 3 sec
Neoprene	< 5 sec
Nitrile	< 5 sec
Leather	5 – 15 sec
ABS	10 – 15 sec
Polycarbonate	10 – 30 sec
Aluminum	20 – 30 sec
Carbon steel	25 – 40 sec

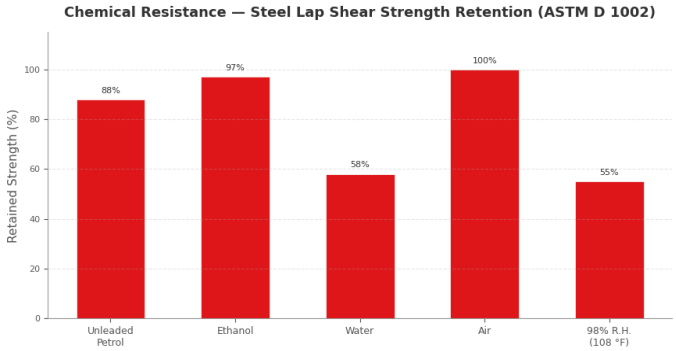
Lap Shear Strength (ASTM D 1002 / ISO 4587)

Tensile shear strength after 48 hours at 23 °C (73 °F).

Substrates	Strength (PSI)
Carbon steel / Carbon steel	2,175 – 3,480
Aluminum / Aluminum	1,015 – 1,305
ABS / ABS	870 – 1,305
Neoprene / Neoprene	725 – 2,030
Polycarbonate / Polycarbonate	725 – 1,305
Nitrile / Nitrile	725 – 1,305

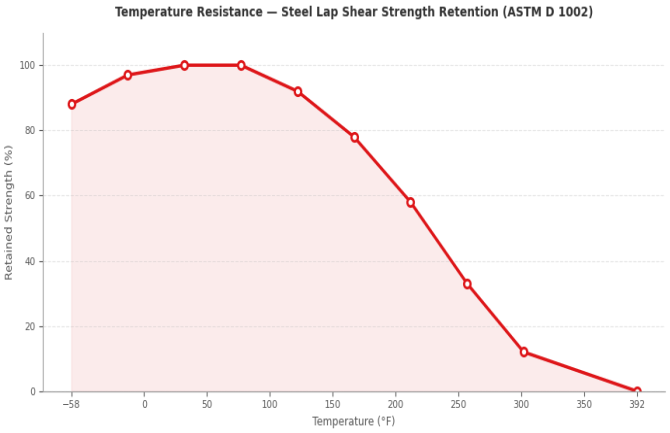
Chemical Resistance

Specimens exposed for 6 weeks at 23 °C (73 °F) after full cure of the adhesive. Carbon steel / Carbon steel (ASTM D 1002). Bond gap: 0.05 mm. Cure: 7 days at 23 °C (73 °F). Percentage of retained strength.



Temperature Resistance

Test on carbon steel (ASTM D 1002), cured 24 h at 23 °C (73 °F), conditioned 1 h at test temperature. Percentage of retained strength.



Directions for Use

- The surfaces to be bonded must be clean and free of grease.
- Apply the adhesive to one of the surfaces to be bonded. Do not use tools to spread the adhesive.
- Assemble the parts immediately. Position with precision, as only a brief adjustment time is available.
- Hold the assembly firmly in place until the adhesive has set.
- Allow the product to develop full strength before subjecting to operational loads (24 to 72 hours depending on gap, materials, and conditions).

Storage and Shelf Life

Parameter	Value
Optimum temperature	36 – 50 °F (refrigerated)
Maximum temperature	77 °F
Shelf life (unopened, refrigerated)	12 months

Refrigeration at 39 °F provides optimum storage stability. Store in original sealed container, away from moisture sources. Prolonged exposure to direct light may affect product performance.

Standard Packaging

Content
20 g (0.71 oz)
50 g (1.76 oz)
454 g (1 lb)

Cleaning

Condition	Method
Uncured (immediate)	Acetone or cyanoacrylate remover.
Cured	Cyanoacrylate remover or mechanical removal.
Skin contact	Soak in warm soapy water. Do NOT force apart.

Precautions

- Not recommended for use with pure oxygen and/or oxygen-rich systems.
- Do not use as a sealant for chlorine or other strong oxidizers.
- Avoid contact with eyes and skin — instant bonding.
- Use in well-ventilated areas — vapors are irritating to eyes and respiratory tract.
- In case of eye contact: flush thoroughly with water and seek medical attention.
- In case of skin bonding: soak in warm soapy water, do NOT force apart.
- Refer to the Safety Data Sheet (SDS) for complete hazard information.

Test Methods

Standard	Description
ASTM D 1002	Standard test method for apparent shear strength of single-lap-joint adhesively bonded metal specimens by tension loading.
ISO 4587	Adhesives — Determination of tensile lap-shear strength of rigid-to-rigid bonded assemblies.
MIL-PRF-46050	Military specification for cyanoacrylate adhesives, Type II (medium viscosity), Class 2 (low blooming).

Pre-Testing Recommendation

The end user is solely responsible for verifying the performance of ADINOX® C95 under actual production conditions prior to committing to series use. The following validation steps are strongly recommended:

- Bond the actual substrates under the surface conditions and contamination levels expected in the production environment.
- Measure joint strength under the relevant mechanical load modes (shear, tension, peel).
- Evaluate performance across the full intended service temperature range.

- If long-term durability is critical, conduct accelerated aging tests including thermal cycling and chemical immersion.
- Confirm that the adhesive joint design meets all applicable structural integrity requirements.

Legal Information and Disclaimer

Limitation of Warranty

The technical data and guidance contained in this Technical Data Sheet are derived from laboratory tests conducted under controlled conditions and are provided for informational purposes only. They are not intended as design specifications. Given the inherent variability in storage conditions, handling practices, application techniques, substrate types, surface preparation, and end-use environments, ADINOX makes no representations or warranties, express or implied, with respect to this information, including any implied warranty of merchantability or fitness for a particular purpose.

The end user assumes full responsibility for evaluating the suitability of ADINOX® C95 for any proposed application under the intended service conditions. All products purchased from or supplied by ADINOX are subject to the terms and conditions of the applicable purchase agreement.

In no event shall ADINOX's total liability, whether in contract, tort, or any other basis, exceed the purchase price of the specific product that is the subject of the claim.
ADINOX does not warrant that the use of its products will not infringe patents or other intellectual property rights of third parties. Compliance with all applicable laws, regulations, and patent obligations is the sole responsibility of the end user.

Units of Measurement and Glossary

International System / Imperial Equivalences

SI Unit	Imperial Equivalent
1 MPa	= 145.04 PSI
1 PSI (lb/in²)	= 0.00689 MPa
1 N/mm²	= 1 MPa = 145.04 PSI
1 mm	= 0.0394 in
°C to °F	°F = (°C × 9/5) + 32

Glossary of Abbreviations and Terms

Abbreviation / Term	Meaning/Definition
cP / mPa·s	Centipoise / Millipascal-second (viscosity)
TCC	Tag Closed Cup (flash point test)
COE	Coefficient of thermal expansion
KV	Kilovolt
SDS	Safety Data Sheet
Moisture curing	Polymerization initiated by trace moisture on the substrate surface.
Blooming	White haze effect around the joint caused by cyanoacrylate vapors.
Dielectric strength	Maximum voltage per unit thickness a dielectric material can withstand.
Softening point	Temperature at which the cured adhesive begins to lose rigidity.