

CODE: PU-851-HB

PRODUCT NAME:

Aliphatic Polyurethane High Build Coating

DESCRIPTION:

PU-851-HB is aliphatic polyurethane with high build performance, which has excellent resistance to violet exposure as well as chemical, industrial and marine environments. PU-851-HB forms an impact and abrasion resistant coating with excellent color retention, non-yellowing and non-chalking properties, where an attractive appearance and a wide range of corrosion resistance is required for chemical plants, pulp and paper mills, petroleum refineries, offshore platforms, marine equipment, ship topsides and other equipment. PU-851-HB is normally applied over epoxy primers or tie coats. It is also recommended to use as a top coat over epoxy primers where durable finish is required.

TECHNICAL DATA:

Binder	Acrylic-Urethane
Pigment	Chemical and UV resistant pigment
Finish	semi glass (ASTM D 523)
Shade	RAL Colors (Except the color black, silver & red)
Specific gravity after mixing	1.5 ± 0.1 Kg/Lit (ASTM D 1475)
Volume solid	60 ± 3 % (ASTM D 2697)
Flash point	Base 33°C, hardener 42°C
Typical dry film thickness	50 -80 Microns per one coat (ASTM D 1186)
Number of coat	One
Mixing ratio by weight	Base : 100 parts Hardener : 20 parts
Substrate	Primed steel or concrete, Aluminum, Galvanized
Application method	Conventional or airless spray, roller, brush (FED.ST 141(method4331))
Thinner / Cleaner	T-850
Weight of added thinner	Maximum 10%
Induction Time at < 25°C	30 minutes
Theoretical spreading rate (at 75 microns)	8 M ² /Lit (ASTM D 344)
Packing	Base : 20 or 4 kg (PU-851-HB) Hardener: 4 or 0.8 kg (PU-851-HB-H)
Shelf life*	Base: 12 Months Hardener : 12 Months

***Note:** It is dependent on storage temperature and reduces at storage temperature above 20° C. Do not store above 40 °C. Shelf life is exceeded if the liquid is gelled or if the mixed product forms gels before application.

Under License C



Approved b



Touch dry	Hard dry	Over coating		Full cure
		Min	Max	
minutes 30-180	-13 hours7	16-24 hours	-	5-7 days

Note: Drying times are dependent on applied film thickness; all data in this catalogue are reported at recommended DFT.

Above Specification Is Based On Mixture Of The Two Components.

(23 ± 3 °C And 35 ± 5 % RH.)

Pot life (ASTM D 1849)

Temp. of paint	15± 3°C	23± 3°C	40± 3°C
Pot life	9-12 hours	4-7 hours	3-4 hours

SURFACE PREPARATION

All Surfaces to be coated should be clean, dry and free from contamination. Prior to Paint application all surfaces should be assessed and treated in accordance with ISO 8504:1992.

Primed Surfaces

PU-851-HB should always be applied over a recommended anti-corrosive coating scheme. The primer surface should be dry and free from all contamination, and PU-851-HB must be applied within the overcoating intervals specified. Areas of breakdown, damage etc., should be prepared to the specified standard (e.g. ISO 8501 -1:1988) or SSPC-SP10, Abrasive, or SSPC-SP11, power tool cleaning) and patch primed prior to the application of PU-851-HB.

Concrete, precast block work etc

PU-851-HB is suitable for application to concrete. For the first coat it is recommended that PU-851-HB is thinned 15-20 % by T-850 in order to provide good penetration into the concrete substrates. Concrete should be cured for a minimum of 28 days prior to coating. The moisture content of the concrete should be below 6%. All surfaces should be clean, dry and free from curing compounds, release agents, trowelling compounds, surface hardener, efflorescence, grease, oil, dirt, old coatings and loose or disintegrating concrete. All poured and precast concrete must also be sweep blasted (preferred) or acid etched to remove laitance.

Surface preparation shall not take place in the following conditions:

- A) At temperature below 5 °C
- B) When the relative humidity greater than 85%
- C) When the metal surface temperature is less than 3°C above the dew point
- D) Outside day light hours on exterior locations

Application Method

Material is supplied in two containers as a unit. Always mix a complete unit in the proportion supplied. Once the unit has been mixed it must be used within the working Pot life specified.

1-Agitate part A with a power agitator.

2-Combined entire contents of curing agent (part B) With Base (Part A) and mix thoroughly with power agitator.

(Stir during application to maintain uniformity of material.)

Application Equipments

Air less Spray	Tip range 0.017-0.021 inch 141 Bar (2000 psi)	Total output pressure at spray tip not less than
Air Spray	Nozzle orifice 1.8-2mm Nozzle pressure: 2-4 Bar (29-58 psi)	
Brush	Typically 30 mic can be achieved.	
Roller	Typically 30 mic can be achieved.	

Note: The components of polyurethane are reactive with moisture. Keep containers dry and tightly sealed to avoid moisture contamination.

ENVIRONMENTAL CONDITIONS:

- To prevent moisture condensation during application, surface temperature must be at least 3 °C above dew point.
- Never apply coatings under reverse environmental condition.
- In hot climate, material temperature should be 20 to 25 °C prior to mixing; otherwise pot life becomes very short.
- For satisfactory cure, air and surface temperature must be above 10°C
- Paint shall not be applied when wind speed is in excess of 7 m/s

Air temperature	10 to 40 °C
Surface temperature	10 to 50 °C
Material temperature	10 to 30 °C
Relative humidity	Max 80 %

HEALTH AND SAFETY:

This product is Flammable. Keep away from heat and open flame .Keep container closed .Use with adequate ventilation. Avoid prolonged and repeated contact with skin. If used in confined areas, observe the following precautions to prevent hazards of fire or explosion or damage to the health:

- 1-Circulate adequate fresh air continuously during application and drying.
- 2-Use fresh air masks and explosion proof equipment.
- 3- Prohibit all flames, sparks, welding and smoking.

