

## OilSlip 110 TDS

OilSlip 110 is a hydrophobic and oleophobic nano-coating that reduces the surface energy of metals. OilSlip is applied in a simple process by dipping, wiping or using a squeegee. The omniphobic monolayer of OilSlip is chemical and abrasion resistant. On metal devices such as stencils and molds, this coating provides excellent anti-fouling properties. OilSlip is recommended for applications where anti-smudge properties are needed. The main features of OilSlip include:

- Water, oil, protein, DNA and other organics repellency
- Reduced coefficient of friction of metal surfaces
- Does not change the appearance of metal surfaces
- Covalent bonding to surface prevents leaching

### Physical properties of OilSlip:

Physical Property	
Consistency	Liquid
Color	Clear - lightly turbid
Odor	Alcohol like odor
Flammable	Yes
Boiling point of solvent	80°C
Density	0.8 g/ml
Refractive index	<1.36
Soluble in water	No
Hazardous decomposition	> 250°C
Toxicity	Non-toxic
Viscosity	3 cP
Shelf Life	1 Year (in unopened container)

## Properties of coated surface:

Property	
Coating Thickness	~5 nm
Hydrophobicity (Static Water Contact Angle 2 $\mu$ l)	>110°
Water roll-off angle (200 $\mu$ l)	<20°
Oleophobicity (Static Mineral Oil Contact Angle 25 $\mu$ l)	>75°

## Application notes

### Substrate Preparation:

1. Before applying OilSlip 110, check substrate for hydrophilic or water-loving properties (water contact angle <20°) by placing a drop of water on the surface. If the water drop forms a bead (and does not wet the surface) please use the cleaner provided to prepare the surface.
2. The cleaning solution is dilute Phosphoric acid (that needs to be applied using gloves).
3. Clean the surface by dipping a microfiber cloth or paper towel in the cleaner and applying slowly in a swirling motion.
4. After cleaning, rinse with water using towels and dry the surface.
5. After drying, please check surface water wetting properties. If the water continues to bead please repeat step 3.

### Coating Application:

1. Apply OilSlip by dipping, wiping or using spritz and squeegee methods. When wiping on, a slow swirling motion helps with good coverage.
2. Let the coating air-dry and then bake the substrate at 50-100°C for 10-30 minutes. If baking is not possible, air-dry the substrate for 24 hrs.
3. After baking, please use ethanol and water to clean the surface to remove any residual material.
4. After removing residue, let the surface dry and test with water and mineral oil.

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