

LOCK-DOWN

RUST INHIBITIVE METAL PRIMER

Technical Data & Application Instructions

PRODUCT DESCRIPTION

LOCK-DOWN is a single component, moisture cured, low viscosity polyurethane primer containing aluminum pigment. This provides excellent resistance to ultraviolet exposure and exterior weathering. **LOCK-DOWN** cures by reacting with moisture in the air to form a high molecular weight polymer, resulting in a tough, chemical and abrasion resistant finish.

LOCK-DOWN is manufactured with a low viscosity resin designed to maximize "wetting" of the surface. This allows for rapid, thorough penetration of porous substrates and enhances adhesion to clean or sound rusted metal surfaces. **LOCK-DOWN** exhibits superior resistance to rust and corrosion caused by chemicals, solvents, saltwater and humidity.

BASIC USES

LOCK-DOWN is designed to provide maximum corrosion protection, rust inhibition and adhesion over steel, aluminum and galvanized metal surfaces. It is an excellent choice for use over sound rust on metal surfaces when sandblasting is not possible or practical. **LOCK-DOWN** exhibits the unique ability to "wet" into weathered substrates, developing superior adhesion while resisting corrosive conditions, even when sound surface rust is present. Loose, flaking or unsound rusted metal must be brought into sound condition or replaced.

LOCK-DOWN is an excellent primer for use under acrylic or solvent-based roof coatings and industrial finishes. UNITED'S **Roof Mate**, **Diathon**, **Acryclad**, **Acrylex 100** and **Elastuff** Systems all develop outstanding adhesion to **LOCK-DOWN**. Refer to UNITED'S chart entitled Primer Recommendations for ease in making a determination as to which primer to use under a specific set of conditions.

TYPICAL PROPERTIES

- Solids by Weight:**
60% (± 2) [ASTM D2369]
- Solids by Volume:**
55% (± 2) [ASTM D2697]
- Weight per Gallon:**
8.9 lbs (4.1 kg) (± 3) [ASTM D1475]
- Flash Point:**
80°F (26°C) [ASTM D3278]
- Volatile Organic Content (VOC)**
Less than 420 grams/liter
[calculated]
- Dry Time to Touch:**
1 hour @ 75°F (24°C), 50% R.H.
[ASTM D1640]
- Cure Time:**
12 hours @ 75°F (24°C), 50% R.H.
[ASTM D1640]
- Flexibility:**
Passes 1/8" (3 mm) mandrel flex @ 0°F (-18°C)
- Temperature Limits for Service Conditions:**
-30°F to 200°F (-34°C to 93°C)

ADVANTAGES

ADHESION: **LOCK-DOWN'S** low viscosity allows it to penetrate and "wet" into weathered or sound rusted surfaces, imparting a tenacious chemical and physical bond between the substrate and subsequent topcoat.

WEATHERING: Rusted metal panels were wire-brushed, coated with **LOCK-DOWN** and "X" scribed to expose the metal. After 2,000 hours of accelerated weathering exposure, the coated panels showed no rust bleed, creeping or undercutting, or any deterioration of the **LOCK-DOWN** along the scribe lines.

SALT SPRAY RESISTANCE: Rusted metal panels were wire-brushed, coated with **LOCK-DOWN** and "X" scribed to expose the metal. After 500 hours exposure to salt spray, the sample showed only minimal blistering and slight rusting along the scribe lines.

PACKAGING & MIXING

LOCK-DOWN is a single-component material available in 1-gallon (3.8 liter) cans, 5-gallon (19 liter) pails and 55-gallon (208 liter) drums. Stir the material thoroughly prior to application, as well as periodically during use to keep the aluminum pigment in suspension. Thinning is not necessary. Shelf life in unopened containers is 1 year from date of manufacture. Store at temperatures between 50°F and 100°F (10°C and 38°C). Do not open containers until ready to use the material.

SURFACE PREPARATION

All surfaces must be clean and dry. Steel and fabrication defects, such as weld imperfections, slivers, etc., should be corrected prior to starting abrasive blasting operations.

All previous paints, coatings or finishes on the substrate must be completely removed unless they are sound and tightly adhered. When using **LOCK-DOWN** as a spot primer, check compatibility with the existing finish to ensure against lifting.

Steel surfaces may require blast cleaning depending upon the conditions to which the topcoat will be subjected on a given project. Contact UNITED'S Technical Service Department for specific project recommendations. Wet or water vapor blasting is not recommended.

All oil, grease, weld flux and other surface contaminants shall be removed prior to blast cleaning by use of a solvent wash as defined in SSPC-SP1 Solvent Cleaning.

Abrasive blast cleaning shall not be performed when surface temperature of the steel is less than 5°F (3°C) above the dew point of the ambient air, when relative humidity exceeds 80%, or when there is a possibility that the blasted surface will become wet before the primer can be applied.

The blast cleaned surface shall be primed by the end of the same work day, or in any event before any visible rusting occurs. If rusting occurs after blast cleaning, the surfaces shall be reblasted before priming. If the steel surface is subjected to chemical contamination, priming of the blast cleaned surface must take place as soon as possible.

For application over metal surfaces that cannot be sandblasted, or over existing surfaces that are to be spot primed, a test area should be applied to ensure proper adhesion. All loose rust or rust scale shall be removed by mechanical means prior to application of **LOCK-DOWN**. Metal surfaces that are damaged or rusted to the point of being unsound must be replaced.

APPLICATION

LOCK-DOWN may be applied by brush, roller, conventional or airless spray. Airless spray is the preferred method. Any airless spray equipment capable of 1,000 psi (6,890 kPa) and ½ gallon per minute (1.9 l/minute) delivery can be used. A reversible, self cleaning spray tip with orifice size of .015" to .021" (.39 to .53 mm) and minimum 40° fan angle is recommended. Before spraying, flush Xylol solvent through the pump, hoses and spray gun to prevent contamination.

One coat of **LOCK-DOWN** is sufficient for priming most metal surfaces. Coverage rate will depend upon the surface profile of the metal substrate and jobsite conditions at the time of application. Typical application rate is 250 to 300 sq. ft. per gallon (6.1 to 7.3 m²/l) to achieve a minimum dry film thickness of 3 mils.

LOCK-DOWN should be topcoated within 24 hours of application, or less in high humidity areas. If topcoating cannot be accomplished within 24 hours, contact UNITED'S Technical Service Department for recommendations.

LOCK-DOWN can be used on its own if an aluminized finish is all that is required. If this is the case, apply a second coat of **LOCK-DOWN**, perpendicular to the first coat, at the same coverage rate stated above.

Use Xylol to thoroughly flush equipment.

LIMITATIONS & PRECAUTIONS

LOCK-DOWN is affected by moisture and must be protected from moisture contamination. Keep all containers tightly closed during storage. Containers are factory sealed with an inert gas to prevent contamination. After opening and if all components are not to be used, containers must be purged with nitrogen gas or dry air and tightly sealed.

Solvents are flammable. Use only in a well ventilated area. Keep away from heat, sparks, open flame and lighted cigarettes. Use explosion-proof application equipment, which has been grounded and bonded.

Avoid prolonged or repeated breathing of vapor or spray mist. Approved (MSHA/NIOSH) chemical cartridge respirators should be worn by applicator. Avoid contact with eyes and contact with skin.

For additional information on safety requirements, refer to OSHA guidelines and **LOCK-DOWN** Material Safety Data Sheet.



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