

## Solar Protection

### Water based antirust for Solar Installations.

#### **DESCRIPTION**

The newest formulation for *Solar Protection*, with 100% organic technologies, protects efficiently every metal of the circuit for long time saving time and money in maintenance labors for checking concentrations and periodical dosages of additives.

Organic additives do not exhaust when actuate. Solar Protection additives do not run out while working, so it is not necessary periodic dosage and analysis of additives.

*Solar Protection* protects copper, brass, steel, stainless steel, cast iron and aluminium.

*Solar Protection* is formulated without pollutants and it has good environmental compatibility.

Suspended solids present into the circuit do not affect to the performance of the products.

Once the product takes contact with the inner part of the circuit the corrosion protection is available even when there is not water movement.

#### **ADVANTAGES**

Some advantages versus traditional water treatment:

- Compatible with hard waters.
- Long time activity.
- 100% active with suspended solids into the circuit.
- Corrosion protection when system is stopped.
- Formulated without heavy metals amines, phosphates, borates, nitrites or nitrates.
- Catalogued as non toxic by current legislation in the UE.
- Biodegradable.

## PROPIERTIES

### Typical Characteristics:

Appearance	Green Liquid
Odor	Characteristic
Density (20°C)	1,06 - 1,08 Kg./liter
pH as concentrated (20°C)	8,5 – 9,5
pH (1% V/V Water) 20°C	8,0 – 8,5
Water Solubility	Fully soluble

### FLUSING - FILLING THE CIRCUIT.

Installations containing deposits arising from construction (new facilities) or corrosion (those already in service), must be flushed out very carefully.

### Procedures:

- 1) Circulate the existing fluid for at least an hour to bring the deposits into suspension.
- 2) Drain the cooling circuits completely (clean out low points and retention zones).
- 3) Check the heating elements and the expansion tank: clean out if any deposits are found.
- 4) Flush with pure water (at least twice), circulating the water throughout the circuit. Drain and check that deposits are not blocking the filters.
- 5) Drain the entire circuit.
- 6) Fill with **Solar Protection** + water according to the water exigencies for **Solar Protection**. It is recommendable to premix with water before fill up the circuit.
- 7) Keep the pumps running to assure all the circuit get in contact with the product. The pumps must move at least 3,5 times the total volume of the circuit.

### Dosage:

Recommended minimum dosage is 2% by weigh. For already corroded systems or which are going to be stopped the recommended dosage is 2,5% – 3,5% by weigh- Maximum dosage of 5% by weigh is recommended when long time stopped are scheduled or for previous heavy corrosion issues detected.

**Solar Protection** is compatible with conventional water treatment product available, however the properties of the mixture can affect the performance of the product. In case of doubt do not hesitate in contact with our technical department ([carpemar@carpemar.com](mailto:carpemar@carpemar.com))

### **Water Quality:**

In order to ensure the performance of the product water used to mix the product should meet the following characteristics:

pH (25°C)	7,5 – 9,0
Conductivity (25°C):	<600 µS/cm
Total Hardness:	0 – 250 ppm (as CaCO <sub>3</sub> )
Sulfates	< 50 ppm
Chloride	< 50 ppm

### **STORAGE:**

Both *Solar Protection* and its dilutions with water are stable for at least two years in regular stocks conditions (temperatures +5 - +30°C) in airtight containers.

### **PRESENTATIONS**

Solar Protection is supplied in road tankers, intermediate bulk containers (IBC, 1.000 kg) non-returnable drums (210 kg) and 25 Kg. canisters.

For any other presentation, please contact for availability.

### **PRECAUTIONS**

Solar Protection and its dilutions are a non flammable, non corrosive product, so no special precautions are required. In any case good industrial practices are recommendable.

Avoid contact with eyes, in case of splashing flush with running water for at least 10 minutes. Do not eat or drink, keep away of children.

Store in a clean and well-ventilated place.