

HOW TO CARE FOR YOUR REDTRONIC POLYCARBONATE PRODUCTS

POLYCARBONATE IS ONE OF THE STRONGEST PLASTICS AVAILABLE, BUT LIKE MOST MATERIALS THEY DO HAVE THEIR WEAKNESSES.

POLYCARBONATE IS WEAK AGAINST CHEMICAL ATTACK:

Cleaning and washing agents are vast in terms of their chemical composition, and so it should not be assumed they are all the same. They frequently include chemicals that damage polycarbonate.

Makrolon is resistant to normal soaps but not to amines, ammonia, a small number of solvent components, and a large number of high-gloss drying aids. Rinsing agents incorporating high-gloss drying aids are also unsuitable for polycarbonate.

In many instances, it is sufficient to clean with warm or hot water to which some weakly acidic, neutral, or weakly alkaline cleaning agent has been added. If you're unsure whether your cleaning agent is suitable, you should contact Redtronic with details of the product for more advice.

Using aggressive cleaning agents generally leads to a great reduction in mechanical stability and strength, but there are also other effects that are not always visible, such as swelling or chemical decomposition of the polymer.

MAKE SURE CLEANING AGENTS ARE FULLY RINSED OFF:

If you choose to use a cleaning agent, it is imperative that it is fully cleaned away and is not left in either droplet or film form. The longer a chemical agent is left in contact with polycarbonate, the increased possibility that it will damage it.

WATER TEMPERATURE IS IMPORTANT:

For completely sealed units, it is not recommended to either immerse the product in water above 60°C or in steam. It is highly likely that using water above a temperature of 60°C will affect the chemical bond and composition of the plastic, resulting in deformation or stress cracking, potentially resulting in total failure. The higher the temperature of the water used will shorten the lifetime of the polycarbonate.

FOR HARD TO REMOVE OIL AND GREASE:

Surfaces soiled with lubricants like oil and grease are best cleaned with suitable solvents at room temperature and with short exposure times. These include: gasoline fractions free of aromatics (e. g. petroleum-ether, ligroin, white spirit), alcohols (ethyl, n-propyl, isopropyl, butyl and isobutyl-alcohol, but not methyl alcohol).

LONG LASTING UV STABILISED PROTECTION:

The more you clean polycarbonate, the more you break down the UV stabilised additive in the material.

HOW YOU CLEAN DEPENDS ON THE IP RATING OF THE PRODUCT:

If your product is issued an IP69K rating, you can jet/pressure wash the product.

However, it's important that the end user is aware of the parameters behind the test. Importantly, the nozzle should be no closer than 150mm, the water flow rate should not exceed 15 litres per minute, and the pressure no more than 100 bar.

If you're unsure of the product's IP rating, you should either check the datasheet, our website or contact us.

HERE'S A BASIC OVERVIEW OF THE TEST:

Test: High pressure steam cleaning

Gen. ISO 20653 (2013-02); IPX9K

Parameters: Distance of the nozzle to the test specimen: **100-150mm**

Water flow rate: **15l / min**

Water pressure: **100 bar**

Water temperature: **80°C**

Speed test table: **5U / min**

Spray angle: **0°, 30°, 60°, 90°**

Number of cycles: **1**

Test conditions: **The candidate is not in electrical operation**

