



PolyArmor PCM102 Top Coat

TECHNICAL DATA SHEET

POLYARMOR PCM102 Top Coat is a sprayable, high performance, thermoset coating designed specifically for ground support applications in hard rock mines. It can be used on its own (with bolts) or in combination with other ground support systems offering unique, and impressive ground support benefits in a 4-6 mm coating thickness. POLYARMOR PCM102 toughness properties not only provide exceptional tensile holding strength but also the ability to deform and elongate, continuing to provide support as the rock structure moves.

The appropriateness of POLYARMOR PCM102 use for any specific application should be determined by the mine's ground control personnel based on POLYARMOR PCM102 performance specifications and the associated ground and application conditions. The below summary is meant to highlight the performance of the liner in order to assist the responsible ground control engineer in making his/her decision on the appropriateness of the product.

FEATURES

- High Elongation
- Great Tensile Strength
- Water Resistant - no absorption or stability loss after continuous immersion for 30 days at 50°C

RECOMMENDED USES

- Ground Support
- Mine Shaft Liner

TECHNICAL DATA

	Units	Values		Test Method
HARDNESS	Shore D	60±3	Sprayed	ASTM D2240
PERCENT SOLIDS	%	100 (0 g/l VOCs)	Calculated	
TENSILE	psi	4500	Sprayed	ASTM D412
ELONGATION	%	300	Sprayed	ASTM D412
TEAR	pli	630	Sprayed	ASTM D624
TABER ABRASION	mg/rev. loss	5.4/1000	CS-17 wheel	ASTM D3389
GEL TIME / TACK FREE	Sec	6 / 12	Sprayed	
POP OFF ADHESION STRENGTH:				
TO ROCK	MPa	1.5	Sprayed	ASTM D4541 (Type 5)
TO SHOTCRETE	MPa	1.5	Sprayed	ASTM D4541 (Type 5)

*BASED ON LAB SAMPLES

NOTE: PHYSICAL PROPERTIES MAY VARY ON THE TYPE OF SPRAY EQUIPMENT USED. THE END USER SHOULD CHECK THE SUITABILITY OF THIS PRODUCT PRIOR TO USE

PRECAUTIONS: Part-A contains an Isocyanate. Before using, refer to Safety Data Sheets (SDS). Ensure the same safe working methods are followed for all persons in the work area. Wear suitable protective clothing, rubber gloves and safety goggles with side shields during mixing and application. Respiratory masks should be worn at all times. Contact with skin-wash immediately with soap and water. Contact with eyes-rinse immediately with lots of water and seek medical attention. Keep away from children. **NOTICE:** Read all the information in this product information bulletin, and safety data sheet (SDS) before applying any material. The information contained herein is for the purpose of identifying the product and does not constitute a warranty or guaranty that the product will conform to this description. Product specifications and performance will vary depending on application methodologies, raw materials and other factors. All published information and specifications are subject to change without notification. Technical data shown in product data sheets are typical but reflect laboratory test procedures conducted in laboratory conditions. Actual field performance and test results will depend on installation methods and site conditions. Field test results will vary due to critical job site factors. All recommendations, statements and technical data contained in this data sheet are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty or guaranty of any kind. Satisfactory results depend upon many factors beyond the control of The Hanson Group, LLC. User shall rely on their own information and tests to determine suitability of the product for the intended use and user assumes all risk, loss, damage, expense and liability resulting from their direct use, indirect use or consequential to their use of the product. The Hanson Group, LLC shall not be liable to the buyer or any third party for any injury, loss or damage directly or indirectly resulting from use or inability to use the product. Products manufactured by The Hanson Group, LLC are free of defects for a period of one (1) year from time of manufacture. Liability and buyer's remedy under this limited warranty shall not exceed the purchase price of the materials in question. PolyArmor® is a trademark registered in the US Patent and Trademark Office. The marks of The Hanson Group, LLC, its divisions, slogans, emblems, other marks appearing in this document are the trademarks and/or service marks of The Hanson Group, LLC, its subsidiaries, affiliates or licensors.



SURFACE PREPARATION

All surfaces receiving the POLYARMOR PCM102 Top Coat must be thoroughly cleaned of loose rock, dirt, dust, oil, grease, diesel residue and other contaminants that may impair bonding. Verify existing conditions of the surface before starting work.

COLOR

Orange

COVERAGE RATE

1 gallon (3.79 liters) of POLYARMOR PCM102 will cover approximately 1600 square feet at 1 mil (0.025mm) thick, and can be applied in one or more passes to achieve a desired thickness.

PACKAGING

Part-A (Isocyanate) 450 pounds net and Part-B (Curative) 441 pounds net packaged as a “kit” in 2x55 gallon drums. 275 gallon IBC Totes are available.

MIXING PROCEDURES

Part B should be mixed with air driven tools at a medium speed for at least 8 hours prior to use. Verify mixing by feeling for any sediment still on the bottom of the drum. If any exist, continue to mix. The B side must also be agitated while being sprayed to ensure suspension of all fillers. Part A requires no mixing.

STORAGE

POLYARMOR PCM102 has a shelf life of 1 year from the date of shipment, in factory-sealed containers. Storage temperature for Part-A and Part-B is between 70°F - 95°F. (Avoid freezing temperatures). Keep containers sealed tightly to eliminate any condensation, moisture, or water contamination in Part-A or Part-B. Use inert gas such as nitrogen to flush partial containers.

EQUIPMENT CLEAN UP

Immediately clean equipment with an environmentally safe solvent, as permitted by local regulations. Cured or dried material may be removed by mechanical means. Know your equipment and how to perform routine maintenance.

APPLICATION

Prior to application, precondition both Part-A and Part-B to 70°F - 90°F (21°C - 32°C). Surface temperature should be greater than 32°F (0°C). Ensure that the air temperature is at least 42°F (6°C) above the dew point and rising. Fit Part-A with a desiccant drying device. In order to enhance mechanical bonding to the substrate, insert mechanical fasteners into the substrate prior to applying the POLYARMOR PCM102. Once in place, apply POLYARMOR PCM102 using plural component, high pressure 1:1 ratio heated, spray equipment over the bolts. Secure the liner in place by fastening a plate to the protruding bolt. The fastened plate can be coated with another layer of POLYARMOR PCM102 to lock it into place. Consult your THG representative for more information on your specific application. Installation shall follow standard operating procedures prepared by authorized personnel for the specific mine site.

TYPICAL SPRAY MACHINE REQUIREMENTS

- Capacity minimum 20 lbs. per minute
- Static pressure 1800 – 2500psi
- Spraying pressure 2200psi
- Pressure balance 100 variance desirable
- 300 psi variance maximum
- Temperatures, preheaters & hose 140°F-175°F each. Check with your local representative.