

Protect VE-CR 70 Flake

Vinyl Ester Flake Glass Lining



DESCRIPTION:

Protect VE-CR 70 Flake is a catalyzed, vinyl ester resin for heavy duty protection of steel substrates. It is a highly chemical resistant resin that provides excellent resistance to alkalis, acids and a broad range of chemicals. It is used for steel tank linings in immersion service

Typical uses

Process Tanks	Storage Tanks
Stacks / Scrubbers	Refineries
Pulp/Paper	Metal Finishing
Pharmaceutical	Petrochemical

Advantages

- Excellent chemical resistance
- Very low vapor transmission rate
- Long service life vs. common coatings
- 100% reactive material
- FDA compliant (CFR 175.300)

Chemical Resistance

In addition to strong chemicals, this system is resistant to most acids, and alkalis. This system has a higher operating temperature than traditional coatings and is excellent for immersion service. Specific information on the chemical resistance properties will be furnished on request.

Surface Preparation

Metal - For immersion or intermittent splash and spillage conditions, abrasive blast to "White Metal" in accordance with Steel Structures Painting Council Specifications **SP-5** or **NACE Specification #1**. A minimum surface profile of 3.0 mils is required. The substrate must be primed.

Concrete:

Not for concrete application

Mixing

Mix using drill motor and Jiffy type or similar paddle.

Mechanically mix **Protect VE-CR 70 Flake-A** and **Protect VE-B** hardener approximately 3-4 minutes.

Thinner—None required. **DO NOT THIN.**

Mixing Ratio - By Volume (varies depending on surface temperature)

Protect VE-CR 70 Flake-A Resin	1 gal
Protect VE-B Hardener	1-1/2 oz to 3 oz

Contrasting Tint to Differentiate Basecoat from Topcoat

To assure proper coverage of the second coat atop the first coat, a small amount of Protect CPU colorpack may be added to the basecoat rendering it a slightly different shade.

Handling Properties

Working Time

50°F (10° C)	50 min
70°F (21° C)	30 min
90°F (32° C)	15 min

Application

Must be applied over primed surface.

Primed surface must be dry and free of foreign matter at time of lining application. Test primer by wiping with cloth dampened with styrene. The primer must become tacky. Apply using 10"-12" steel trowel, followed by lightly rolling with a short nap 9" roller dampened with styrene to orientate flakes and smooth the surface.

Food Contact

Protect VE-CR-70 Flake should be post cured at 140°F or higher for 8 hours. The surface should be washed with a biodegradable soap and rinsed.

Time to Recoat

when not in direct sunlight

	Min. time	max. time
50°F (10° C)	8 hrs	1-2 weeks
70°F (21° C)	4 hrs	7 days
90°F (32° C)	2 hrs	4 days

Optional resin topcoats available.

Coverage

Steel substrate **Two - 35-40 mil/coats totaling 70 – 80 wet mils** will yield theoretical coverage of approximately **16 – 18 ft² /gallon.**

Color as supplied

off-white

Packaging

The following standard packages are available

Protect VE-CR 70 Flake	4 gal units
	29 gal units

Technical and Physical Data

	Test standard	Unit	Value
Generic Type			Vinyl Ester
Weight		lbs/gal	11.0
Color			off-white
Adhesion (steel)	ASTM D4541	psi	>1200
Tensile strength	ASTM C-307	psi	3800
Elongation	ASTM C-307	psi	.6-.9%
Temperature Resistance			180°F (83°C)
Solids content	Theoretical Calculation	%	100 (reactive)
VOC	Theoretical Calculation	g/L	29

Safety

Do not use acetone for cleaning purposes.

Protect VE-CR 70 Flake contains vinyl ester resins and cumene peroxide catalyst. The product's components have been formulated to optimize physical characteristics such as strength and chemical resistance while minimizing hazardous physical and health factors encountered during application. A concerted effort is made to be aware of the latest chemical toxicological information and to apply this knowledge in a responsible manner to ensure product safety. Use respirators when necessary.

During application of **Protect VE-Flake Systems**, always wear gloves and appropriate work clothing to minimize contact. Ventilation is required with special consideration for enclosed or confined areas. Air movement must be designed to insure turnover at all locations in work area and adjacent areas to avoid buildup of heavy vapors. Use caution when handling flammable liquids, eliminate sources of ignition from work area and containers with residues. Observe safe storage practices by separating resins from hardeners, by keeping solvents in a cool area, free of sources of ignition.

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Product Material Safety Data Sheets are available and should be consulted when handling products. These products are for industrial and professional use only; application directions must be followed.

Maintenance

Periodically inspect the applied material and repair localized areas as needed. Consult your Protective Industrial Polymers representative for additional information.

Environmental conditions during application

Substrate temperature must be between 50°F and 100°F
 Surface temperature must be 5°F above dew point and relative humidity below 90%

Storage and Shelf Life

Store material in a cool, dry and covered location [50°-90° F (10° - 32° C)], away from fire hazards and direct sunlight. Shelf life is from date of manufacture (DOM).

@ 40-60°F (4-16°C)	6 months
@ 61-85°F (18-29°C)	4 months
@ 86+°F (30°C)	3 months

Higher temperature will shorten the shelf life of these products. The packing drums are to be kept tightly sealed and are to be resealed each time materials have been removed. All liquid products are to be stored in a frost-free place.

TECHNICAL SUPPORT: For application questions, please contact your salesman or PIP technical service at 440-243-4560. After business hours, please contact 1-866-361-3331.

READ MATERIAL SAFETY DATA SHEET (MSDS) FOR SAFETY AND PRECAUTIONS. KEEP OUT OF REACH OF CHILDREN.

WARRANTY AND CONDITIONS OF USAGE

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