

**Product Description**

Lockwell UP-100 is a high performance, rapid curing, lower cost alternative, modified PU / Polyurea designed for use in application in most substrates that do not require the full cure properties of other specially formulated polyurea's and epoxies.

Lockwell UP-100 is extremely durable, fast set thermoset polymer designed for tanking, buried and below grade applications. UP-100 is a general-purpose waterproofing elastomeric and seamless membrane that performs well in anticorrosion, roofing, tanking, steel, and concrete to include geotextile liners and many other substrates.

Lockwell UP-100 can be applied at temperatures ranging from 10°C and up. This hybrid aromatic polyurea elastomer displays up to 600% elongation formulated as a fast cure polymer with excellent chemical resistance, thermal stability and UV resistance. UP-100 can be textured easily for anti-skid purposes. UP-100 has very low water absorption resistance making it an all-purpose waterproofing system.

**Features**

- 100% Solids with zero VOC
- Fast reactivity and cure time resulting in almost immediate return-to-service time
- Can be applied in temperatures from -30°C upwards
- Perform in constant temperatures from -30°C to +120°C
- Retains physical properties at -30°C to +120°C
- Good elongation properties
- Seamless, resilient, flexible and tough
- Chemical Resistant (Consult Lockwell Systems)
- Good corrosion protection
- Impact, tear and abrasion resistant
- Low permeability waterproofing membrane

**Application Area**

- Truck bed, trailers and vehicle liners
- Below grade tanking
- General waterproofing and damp proofing, vapor barrier
- Industrial floorings
- Cargo holds
- Asbestos encapsulation
- Secondary containment

**Colours**

Standard dark grey color. Special colors available on request with MOQ required.

**Technical/ Performance Data**

|                             |                   |
|-----------------------------|-------------------|
| Color                       | Standard Medium   |
| Odor                        | None              |
| Specific Gravity            | 1.03              |
| Tensile Strength            | 5 to 7 MPa        |
| Elongation                  | 500 – 600%        |
| Hardness, Shore A           | 78 to 85          |
| Tear Strength               | 30-40 KN/m        |
| Fire Rating                 | Class 3           |
| Flash Point (Pensky Martin) | >93°C             |
| Service Temperature (Dry)   | -30°C to 120°C    |
| Water Vapor Permeability    | 0.00391 perm-inch |
| Water Absorption (24hours)  | <0.5%             |
| Viscosity at 25°C in Cps    | A-650, B-1000     |

**Processing Data**

|                       |   |
|-----------------------|---|
| Mix Ratio (by volume) | 1:1   |
| Gel Time              | 23 to 25 seconds                                    |
| Tack Free Time        | 180 to 200 seconds<br>(DFT & Temperature dependent) |
| Post Cure Time        | 24 hours  |
| Theoretical Coverage  | 1L = 1mm thick over 1m <sup>2</sup>                 |

Note: All data above are tested in Lockwell Systems Lab under certain conditions.

**Application Guideline**

**Introduction**

This coating is designed for application through heated, plural component, high pressure reactor spray equipment capable of supplying material at the spray gun at a minimum of 2000 psi spray pressure and material temperature of 60-80°C (depending on geographical location). Graco plural component reactors using impingement mix tips in plural component air and mechanical purge guns (air purge recommended) are typically used.

If there is any change in color or consistency of the material, the sprayer should stop immediately and troubleshoot the equipment.

Filters should be checked periodically for any build-up of material.

**Application Temperatures**

Minimum recommended material and substrate temperatures are 24°C and 10°C respectively. Maximum recommended substrate temperature is 50°C. Wider temperature windows can be achieved but please consult your technical representative for specific advice.

**Cure Time and Recoat Time**

Development of a full cure may take up to 24 hours. Material maybe recoated when tack-free. Old, sound coatings should be lightly abraded to remove any oxidized material and cleaned thoroughly prior to recoat. Consult your technical representative for options regarding treatment of day joints and coating over cured product.

**System Specification****Primer**

Use Lockwell P-601 Concrete Epoxy Primer as the under layer primer.

Refer to Lockwell Systems technical representatives and distributors to verify specific application recommendations.

**Recommended Thickness**

Abrasion resistant : 3 mm min. thickness

Corrosion & Chemical resistant : 2 mm min. thickness

*Note: Contact your local distributor for application specific recommendations.*

**Number of Coats**

This product can be applied in thicknesses from 1mm up to several cm in one monolithic coat. To build to specification, allow just enough cure time for the first coat to become firm, and then spray the next coat. Do not exceed recommended recoat windows. When building to more than 4mm thickness, pause for at least 5 minutes every 3mm (approximately) to allow the coating to exotherm and to cure evenly in the layers.

Sometimes two or more coats are applied using different colors as a visual wear indicator. The additional coats should be applied as soon as possible after the preceding coat has gone tack free, but no longer between coats than the specified recoat window of 2 hours.

Contact your distributor for reactivation requirements for coating over cured product.

**Top Coat**

An aliphatic system such as Lockwell UP-115 solar resistant PU (or) Polyaspartic polyurea (or) "other LW approved" may be required for some applications, particularly where color stability is required (this product is 100% UV stable, but not color stable). Contact your distributor for a range of options. The top coat shall be applied as soon as possible following the final coat reaching tack-free status, with a maximum time between coats as specified by the recoat window of this product.

**LOCKWELL UP-100****Storage and Handling Precautions**

The Part A should be kept properly closed and stored indoors in a well-ventilated area under normal factory conditions. Storage at room temperature (20-25°C) also provides a convenient viscosity for handling.

Storage at low temperatures (below 10°C) is not recommended because it may lead to some crystallization: this material must be protected from frost. Drum heaters may be used with the heat setting at low.

The material should be agitated to uniformly distribute the heat. In no circumstances should the material be heated above 80°C during preconditioning.

Storage temperatures above 50° C are not recommended since they can accelerate the formation of insoluble solids and also increase the viscosity over extended storage intervals.

Under the recommended storage conditions and in properly sealed containers, the components have nominal storage life of 12 months. If either component is opened and partially used, it should be purged with nitrogen or desiccated air and resealed or refilled into smaller containers to their maximum volume.

**Packaging**

Standard 400L kits, 2 x 200L Drums per kit. Other sizes may be available on request.

**Additional Information - Disclaimer**

The information provided herein, especially recommendations for the usage and the application of our products, is based upon our knowledge and experience. Due to different materials and equipment used, as well as varying working conditions and environments beyond our control we strictly recommend carrying out intensive trials to test the suitability of our products with regard to the required processes and applications. This data sheet is provided free of charge and we do not accept any liability with regard to the above information or with regard to any verbal recommendation, except for cases where we are liable of gross negligence or false intention.