Nano EcoLine
Solar Panel Coating Solvent

Product information

Nano-EcoLine Solar Panel Coating Solvent is an easy-to-apply coating designed to form a durable, anti-adhesive (hydrophobic and oleophobic) nanoscale layer on the exterior surface of PV/solar panels. The coating reduces the adhesion of contamination such as water, dust, bird droppings and other pollutants, allowing dirt to release more easily. In many situations, panels will clean themselves partially after a heavy rain shower, resulting in fewer cleaning cycles and helping maintain performance.

Benefits and key features

- Strong anti-adhesion properties (water- and oil-repellent).
- Excellent easy-clean effect; less need for aggressive or abrasive cleaners.
- Highly durable, UV-stable and wear-resistant.
- Invisible to the human eye (nanoscale coating).
- Breathable and resistant to temperature fluctuations.
- Chemically resistant within pH 1–13.
- Easy to apply (also suitable for DIY use).

Preparation

- The substrate must be dry and free from dust, oil, grease and other contamination.
- Work in the shade and in a well-ventilated area.
- Shake the product gently before use.

Application

- Manual: spray the product thinly onto a surface (max. approx. 1 m² per session) and buff immediately with a dry, lint-free microfibre cloth in circular motions.
- HVLP spraying: nozzle approx. 0.8 mm; distance 35–50 cm; spray pressure 5–6 bar; atomise finely and evenly.
- Drying: dust-dry after approx. 4 hours at 23°C / 50% RH; fully cured after 24 hours.
- Accelerated curing: 5 min at 150°C (dust-dry) / 30 min at 150°C (fully cured).

Important notes

- Do not apply to panels when the surface temperature exceeds 30°C; in warm climates, preferably work early or late in the day (ideal 15–20°C).
- Do not apply to substrates treated with silicones or similar products (adhesion may be reduced).
- Wear nitrile gloves; fingerprints can be much thicker than the coating itself.
- Avoid application in vapour-rich or very humid conditions and in direct, hot sunlight.

Removal

After full curing, the coating is difficult to remove. Removal is generally only possible by polishing with a suitable cutting compound. Read the instructions carefully to avoid unwanted effects during correction.

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Technical data

Property	Value / Description
Appearance	Colourless liquid
Dry film thickness	200–300 nm
Coating thickness (indicative)	100–150 nm (visually invisible)
Consumption	Manual: 5–10 ml/m²; Industrial: 5–15 ml/m²
Density @23°C	0.8 g/cm³
pH value	4.7–5.0
Chemical resistance	pH 1–13
Saltwater resistant	Yes
Moisture resistant	Yes
Pencil hardness (ISO 15184)	7H
Temperature resistance	275 °C
Water contact angle	97° @10 µl
Water contact angle after 2000× wet scrub (ISO 11998)	92° @10 µl
Water sliding angle	16° @60 µl
Oil contact angle	76° @10 µl
Gloss @60° (ISO 2813)	93 (acrylic)
REACH	Yes
Durability	Up to 5 years (normal conditions -20°C to +30°C / pH<12)
Storage	-3 °C to +30 °C; dry, well ventilated; keep away from heat/ignition sources
Shelf life	12 months unopened; after opening, preferably use within 1 week

Packaging units

Article number	Content	Packaging type
NCN.SOLAR.C/1L	1 Litre	Bottle
NCN.SOLAR.C/5L	5 Litres	Jerrycan
NCN.SOLAR.C/250L	250 Litres	Drum / IBC (on request)

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