

Product Description

Lockwell CBR (conveyor belt repair) is a 100% pure polyurea specially formulated for applications where a combination of good early strength, flexibility, hardness and high early adhesion to active substrates is required. Lockwell CBR is designed for excellent adhesion to tricky substrates like rubber without the need for an additional primer.

Lockwell CBR is a highly flexible, 100% solids, aromatic, two-component pure polyurea with, excellent workability and finishing performance.

Lockwell CBR is a 15 to 20 second gel and formulated for application on live systems or substrates in field operations. Lockwell CBR has excellent spray-ability and gel time that still allows it time to penetrate cracks and voids during the initial gel time, yet fast enough to retain early physical properties and immediate elongation and memory. This allows return to service in as little as one hour after coating in very harsh conditions.

Please consult your Lockwell technical team for any specification requirements. Our technical and R&D team are available to help design and formulate systems and applications to desired results.

Features

- Early memory retention
- Tailored early & in-service physicals
- Excellent early adhesion to normally difficult substrates
- Extended re-coat window
- Excellent abrasion resistance and carry back reduction
- Excellent thermal stability
- Zero VOC
- No toxic vapours
- Odourless
- 100%Solids
- Seamless
- Low water vapour permeability
- Flexible at low temperatures
- Non-reactive
- Good chemical resistance

Application Area

- Process Mining
- Quarry
- Coal
- Flooring crack bridging systems
- Food grade Processing Plants
- Marine Environments
- Secondary Containment
- Geotextile composites
- Waste Water Treatment

Technical/ Performance Data

Hardness, ASTM D-2240	38-43 Shore D
Mix Ratio by Volume	1A:1B
Spray Temperature	60-75°C
Gel/Set Time	15-20 seconds
Tack-free Time	30-60 seconds
Maximum Recoat Window	16 Hours
Flash Point	>145°C
Taber Abrasion Resistance; H-18,1000cycles, 1kg	95.4 mg
Tensile Strength ASTM412-C	12-15.5 MPa
Elongation, ASTM412-C	350-450 %
Tear, ASTM 624-86	78-83 kN/m
Service Temperature	-40 to 120°C
Water vapour permeability	0.00036 perm-in
Fire resistance (spread of flame, Class rating, etc.)	Class 2, Class A for Roof coverings

Typical Wet Properties

Material Property	Component A (Isocyanate)	Component B (Resin)
Density (kg/L)	1.11	1.00
Viscosity (Cps @ 21°C)	900	700
Mix ratio (by volume)	1 : 1	
Solids (mixed) by volume	100%	
Flash Point (Pensky Martens Closed Cup)	>145°C	
Theoretical Coverage	1L = 1mm thick over 1m ² .	

Colors

Standard natural (cream). Custom colours can be produced on request, but may require additional lead time and price premium.

Application Guideline

Introduction

This coating is designed for application through heated, plural component, high pressure spray equipment capable of supplying material at the spray gun at a minimum of 2000 psi spray pressure and material temperature of 60-75°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 colour 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 (in the drums) 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 with your technical representative for specific advice.

Cure Time and Recoat Time

Development of a full cure may take up to 24 hours, for return-to-service windows refer to your distributor. 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 with your technical representative for options regarding treatment of day joints and coating over cured product.

System Specification

Primer

Not required for conveyors. Refer to Lockwell Systems technical representatives and distributors for recommendations based on your specific application.

Recommended Thickness

Recommended minimum thickness for abrasion resistant heavy duty protection is 3mm. Recommended minimum thickness for corrosion and some chemical resistance DFT is 2mm. 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 3-4mm (approximately) to allow the coating to exotherm and to cure evenly in the layers.

Sometimes two or more coats are applied using different colours 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. Contact your distributor for reactivation requirements for coating over cured product.

Top Coat

An aliphatic system Lockwell UP-115 solar resistant, polyaspartic polyurea topcoat or "other LW approved" may be required for some applications, particularly where colour stability is required (this product is 100% UV stable, but not colour 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.

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 crystallisation: this material must be protected from frost. Drum heaters may be used with the heat setting at low.

Part B should be agitated to uniformly distribute the heat and pigment. In no circumstances should the material be heated above 80°C during melting. 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 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.

Chemical Resistance

The following technical information and data should be considered representative or typical only and should not be used for specification purposes. Contact Lockwell Systems distributors for specific recommendations for chemical resistance.

Acetic Acid (10%)	R	Phosphoric Acid (10%)	R
Ammonium Hydroxide (20%)	R	Potassium Hydroxide (10%)	R
Ammonium Hydroxide (50%)	RC	Potassium Hydroxide (20%)	RC
Hydraulic Fluid	R	Sodium Hydroxide (10%)	R
Hydrochloric Acid (10%)	R	Sodium Hydroxide (50%)	RC
Gasoline (unleaded)	R	Sulphuric Acid (15%)	R
Hydrogen Sulphide (gas)	R	Waste water	R
Diesel Fuel (Kerr-McGee)	RC	Sea Water	R
Motor Oil, Brake Oil	RC	Water (Tap) @ 80°C	R

R-Resistant, RC – Slight surface change, discolouration with no loss of hardness.

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.