

MicroCure DTO-6ET TECHNICAL DATA SHEET

OVERVIEW

MicroCure DTO-6ET is a water and ice repellent coating that is transparent, smooth, and slippery. The smoothness and low surface energy of this coating reduces ice adhesion on glass, metal, and painted surfaces. MicroCure is colorless and does not alter the color of most substrates.

APPLICATION NOTES

MicroCure can be applied by wipe, brush, or spray. When wiped on, films will be dry to the touch in 5 minutes at room temperature. At room temperature curing takes 24 hours. At 100°C, the time to cure is approximately 10 minutes.

TECHNICAL DATA

Concentration	6% solids in tert butyl acetate
Appearance	Clear to yellow liquid
Density	0.8 g/ml
Flammability	Flammable
Shelf life	2 years
Dry film toxicity	Non-toxic
Package options	100 grams in 4 oz. bottle; 7 pounds in 1-gallon can; 35 pounds in 5-gallon pail

HARDNESS TESTING

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

WEIGHT	PENCIL HARDNESS
500 grams weight pencil:	7-8H Hard
750 grams weight pencil:	6H Hard

ICE ADHESION TESTING

Glass was polished with a cerium oxide suspension and cleaned with isopropyl alcohol. MicroCure was deposited onto the glass with a dropper. A soft, lint-free, towel was used to wipe the solution on the glass in a crosshatch pattern (in one direction, then perpendicular to that direction). Allowed curing for at least 5 minutes before buffing clean with a new towel. The samples were cured for 72 hours at room temperature.

Coating	Exposure	Hydrophobicity		Icephobicity	
		Contact Angle θ_{Static} (°)		Ice Adhesion Strength, τ (kPa; -10°C)	
		Mean	St. dev	Mean	St. dev
Uncoated glass (reference)	None	10	2	795	159
MicroCure DTO-6ET	None	99	3	206	35
MicroCure DTO-6ET	UV	100	3	300	59
MicroCure DTO-6ET	Water	99	5	292	56

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