

Industrial Strength Steel Primer

MIR-900

MIR-900 is a flexible, highly modified urethane based primer system that welds tenaciously to sand-blasted steel surfaces and polyurethane resins.

The industrial strength, single pack primer requires only a single coat and dries within 3 hours at 68°F. Unlike other steel primers it has excellent elasticity and impact resistance, which guarantees its long term performance.

Physical Properties

Vehicle type	Urethane backbone
Color	Red
Dry time	3 hours at 68°F (or 1 hour at 77°F)
Secondary / finish coating	Within 12 hours
Coverage	120-160 sq. feet per gallon
Coating thickness	35-50 microns
Usual no. of coats	1
Chemical resistance:	- acids - caustic materials / alkalis
Solvent resistance	Not applicable when matched with Mirteq laminates and finish coats
Toxicity	Suitable for potable water when top-coated
Durability	Excellent impact and abrasion resistance
Clean up	Lacquer thinners

“There are several important attributes to look at when evaluating steel primers:

- a) the quality and strength of the primer’s bond with the steel surface, which is critical as it prevents air and moisture from reaching the surface;*
- b) the required surface preparation, because contaminants and residue on the surface ultimately affect the quality of the bond between the steel and the primer; and*
- c) the primer backbone. It is essential that the primer has a flexible backbone so that the bond is not affected by impacts or temperature fluctuations, which is why I prefer a flexible urethane backbone as it has excellent chemical, impact and heat resistant properties.”*

Peter Hodgson, Inventor

About MIR-900

- ◆ Typical use - anywhere an industrial strength primer for coating steel is required.
- ◆ Excellent adhesion to sandblasted steel surfaces.
- ◆ Excellent impact resistance.
- ◆ Custom designed for use with MIR structural reinforcement resins.
- ◆ Suitable for use with most urethane and epoxy paints.
- ◆ Dry film stability. Primed steel surfaces should be protected from contamination and coated within 12 hours.

Surface Preparation

- ◆ Pick a time when it will not rain to start and finish the grit blasting.
- ◆ Properly preparing a metal surface is essential to obtaining a high quality, consistent chemical bond between the primer and the steel surface.
- ◆ To thoroughly clean the surface and ensure the primer's chemical bond is not compromised in any way the steel must be abrasive blasted with a class 2.5 grit, which achieves a near white metal finish.
- ◆ Thoroughly dust the steel after blasting.

NOTE: Water and oils are the enemy during the coating process. Sand/grit blast units should therefore have filters to ensure no contaminants or oil-based residue is left on the surface.

Application

- ◆ Read the MSDS and observe safe handling requirements.
- ◆ Apply within 68°C - 104°F temperature range.
- ◆ Thoroughly stir MIR-900 before using.
- ◆ Brush on and work onto the surface to ensure there are no entrapped air bubbles.
- ◆ Pay particular attention to the edge of the coating area so that there is nowhere for moisture to come into contact with the prepared steel surface(s).
- ◆ Allow at least 3 hours at 68°F for the material to dry before applying any secondary coating materials.
- ◆ For best results the steel primer coating should be applied within 12 hours of sandblasting the surface.

Storage & Handling

- ◆ Keep container firmly closed when not in use.
- ◆ Avoid breathing vapor - use with adequate ventilation.
- ◆ Store away from direct sunlight at 68°F - 77°F.
- ◆ Shelf life - 3 months. If stored beyond this time a quality control evaluation should be performed prior to its use.

Warranty

As with any coating system the outcome is dependent on quality of the surface preparation and coating system. We therefore recommend users satisfy themselves on the quality of the adhesion they are achieving by testing on a small area.

Precautions

- ◆ FLAMMABLE - Keep away from heat and open flames.

Packaging

- ◆ MIR-900 is available in 5 gallon pails.



Figure 1: Mirteq's custom made primer. A coated steel plate was bent 90° to fracture the MIR-950 structural coating. The coating was then ground away to expose and show off the tenacious chemical bond the MIR-900 steel primer forms with the steel.

Disclaimer

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