

# Technical Data Sheet

## Solar Sharc® LITE Permanent, Easy-to-Clean Coating for Solar Panels

### DESCRIPTION:

#### PROPERTIES/PRODUCT DESCRIPTION

- Permanent highly transparent coating
- Excellent protection against dirt build-up and surface contamination
- Easy-to-Clean
- Excellent adhesion to glass and most substrates
- Outstanding weather resistance
- High UV and chemical resistance
- Economical
- Easy to apply
- Cures at room temperature
- Fluorine free.

**Solar Sharc® LITE** is a clear, ready-to-use coating solution that protects smooth, non-absorbent surfaces such as solar panels against dirt build-up. Based on a patented polysilazane technology, **Solar Sharc® LITE** forms a permanent barrier layer that bonds chemically with the substrate and cures at room temperature with atmospheric humidity. The surface protected with **Solar Sharc® LITE** can be cleaned repeatedly without reapplying the product.

### INSTRUCTIONS FOR USE:

The product should be applied following the indications below.

### SUBSTRATE PREPARATION:

The substrate to be coated must be clean, grease-free and absolutely dry. Areas which are difficult to reach, such as cavities or drainage channels etc. must be dried additionally with absorbent cloths or blown dry with compressed air. On contact with a damp substrate surface, **Solar Sharc® LITE** reacts prematurely and cannot form a permanent seal.

### CLEANING DUST & DIRT REMOVAL

Surfaces coated with **Solar Sharc® LITE** should be cleaned with cleaners in the pH range 3 – 12. Strong (mineral) acids or alkalis should be avoided and are also unnecessary as neutral cleaners are generally sufficient to clean solar panels coated with **Solar Sharc® LITE**. Dirt and dust accumulation should always be removed from the coated surfaces as quickly and efficiently as possible during cleaning process.

### APPLICATION:

#### Application tool/method:

**Solar Sharc® LITE** is suitable to be applied with different methods offering several options to adapt to specific situations. The product should be applied by trained personnel only. Test on a small area or apply a test coat before application. The average coverage is approximately 15 ml/m<sup>2</sup> and this should not be significantly exceeded.

**The product is also suitable for spray deposition using the following conditions:**

<b>Spray-coating</b>	Gravity spray gun HVLP-compressed air	E.G: SATA minijet HVLP
	Working pressure:	ca. 2 – 3 Bar
	Nozzles:	0.8-1.3mm
	Distance to the surface:	15-20cm

NOTE: The spray gun can be cleaned with n-butyl acetate, for example.

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### Wipe-coating

The product can be applied with microfiber applicators or paint rollers (microfiber-flocking). These are the most suitable method for retrofit application. Decant the quantity that will be used in an applicator container.

The applicators cannot be reused once the coating has been applied. Traces of water in the applicator should also be avoided. Applicators dampened with water should not be used. If dirt appears on the applicators during coating, they should be replaced with clean applicators to avoid dirt entering the **Solar Sharc® LITE** coating. *Solar Sharc® LITE is dry-to-touch after about one hour.*

During application, only small quantities should be decanted from the original container into the application container. If the solution in the application container solidifies or a deposit forms, it can no longer be used. Residues of unused **Solar Sharc® LITE** should not be returned from the application container to the original container. Solutions that are no longer useable must be disposed of properly.

Any mistakes can be rectified within approx. 10 min of application. After this the repellent effect of **Solar Sharc® LITE** makes it impossible to apply another coat.

### APPLICATION CONDITIONS:

The substrate temperature must be between + 5 °C and + 30 °C, the relative humidity at 30 % - 80 %. Avoid direct sunlight! Apply the coating in dry conditions and never in rain.

### CURING CONDITIONS:

The recommended curing conditions (until water resistant) are:

1. @ Room temperature: 8 – 12 hours
2. @ 80 °C: two hours
3. @ 130 °C – 180 °C: one hour

The **Solar Sharc® LITE** coating is fully effective after 5 – 7 days' curing at room temperature.

Should the coating be installed as a retrofit solution during this time, the solar panels require protecting from the weather conditions and should not be cleaned driven into a vehicle wash, to achieve optimum adhesion to the substrate.

### SAFETY INSTRUCTIONS

The instructions on the accompanying Safety Data Sheet must always be followed.

### PROPERTIES

**Solar Sharc® LITE** coating:

1. Easy to clean surface for dust and dirt accumulation.
2. Clear coating
3. Easy to apply solution.
4. High weather resistance.
5. Fluorine-free product.

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PHYSICAL & CHEMICAL PROPERTIES	SPECIFICATIONS
Density	ca. 0.93 g/cm <sup>3</sup>
Solid Content	20 – 60 %
Flash Point	< 21 °C
Binder Component	Organic polysilazane
Solvent Based	n-butyl acetate
Appearance	Colourless to pale yellow liquid
Shelf Life	12 months from delivery date stored at 20 °C