



GENERAL TECHNICAL DATA OF UVIC-P Series UV Clear

Introduction to UVIC-P Series

This paint series is ultraviolet curable coatings which designates for plastic material as main use.

There have excellent physical properties such as scratch resistance, solvent resistance and chemical resistance, e.t.c.

There is a wide range of qualities; from the hard finishing type which has good anti-abrasion and hardness to the soft finishing type which shows elasticity and good bending resistance. It means there is wide range paints in the series for various purpose and requirement. We recommend UVIC series for your UV cured system application

Feature of UVIC-P Series

The advantage of using UVIC is the wide range choice available from physical properties and finishing according to user purpose

UVIC PH

- High hardness and excellent abrasion resistance
- Excellent performance when apply on hard materials such as PC, Acrylic and PA
- Recommend to use as Scratch Resistance

UVIC PM

- Excellent balance of performance, adhesion and efficiency
- Certain hardness can be expected without sign of film shrinkage
- It is suitable for film material and metal plated plastics which may cause poor appearance and adhesion of paint film due to shrinkage.

UVIC PF

- Soft type that can be suitable for crack measure when it bends and bending resistance is necessary
- It can be applied on special materials such as paper or cloth

All the abovementioned have standard physical properties such as good chemical and solvent resistance as ultraviolet curable coatings

Substrate Comparability

- Excellent adhesion for plastics such as ABS, AS, PC, Acrylic, PA, PET e.t.c.

APPLICATION SPECIFICATIONS OF UVIC-P Series UV Clear

Standard Thinner		Thinner No. 5000 series
Mixing Ratio (Paint/ Thinner)		100 / 90 ~ 110
G	Type	W-71 (IWATA)
U	Nozzle Tip Size (mm)	1.2 ~ 1.3 mm
N	Cup	Gravity Cup
Number Of Coat		1 coat
Dilution Viscosity (NK-2 Cup)		9 ~ 11 seconds
Air Pressure		3.5 kg / cm ²
Gun Distance		20 ~ 25 cm
Rotation of Supply Valve		1.5 times
Dry Film Thickness		8 ~ 15 μm
Pre- Drying Condition		60°C x 5 minutes
Lamp		80 ~ 120 w/cm
Height of Lamp		10 ~ 20 cm
Accumulate Light Intensity		500 ~ 800 mJ/cm ²
Duration		3 ~ 5 seconds

Remarks:

1. UVIC consists of low-molecular resin compared with standard paints (ex: lacquer, heat reactive resin, etc). Try to avoid direct contact with skin. In case of contact, wash out by water with soap
2. Main component is high reactive low-molecular resin (Mainly monomers and oligomers). Avoid direct strong light (example sunlight) and exposure to heat. Keep the container tightly capped and store it in cool shade.
3. If UVIC or base coat is hardened with containing volatile matter, the UVIC paint film might not be formed uniformly or have some variability in physical properties. Please design painting process properly based on paint film condition.

The above is only a recommended specs, coater had to test and find the best condition to achieve good paint film appearance.

Integrating Light Intensity & Measurement

The most important index concerning light for curing of ultraviolet curable coating is "Integrating Light Intensity"

UVIC Series starts curing with 100~200mJ/cm and sufficient performance is appeared in range of 400 ~ 800mJ/cm.

Integrating Light Intensity (mJ/cm²) = Illumination Intensity (mW/cm²) X Radiation Intensity(t).

Film Performance Data

Test Item	UVIC PH	UVIC PM	UVIC PF
Initial adhesion	100/100	100/100	100/100
Secondary adhesion	100/100	100/100	100/100
Pencil hardness	3H	2H	B
Heating testing	100/100	100/100	100/100
Hot water resistance test	100/100	100/100	100/100
Heat cycle test	OK	OK	OK
Chemical resistance test			
Glass cleaner	OK	OK	OK
Handcream	OK	OK	OK
Artificial sweat	OK	OK	OK
I.P.A	OK	OK	OK
Solvent resistance test			
Acetone	OK	OK	OK
MEK	OK	OK	OK
Toluene	OK	OK	OK
Ethanol	OK	OK	OK
Abrasion resistance test Eraser Load 9.8N	>1200 RUB, 10 μ m	>600 RUB, 10 μ m	--
Abrasion resistance test Eraser load 3.92N	--	--	>1500 RUB, 10 μ m
Abrasion resistance test RCA	>1200 RUB, 10 μ m	>200 RUB, 10 μ m	--
Weathering test	SATISFACTORY	SATISFACTORY	SATISFACTORY

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