

Antifouling agent OPTOOL DSX-E

TECHNICAL
DATASHEET

OPTOOL DSX-E is an innovative antifouling agent, which DAIKIN has developed based on our long experience in original fluorine chemical technology.

Introduction

OPTOOL DSX-E is especially effective on glass and surfaces coated with SiO₂.

It adds the following characteristics to the surfaces:

- Water and oil resistant.
- **Anti-adhesion of oils like fingerprints and its easy removability.**
- **Low friction surfaces.**
- Durability.
- Sliding angle reduction, especially effective for oils.
- Non-cohesiveness.
- Ice suppression and easy removability.
- It is simply used and contributes to rapid processing.

Typical Properties (*1)

The following data was measured on DSX-E coated Gorilla Glass surface.

Test item	Unit	OPTOOL DSX-E
Water contact angle	°	115
Critical surface tension	mN/m	13
Sliding angle of water	°	8
Sliding angle of n-hexadecane	°	6
Tendency for fingerprint transfer	-	Better
Cleanability	-	Excellent
QUV durability (*2)	h	72
Xenon arc lamp durability (*3)	h	200
Steel wool abrasion durability (*4)	cycle	6,000
COF (*5)	-	0.07
Haze	-	0.25
High temperature test (*6)	°	114
High temperature and high humidity test (*7)	°	115
Acid resistant (*8)	°	107
Base resistant (*9)	°	59

(*1) Typical properties are not suitable for specification purposes.

(*2) Irradiation time to keep water contact angle above 100 degrees.

UV source: UV-B313, Irradiance (@313nm):0.63W/m²

(*3) Irradiation time to keep water contact angle above 100 degrees (SAE J2527)

- (*4) Maximum rubbing cycles to keep water contact angle above 100 degrees.
Conditions: Steel wool #0000, Load: 1kgf/cm², Stroke: 6cm, Speed: 60rpm
- (*5) Equipment: LabthinkFPT-1, Load: 200g, Speed: 200mm/min, friction material: paper
- (*6) Water contact angle in Air 130°C after 6days passage.
- (*7) Water contact angle in Air 85°C/85%RH after 6days passage.
- (*8) Water contact angle in 1.0mass% HCl aq. 25°C after 4days passage.
- (*9) Water contact angle in 4.0mass% NaOH aq. 25°C after 4hours passage.

Handling method/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.

Packing specification

- 100g

For more information, visit our website.

DAIKIN INDUSTRIES, LTD.

<https://www.daikinchemicals.com/>

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