

MicroCure DTO-0.5

MicroCure DTO 0.5% is a hydrophobic and oleophobic coating that is transparent, smooth and slippery. The smoothness and low surface energy of this coating makes it suitable for easy to clean (E2C) applications. MicroCure adheres well to most substrates including glass, metal, plastic and painted surfaces. MicroCure DTO is colorless and does not alter the color of most substrates.

Technical Data

Appearance	Liquid
Color	Clear - lightly turbid
Flammable	Yes
Density	0.9 g/ml
Refractive Index	~1.4
Soluble in Water	No
Hazardous decomposition	> 250°C
Dry film Toxicity	Non-toxic

Hardness testing:

MicroCure DTO was tested on 200µm plastic (PMMA) substrates. The substrate was first plasma cleaned. The sample was rod coated with MicroCure DTO to a wet film thickness of 7.5µm. The coated plastic was left to cure at room temperature for over 12 hours. Pencil hardness tests were carried out with a MXBAOHENG pencil hardness test kit and Staedtler Mars Lumograph calibrated pencil set.

Table 1. Pencil hardness test results of MicroCure DTO on PMMA

Tests	Property
500 grams weight pencil:	7-8H Hard
750 grams weight pencil:	6H Hard
1000 grams weighted pencil:	4H Hard

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Table 2. Properties of MicroCure DTO 50 nm film on glass

Tests	Property
Water contact angle	>100°
Water roll-off	<10° roll-off angle
Mineral oil contact angle	>50°
Mineral oil roll-off	<5° roll-off angle
UV light resistance	No yellowing observed, as good as glass

Curing: MicroCure DTO will be dry to the touch after 60 minutes at room temperature. At room temperature complete curing of MicroCure takes 12 hours. At 80°C, the time to cure is approximately 90 minutes.

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