D-Solar Defendor

Datasheet

Description

D-Solar Defendor is an easy to apply hydrophobic coating that minimizes the adherence of soiling to the solar panel keeping it cleaner and easier to clean. Is a concentrated product that is mixed with water to create the ready to use D-Solar Defendor solution.

Dilution Specifications

1kg of **D-Solar Defendor** for 1000 litres of soft water (reverse osmosis, destilled or using the Water Softening Agent from ChemiTek).

Applications

This product was developed to be as an hydrophobic coating for photovoltaic panels, facilitating its maintenance.

Instructions of Use

1. **Dilute** the D-Solar Defendor concentrate directly on the cleaning soft water (see dilution ratio above);
2. **Clean** the panels as usually done with just water.

Note: When using a mechanized brush (e.g. Sunbrush) to clean the panels and simultaneously apply the D-Solar Defendor coating for the first time, the speed of the tractor must guarantee that the panels are cleaned thoroughly and all soiling is removed to assure a perfect application of the coating.

The company Chemitek, SA is not responsible for the non-compliance application protocol and / or improper use of the product.

Stress Tests Results

Stress / Test type	Contact Angle		
	Before	After	**Results**
Water solubility (1º immersion in water for 96h at room temperature; 2º immersion in boiling water for 5, 15 and 30 min.)	96,8º	105,7º	Pass
Stability in acid environment (immersion in a phosphoric acid solution with a pH ~ 4 for 48 h)	96,8º	104,3º	Pass
Stability in alkali environment (immersion in a NaOH solution with a pH 8 for 48 h)	96,8º	105,5º	Pass
Stability in alkali environment (immersion in a NaOH solution with a pH 9 for 48 h)	96,8º	78,2º	Affected
Ionic stability (immersion in an ionic solution of 3.5% NaCl for 48h)	96,8º	104,2º	Pass
High temperature resistance (120ºC for 15h)	96,8º	105,8º	Pass
Low temperature resistance (-20ºC for 48h)	96,8º	100,3º	Pass
UV resistance exposure (7 J/(s·m2) for 8 h)	96,8º	102,2º	Pass
Stability in organic solvents (immersion in ethanol for 30 min)	96,8º	105,6º	Pass
Stability in SOLAR WASH PROTECT solution (4 wash cycles with Solar Wash Protect)	96,8º	104,2º	Pass
Anti-soiling test (dust chamber test acc to MSZ EN 60068-2-68:2000 – TUV)	94 º	91º (After 10 dust cycles)	Pass See TUV report

[1] **Note:** all tests described above were performed in glass. Exception: anti-soiling test was performed on solar panels OFFGRIDTEC ® 5Wp.

Compatible Applying Equipments

Rotative brushes, Robots, Tractors with brushes, etc.

Comments

Please follow the instructions in the safety data sheet for the safe handling of the product.

Properties

Aspect: Whitish liquid;
Odor: Characteristic;
pH: 7 ± 1;
Density: 1,03g / cm^3
Solubility in water: Fully miscible;

Shelf life

Closed: 18 months
After opening: 3 months
After dilution: Use no later than 12 hours after dilution.

Packaging

2, 5 and 20kg transparent drums and IBCs (1000 kg bulk packaging containers).

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