

DR. SHIELDS CDN ROOF ARMOR : HYBRID HI-PERFORMANCE POLYASPARTIC (SLOW-NO ODOR)

TECHNICAL DATA SHEET

DESCRIPTION

DR. SHIELDS CDN ROOF ARMOR is a two-component, **slow curing, no odor**, hybrid polyaspartic coating system designed as a decorative yet durable coating for commercial and industrial roofing. Formulated with aliphatic chemistry, DR. SHIELDS CDN ROOF ARMOR is color stable allowing it to take UV exposure without color shifts seen with other coating systems such as epoxies. DR. SHIELDS CDN ROOF ARMOR is a 1:1 mix ratio system with sufficient pot life to be rolled, brushed, or sprayed. It has a robust application window with ability to apply at low temperatures and high humidity.

PRIMARY APPLICATIONS

- Residential and Commercial Roofing for most Roof Types
- Marine protection for fiberglass, steel, concrete or wood
- UV-stable top coat
- Aircraft hangar roofs
- Low temperature equipment
- Maintenance facilities
- Offshore platforms
- Industrial shop roofs
- Car washes or wash bays
- Secondary Containment
- Cooling towers
- Bridges
- Wastewater treatment applications

ADVANTAGES

- Lower odor than most polyaspartics
- Cures at temperatures just above freezing
- Can be applied below -20°F (-28.9°C). Will cure with special handling
- Excellent UV resistance, non yellowing and high gloss characteristics
- Excellent color stability
- Achieve a variety of colors, patterns, and logos, using decorative flakes, particles, or signs
- Excellent abrasion and impact resistance
- Available in low VOC and also in zero VOC formulation for restricted areas such as Southern California
- Micro media traction agents can be introduced into the liquid system or dispersed into the top coat
- Excellent chemical resistance, resistant to skydrol
- Resistant to hot tire peel
- Excellent coefficient of friction properties
- High build capability in lifts of 10 – 12 mils maximum
- Can be matted with a matting agent
- Bonds to virtually all substrates of any dimension, including metals, concrete, and fiberglass
- Tolerant to 300°F (149°C) for random, incidental heat contact
- VOC compliant in all 50 States and Canada

TECHNICAL DATA

COLOR	Upon request	
RECOMMENDED THICKNESS	PRIMER	FINISH COAT
	8 mils (200 ft ² /gal)	- Over solid color : 6 mils (266 ft ² /gal) - Over vinyl chips : 12 mils (140 ft ² /gal)
SHELF LIFE	12 months in original unopened factory sealed containers. Keep away from extreme cold, heat or moisture. Keep out of direct sunlight and away from fire hazards.	
MIX RATIO, BY VOLUME	A:B = 1:1	
MIX RATIO, BY WEIGHT	A:B = 100:110	
POT LIFE 16 OZ (454 G)	20 minutes @ 77°F (25°C)	

PROPERTIES

@ 73°F (23°C) AND 50% R.H.

* Times are approximate and will be affected by changing ambient conditions, especially changes in temperature and relative humidity.

* The indicated mileage is calculated for flat surfaces. A porous or imperfect surface will require more material in order to cover the same mileage. *

	PART A	PART B	MIX
SOLIDS CONTENT, BY VOLUME - CLEAR	93%	78%	85%
SOLIDS CONTENT, BY WEIGHT - CLEAR	92%	75%	83%
DENSITY (KG/L)	1.06	1.15	1.11
THINNER RECOMMENDED	Xylene		
DRYING TIMES			
TACK-FREE	1 - 2 hours		
RECOAT TIME	2 hours		
FOOT TRAFFIC	2 - 4 hours		
HEAVY EQUIPMENT TRAFFIC	24 hours		
FULL CURE	4 - 7 days		
ABRASION RESISTANCE, ASTM D4060 TABER ABRASER CS-17 WHEEL / 1000G (2.2 LBS) / 1000 CYCLES	9 mg loss		
ADHESION, ASTM D4541	Concrete-primer : > 550 psi (substrate ruptures)		
WATER ABSORPTION, ASTM D570	0.2 %		
WATER VAPOUR TRANSMISSION, ASTM E96	Water procedure B Film 0.01cm (0.004") : 1 perm		
HARDNESS (SHORE D), ASTM D2240	57 - 60		
FLEXIBILITY, 1/8" MANDREL, ASTM D1737	Pass		
FALLING SAND ABRASION RESISTANCE (L SAND/ 1 DRY MIL), ASTM D968	45		
	PART A	PART B	MIX
VISCOSITY @ 77°F (25°C)	350 - 450 CPS	75 - 100 CPS	125 - 225 CPS
GLOSS, ASTM D523	95+		

(afterpart)

PROPERTIES

@ 73°F (23°C) AND 50% R.H.

FIRE RATING CAN/ULC S102	Estimated on similar coating
FLAME SPREAD	5
SMOKE DEVELOPED	94
TENSILE STRENGTH, ASTM D638	6500-7500 psi
COMPRESSIVE STRENGTH (PSI MPA), ASTM D695	9500
*W/QUARTZ	13700
*W/CHIPS	12200
ELONGATION AT BREAK, ASTM D638	100%
TEAR STRENGTH (PLI), ASTM D2240	350
VOC	121.8 g/L

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SURFACE PREPARATION

Applying Canadian Roof Armor Polyaspartic Roof Coating.

Clean roof surface with a power washer, preparing it to receive coating. Use a minimum of 2,000 psi of water pressure. Be sure all loose dirt and debris is removed.

Once roof is dry, make any necessary repairs to drains, seams, flashings, and fasteners to get them in good working condition.

APPLICATION

After making repairs, apply coating at the proper rate for your roof type. Use a plural component industrial grade spray machine or squeegee and/or thick nap roller for flat and low slope torch-on, and EPDM roofs to spread the coating out as evenly as possible. Extra material is required on seams and around protrusions.

CLEANING

Clean all tools and equipment with mineral spirits. Do not use water.

RESTRICTIONS

- Minimum/Maximum temperature of substrate: 42°F / 86°F (5°C / 30°C)
- Maximum relative humidity during application and curing: 85 %
- Substrate temperature must be 5.5°F (3°C) above dew point measured
- Humidity content of substrate must be < 4 % when coating is applied
- Do not apply on porous surfaces where a transfer of humidity may occur during application
- Protect from humidity, condensation and contact with water during the 24 hour initial curing period

CHEMICAL RESISTANCE

CHEMICAL	RESULTS (77°C / 25°C)	CHEMICAL	RESULTS (77°C / 25°C)
ACETIC ACID 100%	C	NACL / H ₂ O 10%	R
ACETONE	C	NITRIC ACID 20%	NR
AMMONIUM HYDROXIDE 50%	RC	PHOSPHORIC ACID 10%	R
BENZENE	C	PHOSPHORIC ACID 50%	NR
BRINE SATURATED H ₂ O	R	POTASSIUM HYDROXIDE 10%	R
H ₂ O CHLORINATED	R	POTASSIUM HYDROXIDE 20%	R, DIS
CLOROX (10%) H ₂ O	R	PROPYLENE CARBONATE	RC
DIESEL FUEL	RC	SKYDROL	C
GASOLINE	RC	SODIUM HYDROXIDE 25%	R
GASOLINE / 5% MTBE	RC	SODIUM HYDROXIDE 50%	R, DIS
GASOLINE / 5% METHANOL	RC	SODIUM HYPOCHLORITE 10%	R
HYDROCHLORIC ACID 20%	R	SODIUM BICARBONATE	R
HYDROCHLORIC ACID 10%	NR	STEARIC ACID	R
HYDRAULIC FLUID (OIL)	RC	SUGAR / H ₂ O	R
ISOPROPYL ALCOHOL	R	SULFURIC ACID 10%	R
LACTIC ACID	RC	SULFURIC ACID >50%	RC
MEK	RC	TOLUENE	R
METHANOL	R	1,1,1-TRICHLOROETHANE	C
METHYLENE CHLORIDE	C	TRISODIUM PHOSPHATE	R
MINERAL SPIRITS	RC	VINEGAR / H ₂ O 5%	R
MOTOR OIL	R	H ₂ O	R
MTBE	C	H ₂ O : 14 DAYS AT 179.6°F (82°C)	R
MURIATIC ACID 10%	R	XYLENE	RC

R = Recommended/ little or no visible damage

RC = recommended conditional/ some effect, swelling or discoloration

C = Conditional/ Cracking-wash within one hour of spillage to avoid affects

NR = Not recommended

DIS = Discolorative

HEALTH AND SAFETY

In case of skin contact, wash with water and soap. In case of eye contact, immediately rinse with water for at least 15 minutes. Consult with a doctor. For respiratory problems, transport victim to fresh air. Remove contaminated clothes and clean before reuse. For more information, consult the material safety data sheet.

Components A and B contain toxic ingredients. Prolonged contact of this product with the skin is susceptible to provoke an irritation. Avoid eye contact. Contact with may cause serious burns. Avoid breathing vapors release from this product. This product is a strong sensitizer. Wear safety glasses and chemical resistant gloves. A breathing apparatus filtering organic vapors approved by the NIOSH/MSHA is recommended. Predict suitable ventilation.

Consult the material safety data sheet for further information.

IMPORTANT NOTICE

All statements, recommendations and technical information contained in this document are accurate to the best knowledge of Cdn Roof Dr. The data relates only to the specific material designated herein. It may not be valid if used in combination with any other materials. It is the users' responsibility to verify suitability of this information for their own particular use, and to test this product before use. Cdn Roof Dr assumes no legal responsibility for use upon these data. Cdn Roof Dr assumes no legal responsibility for any direct, indirect, consequential, economic, or any other damage except to replace the product.