

The data contained in the following table apply for room temperature (approx. +20 °C) and are provided as a guide only. Given the large number of recipes in practical use – e. g. in cleaning and disinfection – and the possible interactions where several chemicals are used at one location, it is not possible to offer any overall or individual guarantee. The chemical resistance of a coating is also influenced by the fillers and pigments that are used. For these reasons, it is essential that you do your own tests as each case arises.

Under some circumstances chemicals may lead to discoloration, but without attacking the material.

You must also remember that the aggressiveness of acids and other chemicals can increase as the temperature rises. It is also possible that acids on the ground will change concentration through evaporation or the absorption of moisture, making them tend to react more aggressively.

The stresses that occur in practice are often associated with greater and longer temperature stresses and can therefore lead to deviating results under some circumstances. You are welcome to contact Silikal's Application Technology department if you have any questions on this subject.

Test medium	SILIKAL® resin RU 727, R 62, R 81	SILIKAL® resin R 71, R 72	SILIKAL® resin RE 77
Alkalies:			
Ammonium hydroxide 10 %	+	+	+
Ammonium hydroxide 25 %	○	○	+
Ammonium hydroxide, alcoholic	○	○	○
Pottassium hydroxide 10 %	+	+	+
Pottassium hydroxide 50 %	+	+	+
Calcium hydroxide 50 %	+	+	+
Sodium hydroxide 10 %	+	+	+
Sodium hydroxide 50 %	+	+	+
Acids:			
Formic acid 10 %	+	+	-
Formic acid 30 %	-	○	-
Boric acid 3 %	+	+	+
Chromic acid 20 %	+	+	-
Chromic acid 40 %	○	+	-
Acetic acid 10 %	+	+	-
Acetic acid 25 %	+	+	-
Acetic acid 30 %	○	+	-
Acetic acid 80 %	-	-	-
Fatty acid (tall oil fatty acid)	○	○	+
Lactic acid 30 %	+	+	○
Oxalic acid 10 %	+	+	○
Phosphoric acid 40 %	+	+	+
Phosphoric acid, conc. (85 %)	○	○	○
Nitric acid 10 %	+	+	○
Nitric acid 30 %	○	○	○
Nitric acid, conc. (65 %)	-	-	-
Hydrochloric acid 10 %	+	+	+
Hydrochloric acid, conc. (36 %)	+	+	+
Sulphuric acid 30 %	+	+	+
Sulphuric acid 50 %	○	+	○
Sulphuric acid 80 %	-	-	○
Citric acid 30 %	+	+	+

Test medium	SILIKAL® resin RU 727, R 62, R 81	SILIKAL® resin R 71, R 72	SILIKAL® resin RE 77
Solvent:			
Petrol, 2 star	+	+	+
Petrol, 4 star	-	○	+
Benzene	-	-	+
Butanol	-	-	+
Butyl ether	-	-	○
Chloroform	-	-	-
Cyclohexane	+	+	+
Dibutyl phthalate	○	○	+
Dicyclophtalate	○	○	+
Diesel oil/heating oil	+	+	+
Ethyl acetate	-	-	○
Ethyl alcohol 10 %	○	+	+
Ethyl alcohol 96 %	-	-	+
Glycerine	○	+	+
Heptane	+	+	+
Hexane	+	+	+
Isopropyl alcohol	-	○	+
Kerosine	+	+	+
White spirit	+	+	+
Methanol	-	-	○
Methylene chloride	-	-	-
Monochlorobenzene	○	○	+
n-Propyl acetate	-	-	○
Perchloroethylene	○	○	-
Petroleum	○	+	+
Phenol	○	○	○
Styrene	○	○	○
Toluene	-	-	○
Trichloroethylene	-	-	-
Xylene	-	-	○

Test medium	SILIKAL® resin RU 727, R 62, R 81	SILIKAL® resin R 71, R 72	SILIKAL® resin RE 77
Water and aqueous solutions:			
Waste water (sewage)	+	+	+
Chlorine water	+	+	+
Formaldehyde 37 %	+	+	O
Anti-freeze (glycol-based)	O	+	+
Tap water	+	+	+
Sea water	+	+	+
Sodium chloride 5 %	+	+	+
Sodium chloride, saturated	+	+	+
Sodium hypochlorite 15 %	+	+	+
Sodium carbonate (soda)	+	+	+
Soap solution	+	+	+
Water, deionised	+	+	+
Water +80 °C	O	O	+
Hydrogen peroxide 30 %	+	+	O
Hydrogen peroxide 80 %	O	O	-
Drinks:			
Beer	+	+	+
Brandy 40 % vol.	O	+	+
Vegetable juice	+	+	+
Lemonade	+	+	+
Milk	+	+	+
Grape juice	+	+	+
Wine	+	+	+
Oils and greases:			
Blood	+	+	+
Cutting oil	O	O	+
Hydraulic oil (e. g. Skydrol B 500)	O	O	O
Linseed oil	+	+	+
Mineral oil	+	+	+
Olive oil	+	+	+
Vegetable fats	+	+	+
Castor oil	+	+	+
Crude oil	+	+	+
Animal fats	+	+	+

Test medium	SILIKAL® resin RU 727, R 62, R 81	SILIKAL® resin R 71, R 72	SILIKAL® resin RE 77
Cleaning agents:			
Chlorine bleach 15 %	+	+	+
FEWA®	+	+	+
Stain remover	-	-	-
PERSIL®	+	+	+
PRIL®	+	+	+
P3	+	+	O
P3 ASEPTO®	+	+	O
Petroleum	O	O	+
REI®	+	+	+
Sagrotan® 5 %	O	O	+
Ammonia solution	+	+	+
Soap water	+	+	+
Turpentine	+	+	+
Turpentine substitute (white spirit)	O	+	+
TOLO®	+	+	+

Evaluation

+	Resistant	Preliminary testing shows that the coating material may be permanently stressed with this medium.
O	Limited resistance	Permanent stress is not possible, because lengthy action could lead to significant softening or swelling. Short-term stress (approx. 1 – 2 hours) is possible.
-	Not resistant	Damage could occur even under brief stress.

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Silikal general information

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