

SAF Ultimate 15

Two-Component Methacrylate



Product Description

SAF Ultimate 15 is a two-component methacrylate adhesive designed for structural bonding of a wide range of dissimilar substrates, including metals, plastics and composite materials. It provides flexibility and fatigue resistance while maintaining structural bonding performance.

The adhesive is formulated to resist aggressive environments, extreme temperatures, weathering and ageing. Its non-sag properties allow application on vertical surfaces with minimal surface preparation.

Main Applications

- Composites
- Metals
- Plastics
- Dissimilar Substrates

Characteristics

- High environmental and impact resistance
- Metal bonding
- Non-sag, application on vertical surfaces
- Minimal surface preparation

Recommended Substrates

- Steel / Stainless Steel
- Powder-Coated Steel / Aluminum
- Acrylic / Epoxy / Polyester / Vinylester
- PMMA / ABS / PS / PVC / PC

Product Characteristics

System	Two-component, 4:1 Volume Ratio
Polymerization	Room Temperature
Service Temperature	-40°C to 150°C (-40°F to 302°F)

Short-term temperature resistance: up to 220°C (428°F) for 25 minutes during powder coating.

Adhesive Properties

Physical Properties

Tensile Strength at Break (MPa)	6-8
Tensile Modulus (MPa)	150-300
Elongation at Break (%)	100-120
Hardness (Shore D)	55-60

Curing Properties

Open Time (min)	5-7
Fixture Time @ 23°C (min)	10-14
Full Cure (hours)	24

Liquid Properties

	Resin	Hardener
Appearance	Off-white	Grey
Density (± 0.02)	0.98	1.23
Viscosity @ 23°C (mPa·s)	40,000-90,000 ¹	300,000-600,000 ²
Type	Non-sag	

¹ Rheometer viscosity (mPa·s) @ 1-2 s⁻¹

² Brookfield viscosity (mPa·s), spindle T-F @ 10 rpm

The physical and performance characteristics shown above are averages obtained from tests performed according to the applicable test methods indicated in this Technical Data Sheet. Matco makes no warranty of any kind regarding the results obtained from the use of the adhesive products. The information published above is representative of laboratory research conducted on these products and is believed to be reliable. Values should not be used for specification purposes. Each user should conduct their own tests to determine the suitability of the product for their intended use and shall assume all risks and liabilities associated therewith. Materials should be stored at 70°F (21°C) with 50% relative humidity.



Adhesive Properties

Mechanical Properties

Lap Shear Strength (MPa) ³ Thickness 250 µm	10–13 CF ⁵
Tensile Strength at Break (MPa) ⁴	6–8
Tensile Modulus (MPa) ⁴	150–300
Hardness (Shore D)	55–60
Elongation at Break ⁴	100–120%

Weathering and Ageing Resistance

Lap shear strength (MPa) with ISO 4587 after D3 cycle.
D3 cycle NF EN ISO 9142 7 ageing cycles (7 days).

LAP SHEAR STRENGTH (MPa)³ thickness 250 µm

Substrate	Before Ageing Cycles	After Ageing Cycles
Aluminum	12.0 CF ⁵	12.0 CF
Stainless Steel	12.0 CF	12.0 SCF ⁶
Steel	12.5 CF	12.0 CF
FRP	7.0 DF ⁷	7.0 DF

NOTES

1. Rheometer viscosity (mPa.s) @1-2s⁻¹
2. Brookfield viscosity (mPa.s) mobile T-F @ 10rpm
3. ISO 4587
4. ISO 527-1A
5. CF: Cohesive Failure
6. SCF: Special Cohesive Failure
7. DF: Delamination Failure

Surface Preparation

Use AEC T700, or a suitable cleaning product, to remove grease, loose contamination or poorly adhering oxides from metal surfaces before bonding. Most plastics require simple cleaning before bonding. Some may require sanding for improved performance.

Precautions

The adhesive contains methacrylate monomers and is flammable. Store in a cool place away from sources of heat. During polymerization, the chemical reaction may produce a characteristic odor; use the product in a well-ventilated area. When the two adhesive components are mixed, an exothermic reaction may occur and generate heat. The amount of heat generated depends on the mass and thickness of the mixed product. Avoid contact with skin and eyes. In case of skin contact, wash with soap and water. In case of eye contact, flush with water and seek immediate medical attention. Do not swallow and keep out of reach of children.
Read the Safety Data Sheet (SDS) before handling or using this product.

Application

Optimum properties are obtained at room temperature, between 18°C and 28°C (64°F and 82°F), without post-curing. Follow the instructions in the product operating guide or contact your representative for information concerning product use, dispensing equipment or substrate applications.

Storage

The SAF Ultimate 15 shelf life is 9 months in unopened original packaging. The product may be stored in a closed container in a dry place at temperatures between 15°C and 25°C (59°F and 77°F). Exposure to higher or lower temperatures will result in a reduction of the stated shelf life.

Packaging

The SAF Ultimate 15 adhesive is available in 50mL and 415mL side-by-side cartridges, 20L pails or 200L drums.

- SAF Ultimate 15 50mL cartridges require the use of M5.4/16 mixers.
- SAF Ultimate 15 415mL cartridges require the use of MFX10-18 or MF1318 mixers.

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