

Incredible adhesion power!!

Clearbond+ Plus

Adheres to most substrates including metals, resins and even PP!
A multifunctional adhesion promoter compatible with most topcoats!

Clearbond+ Plus is an excellent adhesion promoter based on a polymerized polyolefin resin. It has high solvent resistance, water resistance and corrosion resistance. Clearbond+ Plus offers excellent adhesion power not only on metals including hot dip galvanized steel, raw aluminum, stainless steel, chromium plating but also on glass, tiles, plastics, body bumpers, acrylic sign boards and baking finish. No need for sanding at all. Moreover, unlike wash primer, it doesn't contain harmful ingredients such as lead and heavy metals. It is safe.



Color Clear

Objective an adhesion promoter that offers better adhesion between substrates and topcoats

Applications

1. Use before recoating on baked existing finish.
2. Provides strong adhesion and sealing for recoating by urethane and 2 component urethane
3. Use before recoating on auto parts such as hood, trunk, door, etc

Features

1. Adheres to most substrates including even PP
2. No sanding and saves time
3. Easy to use. 1-component type
4. Complies with Formaldehyde Emission Grade F☆☆☆☆
5. Compatible with most topcoats and equipment
6. Does not contain harmful heavy metals including chrome
7. No yellowing for clear coating

Cautions

- Do not apply a thick coat. If Clearbond+ Plus puddles, then it could cause weak adhesion.
- If applied under low temperature (below 5°C) or extremely high humidity, adhesion could be weakened. Under such conditions, preheat the surface and/or allow longer dry time.
- Although adhesion increases over time, no rough handling is suggested on the surface treated with molten zinc for about a week after coating.
- When lacquer based paint is used, apply thin coats with sufficient flash time between coats. Cracking may occur if coating is thickly applied.

DIRECTIONS for use

1. Surface preparation

Remove oil, dirt, water, dust, and other contaminants from the surface thoroughly.

2. Under coat

Apply two coatings of "Clearbond+ Plus". Apply one or two coatings at a distance of 10-15cm. Avoid thick coating. A thin coating can offer sufficient adhesion.

We suggest a spray gun with a nozzle of 1mm diameter. The recommended amount of coating is 60 – 80 g/m². The film thickness should be 6 – 8 μm.

If a brush/roller is used, the coating will likely be about twice the above amount. It is recommended to stroke the brush/roller as much as possible before thinly applying "Clearbond+ Plus" with it.

*Certain materials may require more precise amount of coating. In the event the brushes/rollers are not found suitable in this regard, please use the appropriate painting device.

3. Dry

Allow to dry for 20 to 30 minutes under room temperature (20 °C) and 60%(humidity). If applied under low temperature (below 5°C) or extremely high humidity, the sufficient adhesion may not be achieved. Under such conditions, heat the surface or the film before applying.

4. Topcoat

Apply the topcoat according to instructions.

Applicable Substrates and Adhesiveness

◎=very good ○=good △=poor

Compatibility with substrates and topcoats		Clearbond+ Plus	Ordinary Products
Substrates	Aluminum	◎	△
	Alumite processed materials	○	△
	Stainless steel	◎	△
	Galvalume	◎	△
	Copper	◎	△
	Steel	◎	◎
	Color corrugated galvanized iron	◎	○
	Baking finish film	◎	○
	Electro deposition coating film	◎	○
	Fluorine processed Material(*1)	○	/
	Chemical conversion coating film(*2)	○	△
	Cold dipped galvanized steel(*3)	○	△
	Hot dipped galvanized steel(*3)	○	/
	Lead	○	△
	Brass	○	△
	Chrome plated material	○	○
	Concrete-Mortar	○	○
	Polypropylene (PP)	○	/
	Polycarbonate	○	△
	Rigid vinyl chloride	○	△
ABS · FRP	○	○	
Poly-decorative sheet	○	△	
Acrylic sheet	○	△	
Melamine decorative sheet	○	△	
Glass · Porcelain enamel	○	/	
Porcelain tile	○	/	
Compatibility with topcoats	1-component Urethane paint (mild and strong solvent type)	◎	/
	2-component Urethane paint (mild and strong solvent type)	◎	/
	2-component Acrylic Urethane paint (mild and strong solvent type)	◎	/
	1-component epoxy paint	○	/
	2-component epoxy paint	○	/
	Acrylic lacquer paint	○	/
	Straight Acrylic paint	/	/
	Water based paint	○	/
	Acrylic Emulsion	△	/
	Melamine Baking paint(150°C)	◎	/
	Acrylic Baking paint(180°C)	/	/
	Epoxy Baking paint(180°C)	/	/
	Powder Coating(200°C)	/	/
	UV paint	△	/
	Acrylic Silicone(*4)	△	/
Synthetic Paint · Phthalic acid based enamel paint	△	/	
Water-based cation paint	○	/	
Baking finish	150°C	◎	/
	200°C	/	/
	2 Coat 1 Bake	△	/
	2 Coat 2 Bake	/	/
	Bake on both sides	/	/

PHYSICAL AND CHEMICAL PROPERTIES

Item	Property
Appearance in Container	Clear with viscous liquid
Density	0.88
Standard Application Amount	6-10μ 60-80g/ m2
Performance	Spray, Gun, Brush
Dry to Touch	2 min 40 sec. (20°C)
Topcoat	More than 20 min. (20°C)
Shelf life	12 months (20°C)

STANDARD OPERATION

Procedure	Coating/Amount/Operation
Surface Treatment	Remove dirt (rust, oil, grease, water, dust) with solvents and sand papers.
Undercoat	Apply 60-80g/ m2 of Clearbond+ Plus with spray gun.
Dry	Summer: 15-20 min. Spring and Autumn: 20-30 min. Winter: 1-2 hours
Topcoat	Apply in conformity to operation procedure of each topcoat.

TEST DATA (WHEN APPLYING URETHANE TOPCOAT)

Item	Results	Property
Adhesion	1mm x 1mm Checkered Area Sticker Tape Tearing Test	100/100
Accelerated Weathering Resistance	Weather meter 2000 hours	OK
Outside Exposure	Exposed outside for 5 years and check second adhesion.	OK
Water Resistance	Subjected to running water from valve at 20°C for 240 hours.	OK
Alkaline Resistance	Subjected to 2% Calcium Hydroxide solution for 48 hours.	OK

Substrate: SECC (Single Edge Contact Cartridge)

Environment Friendly Adhesion promoter

F ★★★★★	
Complies with Formaldehyde Emission Grade	
Register Number	TI8008 with Japan Paint Industry Association
Contact	http://www.toryo.or.jp

Any of the data values above can be changed by climates, surface condition and work environment.

*1 Required sanding before applying

*2 Prohibited thick coating with lacquer paint

*3 Paintable after forming oxide layer followed by surface treatment

*4 Longer dry time needed when two coatings

● Please contact us before applying if you don't have any experiences of applying on the new materials.

● Generally, an ordinary adhesion promoter is applied on a few substrates and it is compatible with limited topcoats.