TECHNICAL DATA SHEET

BeltShield® CV

ShieldCrete®

Rubber Belt Repair System

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Product Description

BeltShield® CV is a 100% solid elastomeric polyurea developed for composite rubber repair system with cross linking properties to ShieldPrime SP to complete our RBRS system and ensure maximum adhesion to rubber as well as other varying substrates. RBRS is a volatile free, odorless system applied with 1:1 mix ratio with plural component spray equipment.

Technical/Performance Data

Cured Film Properties	Test Method	Typical Value
VOC	Theoretical	0%
Solids Content	Theoretical	100%
1Shore A Hardness	ASTM D2240	80-85
Elongation	ASTM D638	300-450%
Tensile Strength, MPa	ASTM D638	6MPa-9MPa
Elastic Modulus, MPa	ASTM D638	3.5MPa-9MPa
Tear Strength	ASTM D624	53-79 kN/m
Moisture Vapour Transmission	ASMT E-96	0.02 perm
Taber Abrasion, mg wt loss (1000g, 1000rev CS-17)	ASTM D4060	8-18
Gel Time	ASTM D1640	10-18 seconds
Tack Free	ASTM D1640	~3 minutes

Tested in accordance to EPA 9090A, LARR Approval (CA)

The value ranges stated in this Technical Data Sheet are based on system processing under laboratory conditions. Equipment configurations and/or field application conditions may produce variances in final system values.

Limitations: BeltShield® CV should not be used for direct contact with extremely high or low pH attack. Composite systems are available. Consult ShieldCrete® Technical team to discuss your specific case.

Benefits

Application

This product is supplied in handy blister packs, which allow easy storage, minimal wastage, hand mixing and ease of application.

Electrical Properties

The excellent electrical properties of this product prevent disbandment from impressed or stray currents and galvanic currents.

Toughness and Flexibility

The high tensile strength and good elongation of this product provides protection from mechanical damage, abrasion, and resistance to puncture and compression.

Increased Productivity and Economy

This product may be applied to thicknesses up to 1mm per coat when reinforcement is used and is rain insensitive once tack free.

Safety

This product contains no volatile or flammable solvents. This reduces hazards during transport, storage, and application.

Application Areas

- ✓ Rubber Repairs with SP Primer
- ✓ Geotextile Coatings
- ✓ Secondary Containment
- ✓ Oil Production Water / Condensate Containments
- ✓ Flexible Membranes
- ✓ Liners
- ✓ Foam Coatings
- ✓ Typical Ambient Wastewater & Hydrogen Sulphide Exposures

Features

- ✓ 100% solids
- ✓ 1:1 mix ratio by volume
- ✓ Rapid cure
- ✓ Immediate return to service
- ✓ Applied by plural component spray
- ✓ Exposure temperatures -40°F to 350°F, dry
- ✓ No VOC's
- ✓ Low curing stress shrinkage
- ✓ Odorless
- ✓ FLL Root Resistant
- ✓ ANSI/GRHC/SPRI VR-1 (2011) compliant.

Typical Wet Properties

Material Property	Component A (Isocyanate)	Component B (Resin)
Density (kg/L)	1.24	1.05
Viscosity (Cps @ 21°C)	350	10,000
Mix ratio (by volume)	100:28	
Solids (mixed) by volume	100%	
Flash Point (Pensky Martens Closed Cup)	>145°C	
Theoretical Coverage	1L = 1mm thick over 1m^2.	

Application Guidelines

BeltShield® CV provides less shrinkage with improved elongation characteristics. As a result, RBRS makes an excellent polyurea for liners, rubber repairs, and applications where resilience and durability are required. RBRS may be applied at varying thicknesses in a single application using a multi-pass spray technique.

Mixing

BeltShield® CV must be spray-applied using approved equipment. Use 1:1 ratio pump with appropriate material heaters, as required for individual application. For more information contact ShieldCrete® International.

Colours

Standard Black and Grey. Custom colours can be produced on request but may require additional lead time and price premium. Contact your local distributor for availability. Black tends to chalk slightly on the surface with UV exposure, other colours will tend to yellow or darken over time with UV exposure, but the coating will maintain its physical properties.

Polekote can be top coated for a colour-fast finish if required.

System Specification

Primer

Refer to ShieldCrete® technical representatives and distributors for recommendations based on your specific application. In most cases, no primer is required, even on difficult to stick to surfaces. In high abrasion polyurea or polyurethane repair environments, use ShieldPrime SP intercoat primer.

Recommended Thickness

Recommended minimum thickness for regular corrosion protection is 0.4mm when not exposed to abrasion or full UV exposure. For general corrosion and whipper snipper resistance (abrasion), the recommended minimum is 0.7mm. Recommended minimum thickness for high corrosion and chemical resistance duty is 2mm. Contact your local distributor for application specific recommendations.

Number of Coats

This product can be applied in thicknesses up to approximately 1mm in one monolithic coat (depending on temperature, reinforcement, and surface orientation). To build to specification, allow just enough cure time for the first coat to become firm, then apply the next coat. The use of reinforcement aids in the build of film thickness as well as increasing longevity. Do not exceed recommended recoat windows.

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.

Topcoat

An aliphatic polyurea, polyurethane, polyaspartic polyurea or other topcoat may be required for some applications, particularly where colour stability is required (this product is UV stable, but not colour stable). Contact your distributor for a range of options. The topcoat 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

Please refer to SDS. Observe reasonable care and employ ordinary hygienic principles such as washing the hands with soap and water before eating or smoking. It is recommended to wear gloves, goggles, and nose masks while application. In case of splashes on the skin, dampen the cloth with thinner wipe the hands with the cloth. Wash then with soap and water. Dried film is nontoxic. In case of contact with eyes, rinse with plenty of water and seek medical advice. In case of continuous exposure to vapour, the applicator should be immediately moved to get fresh air. The disposal of excess or waste material should be carried out in accordance with the local legislations.

One year from date of shipment, in original, unopened factory containers, under normal storage conditions of 55°F to 95°F (18°-35°C).

Packaging

One Hundred Ten Gallon Kit: 55 gallons of ‘A’ side and 55 gallons of ‘B’ side. Drum containers filled by weight; volume is closely approximated.

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 regarding the required processes and applications. This data sheet is provided free of charge, and we do not accept any liability regarding the above information or regarding any verbal recommendation, except for cases where we are liable of gross negligence or false intention.