

PROTECH NH-290(FR)

FIRE RETARDANT POLYUREA



Fire retardant polyurea Protech NH-290(FR) is a paint that is applied with designated spray equipment. It is a special paint mainly composed by bonding between Urea and Urethane and the curing reaction rate is achieved within few seconds to form dry film that has fire retardancy. Since it contains flame retardant powder, it is easily precipitated. So it must be stirred thoroughly before use and must be used while stirring.

Usage

Concrete structures requiring fire retardant specification.

Specification

Paint type	Polyurea / Intermediate coating (2K)			
Drying time	Category	5℃	20℃	30℃
	Set-to-touch	less than 1 minute	less than 1 minute	less than 1 minute
	Dry-through	less than 1 hour	less than 1 hour	less than 1 hour
	Above drying time is based on laboratory condition and may vary depending on the construction site.			
Thinner	Not Applicable		Dilution ratio	-
Specific gravity	Approx. 1.1 (A+B)			
Theoretical Coverage	1.1 kg/m² (based on 1mm)		Solid volume ratio	99%
Color	Gray, Black		Thickness of dried	-
Mixing ratio	Base(A)/Hardener(B)=100/100 (vol)		Flash point	-
Shelf life	6 months (5~35℃ indoor storage)		Package unit	410 kg [A:210 kg & B:200 kg]

Physical Properties

Tensile strength	More than 10 N/mm ²	Tear strength	More than 50 N/mm
Elongation rate	More than 300 %	Hardeness	More than Shore A 80

How to Use

Surface treatment	<ol style="list-style-type: none">1. Completely remove oil, moisture, sand, dust, laitance and other foreign matter from the surface.2. Cure concrete for at least 28 days at a temperature of 21°C and a relative humidity of 50%.3. Remove protruding parts using a grinder. Cracks in the substrate must be repaired before work.
Coating Conditions	<ol style="list-style-type: none">1. Spray application is available when the substrate temperature is -5 to 50°C2. Concrete moisture content: 6% or less
Coating Method	<ol style="list-style-type: none">1. For the spray gun, Fusion AP gun and Round tip must be used. (Chamber is AR4242 type or higher)2. Component B contains flame retardant pigment, so it must be applied while stirring using an agitator before use.3. Remove the steel filter at the bottom of the urea equipment for component B as well as of the AP gun for component B. (Flame retardant pigments may get caught in the filter and may not be sprayed.)4. Thickness per each application: 300~800μm & Number of application: Apply according to designed thickness.5. If the surface condition is poor after the first application, reapply within 24 hours.6. Due to the formation of dust in the overlapping area during spraying, it is finished with the embossing method.7. Apply preliminary spray (1~4m²) on corrugated cardboard or plastic to check for any abnormalities before applying.8. Recommended equipment: Spray equipment for polyurea (equipment with Graco/Gusmer reactor E-XP 2 or higher) <p>▷Primer: PROTECH 100 (or CLEANTHANE 1000, BLACKTHANE 100) (Depending on surfaces)</p> <p>▷Intermediate: ECO-CLEANTHANE 2100 (KS F 3211) can be used for scraping coating and Proform NF Series</p> <p>▷Top coat: PROTECH 300 (or DHDC-3000(H)) (When exposed to the outside)</p>