Technical Datasheet

Vitapanel® Clean ECO

1. PRODUCT DESCRIPTION

Vitapanel® Clean ECO is a dedicated solar panel cleaner that is environmentally safe, bio-based, and biodegradable. It ensures effective and thorough cleaning while being non-corrosive and easy to store.

2. PROPERTIES

- Certified by ECOCERT
- No ADR classification, non-corrosive labeling
- Easy storage and transport
- Safe for solar panels and the environment
- Does not harm the AR coating on solar panels
- Biobased & Biodegradable formulation (OECD301F Guideline)
- No IMO containers required

3. RECOMMENDED USE

- Suitable for all types of solar panels
- For industrial and professional use only

4. TECHNICAL SPECIFICATIONS

- Physical State: Liquid
- Color: Colourless
- Odor: Characteristic
- pH: 7,4 - 7,7
- Flammability: Non flammable
- Explosive Properties: None
- Density: 1.02-1.05 g/cm³
- Viscosity: 700 - 1500 mPa.s (Brookfield, 5 rpm, 20°C)

5. TRANSPORT REGULATIONS

- ADR, RID, IMDG, IATA, IDN: Not applicable

6. STORAGE CONDITIONS

- Packaging: 10 L can (2.64 US gal.)
- Pallet Composition: 60 cans per pallet
- Shelf Life: 3 years (unopened, stored in a cool, well-ventilated place)
- Storage Precautions: Protect from frost (below 0°C) and overheating (above 35°C)

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This technical datasheet is based on many years of experience. We can not be held liable for any damages resulting from the use of this product or any damages beyond her control. The customer should check, using the means normally available to him, whether the products supplied are suitable for the planned application. If in doubt, consult our technical specialists via welcome@lumiforte.com

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7. INSTRUCTIONS FOR USE

Weather conditions:

- Apply evenly, on dry solar panels and not during peak hours of solar intake
- Minimum temperature: 5°C
- Relative humidity (RH) < 90%

Application methods:

Vitapanel Clean ECO can be used with all types of cleaning methods and systems. The most appropriate method, cleaning frequency and needed dilution may vary based on the severity of the contamination and the specific characteristics of the site. Solar cleaning is a trade-off between cost and additional energy output. In some situations initial cleaning of heavy soiling requires methods with brushing, in other cases a fast and efficient (regular maintenance) cleaning with drones will bring the desired additional energy output.

- Manual/water fed pole
- Cleaning robot
- Tractor mounted brush
- Drone
- Helicopter

Application Guidelines:

Manual/Robot/Tractor application: spray, brush, rinse

1. Dilute Vitapanel Clean ECO with water (1:20)
2. Apply evenly, on dry solar panels and not during peak hours of solar intake
3. Let the cleaner soak for 30 min
4. Use soft brush to remove stubborn dirt
5. Rinse with (demineralized) water

Drone and helicopter application: spray, rinse by rain

1. Dilute Vitapanel Clean ECO with water (1:10)
2. Spray evenly, on dry solar panels and not during peak hours of solar intake
3. Apply when a considerable amount of rain is expected within 1-3 days

Dilution & Capacity:

- Dilution required may vary based on the severity of soiling and type of dirt. When using a rotating brush driven by water with a dosing pump, dilution can be substantial higher based upon personal preference and experience.
- We advise to use minimum 125-150 ml (0.033- 0.039 US gal) of diluted liquid per m^2 (10.7 ft^2) panel. With 10 liter (2.64 US gal) on a 1:20 dilution you can clean approximately 1400-1700 m^2 (15,069 ft^2 - 18,299 ft^2) of panels.
- When using more concentrated (e.g. 1:10) with for example drones, around 100ml of spraying liquid per m2 panel could be sufficient. In this set-up 1 can will cover around 1100m2 of panels.

Personal protection:

- Wear a safety mask and protective gloves
- Avoid inhalation of fumes, vapors, or mist
- Always take the maintenance and safety instructions of the panel manufacturer into account

8. ENVIRONMENTAL PRECAUTIONS

- Dispose of waste according to official state regulations

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