

POLIGRAT-PRODUCTINFORMATION

POLINOX Protect TC

Thermo-chemical strengthening of the Passive Layer



Properties and effect

The highest possible corrosion resistance for stainless steel is achieved by the two-stage thermo-chemical process POLINOX Protect TC. The passive layer of stainless steel is cleaned in an immersion process (POLINOX B Protect) and afterwards thermally strengthened by thermal treatment (POLINOX Protect TC). The effect of POLINOX Protect TC is based on the deep cleaning (removal of free iron) of the passive layer which changes the Cr/Fe ratio to up to 8:1 while retaining the surface finish.

The surface color of stainless steel is stabilized thus up to temperatures of 240°C no discoloration occurs. POLINOX Protect TC improves all types of stainless steel, even ferritic Cr-steels (>15% Cr).

Application

POLINOX Protect TC is supplied as a two-component chemical. The ready to use bath is prepared with these two components and water. The application can be by immersion, trickling of surfaces or pumping through pipes. Optimal improvements are achieved at temperatures of 60-80°C after a treatment time of 3 hours. After treatment surfaces have to be rinsed with fully de-ionized water.

Afterwards the treated components are tempered at temperatures of 140-200°C (dependent on the material) in air.

POLINOX Protect TC is not specified as hazardous, it is easy to handle and bio-degradable. Process temperatures have to be over 50 °C in immersion baths in order to avoid bio-degradation.

The rinse water is acidic but free from heavy metals and has to be neutralized before disposal according to the statutory laws and regulations.

Technical data

Specific weight/density:	1,15 kg/l
Normal pH-value:	~2
Flashpoint:	inflammable
State at room temperature:	liquid
Working temperature:	+ 20° to + 80°C
Time to act on surface:	30 – 180 minutes
Composition:	citric acid surface active agents, water
Contains no mineral acids (inorganic acids)	



Supply

Concentrate, yields 150 l POLINOX B Protect

POLINOX B Protect K1	solid
▪ Barrel	30 kg
POLINOX B Protect K2	liquid
▪ Bottle	3,5 kg

Your advantage

- highest corrosion resistance
- no colour change of the stainless steel surface
- keeps the original surface finish
- bio-degradable