



Chromium Resistance List

Medium	Effect
Essential oils	No effect
Caustics, soda, potash	Good resistance with aqueous solutions
Alum	Good resistance
Formic acid	Good resistance
Ammonia	No effect
Ammonium chloride	Slight effect
Aniline hydrochloride	Is affected
Atmosphere	No effect, except where acid fumes are present
Beer	Little or no effect at all
Butyric acid	Little or no effect
Chlorine	Resistance to dry gas, but presence of moisture triggers corrosion
Chloroacetic acid	Adequate resistance
Chlorinated lime	Is affected
Printing inks	Very well suited
Ebonite (during casting)	Very good resistance
Acetic acid	Little effect. Somewhat less than with nickel
Hydrogen fluoride	Is affected
Molten zinc	Is affected
Rubber	Good corrosion resistance, adherence is inhibited
Heating	Oxidises at temperatures over 400°C
Calcium chloride	Little effect
Adhesive	Very little effect
Oxalic acid	Slight effect
Carbon dioxide	No effect
Carbon dioxide	No effect
Carbon oxide	No effect
Copper sulphate	No effect
Magnesium chloride	Little effect, but stronger than with nickel
Seawater	Good resistance
Milk	Resistant
Lactic acid	Little or no effect at all
Monochlorosulphur	Good resistance
Sodium chloride	No effect
Sodium carbonate	No effect
Oleic acid	Resistant
Olive oil	No effect
Phenols	Resistant
Phosphoric acid	Is affected by 10% solution, but fairly good resistance with 85% solutions
Crude oil	Good resistance in cracking plants



Medium	Effect
Nitric acid	Is affected by diluted acid. No effect with acid concentrated by passivation
Hydrochloric acid	Is even affected by cold, diluted acid, practically no resistance
Saturated or superheated steam	Good resistance
Sulphur	No effect up to 180°C
Sulphuric acid	Same behaviour as with nickel
Hydrogen sulphide	Little or no effect at all
Soap	No effect
Stearic acid	No effect
Sulphite (alkaline)	No effect up to the boiling point
Tar	Good resistance
Carbon tetrachloride	Not advisable
Racemic acid	Slight effect
Zinc chloride	Rapid effect
Citric acid	No effect
Sugar	Very good corrosion and abrasion resistance
Sugar beet juice	Good corrosion resistance
Cyanides	Little or no effect at all

Confirmation of food suitability of elemental chromium

Like every metal, metallic chromium is charge-neutral. Immediately after manufacture, it forms a passive coating and behaves in a non-reactive way, like noble metals. There are no known negative impacts on people, animals or the environment. Metallic chromium and its alloys are used on a large scale in medical and food technology.

The chromium deposited on your workpieces is metallic chromium (CrO). As a result, to the best of our current knowledge, it is possible to certify clearance for the food industry.

Clearance certification concerning chromium (VI) compounds

Our hard chromium-platings do not contain any chromium (VI) compounds. In electroplating, a layer of metallic chromium is deposited electrolytically from a solution containing chromium (VI). We can provide this clearance certificate, because we do not use any chromium (VI) compounds or other substances in accordance with the 2000/53/EC directive or VDE [Association of German Electrical Engineers] list in further mechanical processing either.

Hartchromwerk Brunner AG

Martinsbruggstrasse 94

CH – 9016 St. Gallen

Tel.: +41 (0) 71 282 40 60