

Anti-smudge coating OPTOOL DAC-100

 TECHNICAL
DATASHEET

OPTOOL DAC-100 is an additive applicable to UV curable hard coatings. It imparts the excellent anti-fouling features, notably a distinctive anti-fingerprint property, with an abrasion resistance.

Introduction

UV curable hard coated surface with OPTOOL DAC-100 takes on the excellent features.

1. Anti-fingerprint and abrasion resistance
2. Water and oil repellency
3. Low coefficient of friction
4. Low haze and high total light transmittance

Appearance and composition / component information:

Items	Numeric value
Appearance	Colorless to Light Yellow
Activity solids	15.0~25.0 mass%
Solvent	1,1,2,2,3,3,4-Heptafluorocyclopentane Butanone

Solubility in general solvents:

Solvent	b.p. (°C)	DAC-100	DAC-HP
acetone	57	○	×
methyl ethyl ketone	80	○	○
methyl isobutyl ketone	116	○	×
ethyl acetate	77	○	○
butyl acetate	126	○	×
propylene glycol monomethyl ether	121	○	○
propylene glycol monomethyl ether acetate	146	○	×
ethyl alcohol	78	×	×
isopropyl alcohol	83	×	×
toluene	111	△	×
hexane	69	×	×

Dissolution test method: 1.0 g of additive and 4.0 g of general solvent were mixed well and the appearance was confirmed.

○: a colorless and transparent solution,

△: clear solution, but slightly colored,

X: other than the result of ○△. light cloudiness, cloudiness, precipitation, etc.

Basic performance of coating film※1)

Substrate film is PET (Thickness: 100μm, Haze: 0.6)

AF additive	none		DAC-100		DAC-HP	
	Type A	Type B	Type A	Type B	Type A	Type B
Hard coating agent	Type A	Type B	Type A	Type B	Type A	Type B
Water contact angle (5μl)	60°	61°	111°	114°	110°	111°
Oil contact angle *2) (2μl)	8.4°	7.5°	67°	71°	66°	67°
Coefficient of friction*3)	-	-	0.07	0.07	0.08	0.08
Haze*4)	0.6	0.6	0.6	0.7	0.6	0.7
Transmittance*5)	90.8%	90.4%	90.6%	90.3%	90.2%	90.1%
Adhesiveness*6)	100/100	100/100	100/100	100/100	100/100	100/100
Pencil hardness*7)	2H	2H	2H	2~3H	2H	2H
SW durability*8)	-	-	1,500 cycle	2,500 cycle	2,000 cycle	2,000 cycle
Rubber durability*9)	-	-	5,000 cycle	9,000 cycle	3,000 cycle	3,000 cycle

※1) coating thickness 5~6 μm,

※2) oil is n-Hexadecane,

※3) Material: OA paper(20×20mm) Load: 1.69N(200gf) Test speed: 200 mm/min,

※4) Nippon Denshoku 「Haze Meter NDH 7000SP」 ,

※5) Hitachi hightech science 「Spectrophotometer UH4150」 ,

※6) ASTM D3359,

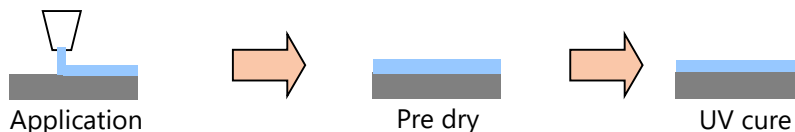
※7)ASTM D3363,

※8) SW:#0000 Load:1kgf Area:1cm stroke:40mm speed:40rpm,

※9) Rubber 81 Durometer[A type] Load:1kgf Area:0.6cm stroke:40mm speed:40rpm.

How to use;

Mix additive with hard coating agent in solid content ratio of 0.1~5%



Application: bar coating, dipping, spraying, spincoating, roll coating, etc

→ Pre dry: Dry at 60~110°C for 2~15min

→ UV cure: Dose 400~1200 mJ/cm² with Hg-lamp under N₂ atmosphere.

Handling / Safety information

- Be sure to read the notes on SDS and labels before use.
- This product is intended for general industry, and therefore its adequacy and safety as a raw material for medical purposes cannot be guaranteed.



Positively Innovative

Package size

- 800g

For more information, visit our website.

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