

# CS-LTV

## Cleaner for Vacuum Tube Solar Installations

### Properties

The cleaner for vacuum tubes CS-LTV is a slightly acid fluid, of green colour and practically odourless. Thanks to its formulation it can detach the degraded products that have been formed during the overheating of the heat transfer liquid.

### Dosification – User’s instruction

In order to achieve an optimal cleaning effect it is necessary to eliminate the overheated fluid from the solar thermal system as completely as possible. The dilution of the product with water reduces its performance, for which it should be avoided. **This product is ready to be used, do not dilute it**, since it would reduce its efficiency.

The collectors should be covered before starting the flushing process for the elimination of the degraded fluid. After filling the system let the product circulate for several hours, according to the state of the installation between 50 and 60°C. Higher temperatures should be avoided, since there may be incompatibility problems with the gaskets. It's recommendable to clean the installation by batteries or groups of collectors assuring a good volume flow through the affected tubes.

It is recommended the use of a centrifugal pump provided with a transparent filter in the suction line, so that the cleaning process can be visually controlled, and the solids generated by detaching the tar present in the circuit. The duration of the cleaning depends on the extension of the contamination. Clean or substitute the filter element if necessary.

After finishing the cleaning process, the cleaning liquid should be drained from the system as completely as possible. The rests remaining in the system can be finally eliminated by flushing with water and after that, with compressed air.

### **Storing**

The product is stable under normal storing conditions. It is not classified as toxic or flammable.

Protect from freezing and maintain containers tightly closed in a fresh and dry place.

## **DELIVERY FORMS**

The product is delivered in containers of 20 liter. For other sizes, please consult their availability.

## **PRECAUTIONS**

The usual precautions for chemical products are recommended:

- Avoid the eye and skin contact
- Use gloves and safety glasses
- Don't ingest
- Don't inhale
- Don't smoke or eat while working with the product.

It is recommended to read the safety data sheet before handling the product.



*Carpemar*