



RAINBOW

HIGH BUILD POLYURETHANE COATING UP-450HB

Specification Data

Type	A two-pack, high-build colored coating based on acrylic polyol resin with non-yellowing polyisocyanate hardener.
Uses	Used for wooden, metal, FRP products and steel structures such as ships, vehicles, bridges, oil refineries, power stations, pulp factories, chemical plants etc.
Characteristics	<ul style="list-style-type: none"> • High gloss and excellent appearance. • Excellent weather resistance with gloss and color retention. • Excellent resistance to chemicals. • Excellent adhesion, flexibility and abrasion resistance.
Color	A broad range of colors is upon customer request.
Finish	Gloss
VOC values	255 g/L , use No.739 thinner to thin up 5% (290 g/L) or 15% (360 g/L).
Volume Solids	70±3%
Theoretical Coverage	33 m ² /gal 8.7 m ² /L 7.5 m ² /kg (DFT :3.2 mils)
Dry Film Thickness	3.2~4.0 mils per coat. Dry film thickness in excess of 4.0 mils (100 microns) per coat is not recommended. Recommended minimum dry film thickness is 60um or more.
Service Temperature	Continuous : 200°F(93.3°C) Non-Continuous :250°F(121°C)
Preceding Coats	EP-999GF Epoxy High Solids Glass Flake Coating / No.1002 Epoxy Primer / No.1006 Epoxy Zinc Rich Primer / No.1007 Epoxy Red Lead Primer / No.1009 Epoxy Red Oxide Primer / No.1050 Epoxy M.I.O. Primer / No.1061 High Solids Epoxy Coating / No.700 One Pack Polyurethane Maintenance Primer.

Performance Data

Test Method	System	Results
ASTM D522 method B Flexibility	1 ct. UP450HB	No cracking and peeling on film
ASTM D2794 Impact resistance	1 ct. UP450HB	No cracking and peeling on film
ASTM D3359 Adhesiveness between layers	1 ct. EP-999GF 1 ct. UP450HB	5A
ASTM D4060 Adhesion	Blasted Steel 1 ct. EP-999GF 1 ct UP450HB	1680 psi
ASTM D4541 Abrasion	Blasted Steel 1 ct. UP450HB	11.4mg. loss after 1000 cycles, CS17 wheel, 1000 gm. load
ASTM D4400 - 18 Sag Resistance	1 ct. UP450HB	250 um
ASTM D4587 Accelerated Weathering (QUV-B)	Blasted Steel 1 ct. UP450HB	Withstand accelerated weather resistance test of 1000hrs.Appearance : No blistering · cracking and peeling on film. Color difference: Not larger than reference sample. Chalking grade: 0 Gloss retaining ratio(%): 76.8

Test reports and additional data available upon written request.

EPDM71UP450H V1.4

YUNG CHI PAINT & VARNISH MFG. CO., LTD.

No.26, Yen Hai 3rd Road, Kaohsiung, Taiwan.
<http://www.rainbowpaint.com.tw>

TEL:886-7-8713181
 FAX:886-7-8715443



RAINBOW

Application Instruction

• Surface preparation

General Remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating. Surfaces must be clean and dry. Moisture, grease, sludge, dust, corrosive salt must be thoroughly cleaned from substrate.

Primed Surfaces UP-450HB should always be applied over a recommended anti-corrosive coating scheme. The primer surface should be dry and free from all contamination and UP-450HB must be applied within the overcoating intervals specified (consult the relevant product data sheet).

Areas of Breakdown and Damage It should be prepared to the specified standard (Sa2 1/2 (ISO 8501-1:2007) or SSPC-SP6, Abrasive Blasting or SSPC-SP11, Power Tool Cleaning) and patch primed prior to the application of UP-450HB.

• Mixing & Thinning

Mixing Mix base and hardener according to the mixing ratio and stir thoroughly.

Thinning Use PU Thinner (No.739) to thin up 5~15%.

Mixing Ratio Base : Hardener = 6 : 1 (by weight)

Pot life 3 hours at 25°C (mixture, 77°F)

• Equipment

Spray Application Avoid applying the paint in rainy or humid weather (the moisture above 85% RH), otherwise the adhesion will be affected by moisture of substrate and the paint film will be loss its gloss. All equipment must be cleaned immediately after use. When overcoating interval is exceeded, paint surface must be roughened to insure adhesion. Hardener cover must be tightly closed to avoid reaction with moisture in air to form bubbles and gelation.

Airless Spray Pump ratio 30:1 or greater

Tip size : 0.015"~ 0.019"

Output PSI : 2100~2500

Brush Application by brush is applicable. For special condition please consult with product manufacturer.

Roller Application by roller is applicable. For special condition please consult with product manufacturer.

• Environment conditions

Condition	Coating	Surface	Environment	Humidity
Normal	20~30°C (68°F~86°F)	20~30°C (68°F~86°F)	20~30°C (68°F~86°F)	30~55%
Minimum	5°C (41°F)	5°C (41°F)	5°C (41°F)	0%
Maximum	35°C (95°F)	42°C (108°F)	42°C (108°F)	85%

Industry standards are for substrate temperatures to be 3°C (5°F) above the dew point . the product simply requires the substrate temperature to be above the dew point.

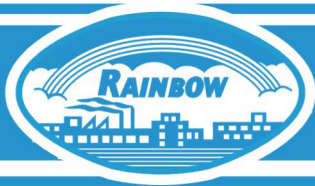
Caution : This Product is moisture sensitive in the liquid stage and until cured. Protect from high humidity ,dew and direct moisture contact until cures. Application and/or curing in humidities above maximum, or exposure to moisture from rain or dew may result in a loss of gloss and/or microbubbling of the product.

EPDM71UP450H V1.4

YUNG CHI PAINT & VARNISH MFG. CO., LTD.

No.26, Yen Hai 3rd Road, Kaohsiung, Taiwan.
<http://www.rainbowpaint.com.tw>

TEL:886-7-8713181
FAX:886-7-8715443



RAINBOW

- Curing Schedule

Surface Temp. & 50% Relative Humidity	Dry to Handle	Dry to Recoat & Topcoat
5°C (41°F)	30 hours	30 hours
15°C (59°F)	20 hours	20 hours
25°C (77°F)	8 hours	8 hours
35°C (95°F)	5 hours	5 hours

- Cleanup & Safety

Cleanup	Use PU Thinner (No.739) to clean. In case of spillage, absorb and dispose of in accordance with local applicable regulations.
Safety	Please read and follow all caution statements on this product data sheet and MSDS for this product.
Ventilation	Proper ventilation and protective measures must be provided during application and drying to keep solvent vapor concentrations within safe limits and to protect against toxic or oxygen deficient hazards.

- Package, Handling & Storage

Shelf Life	Part A :Minimum 2 years under normal storage conditions Part B :Minimum 1 years under normal storage conditions
Shipping Weight	Part A : 1 Gallon – 3.6kg 5 Gallon – 18kg Part B : 1 Gallon – 0.6kg 5 Gallon – 3.0kg
Storage Temperature & Humidity	5-35°C (41-95°F) 0-90% Relative Humidity
Flash Point	Part A: 25°C (77°F) Part B: 47°C (116°F)
Storage	Store in dry, shaded conditions away from sources of heat and ignition.

EPDM71UP450H V1.4

YUNG CHI PAINT & VARNISH MFG. CO., LTD.

No.26, Yen Hai 3rd Road, Kaohsiung, Taiwan.
<http://www.rainbowpaint.com.tw>

TEL:886-7-8713181
FAX:886-7-8715443