

TECHNICAL PAPER
CHEMICAL RESISTANCE SPITA ResQ-tape

SPITA ResQ-tape has good resistance to many chemicals, fluids and oils encountered in high voltage applications.

Dilute Acids, Alkalis and Aquons Salt Solutions: whether hot or cold have a negligible effect on silicones.

Concentrated Acids and Alkalis: silicones are attacked by concentrated acids and alkalis, especially oxidizing acids such as sulphuric acid.

Polar Liquids: short chain alcohols and acetone cause very little swelling and can be used in appropriate applications.

Nonpolar Liquids: linear or cyclic hydrocarbons, aliphatic or aromatic mineral oils, gasoline etc. cause severe swelling. They can only be used to a very limited extent.

The table below lists effect of various chemicals on SPITA ResQ-tape when fully immersed for 336 hrs at room temperature and 49° C.

<i>Immersion Liquid</i>	<i>Exposure Time</i>	<i>Room Temp.</i>	<i>49° C</i>
Acetic Acid 5%	336 hrs	No Effect	No Effect
Acetic Acid 10%	336 hrs	No Effect	No Effect
Acetic Acid 20%	336 hrs	No Effect	No Effect
Acetic Acid Concentrated	336 hrs	No Effect	Slight Cracking
Acetone	336 hrs	Slight Discoloration	Slight Discoloration
Ammonium Hydroxide 10%	336 hrs	No Effect	No Effect
Ammonium Hydroxide Concentrated	336 hrs	Very Slight Discoloration	Very Slight Discoloration
Aviation Fuel	336 hrs	Slight discoloration, severe swelling	Not Tested
Benzene	336 hrs	Slight discoloration, severe swelling	Not Tested
Boric Acid	336 hrs	No Effect	No Effect
20% Calcium Chloride in H ₂ O	336 hrs	No Effect	No Effect
Carbon Tetrachloride	336 hrs	No Effect	No Effect
Diesel Fuel	336 hrs	Slight discoloration, severe swelling	Not Tested
Distilled Water	336 hrs	No Effect	No Effect
Ethylene Glycol	336 hrs	No Effect	No Effect
Fatty Acids (Linseed Oil)	336 hrs	Slight Discoloration, slight swelling	Slight Discoloration, slight swelling



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<i>Immersion Liquid</i>	<i>Exposure Time</i>	<i>Room Temp.</i>	<i>49° C</i>
Formic Acid 5%	336 hrs	No Effect	No Effect
Formic Acid 10%	336 hrs	No Effect	No Effect
Gasoline	336 hrs	Slight discoloration, severe swelling	Not Tested
Glycerine	336 hrs	Discoloration	Not Tested
Hydraulic Fluid	336 hrs	Slight discoloration, slight swelling	Not Tested
Hydrochloric Acid 5%	336 hrs	No Effect	No Effect
Hydrochloric Acid 10%	336 hrs	No Effect	No Effect
Hydrochloric Acid 20%	336 hrs	Discoloration and slight surface cracking	Discoloration and slight surface cracking
Hydrochloric Acid Concentrated	336 hrs	Discoloration and moderate surface cracking	Discoloration and moderate surface cracking
Hydrogen Peroxide 10%	336 hrs	No Effect	No Effect
Kerosene	336 hrs	Slight discoloration, moderate swelling	Not Tested
Methyl Alcohol	336 hrs	No Effect	No Effect
Methyl Ethyl Ketone	336 hrs	Slight discoloration, severe swelling	Not Tested
Methyl Isobutyl Ketone	336 hrs	Slight discoloration, severe swelling	Not Tested
Mineral Spirits	336 hrs	Slight discoloration, moderate swelling	Not Tested
Motor Oil	336 hrs	Slight Discoloration	Slight Discoloration, softening
Nitric Acid 5%	336 hrs	No Effect	No Effect
Nitric Acid 10%	336 hrs	Slight discoloration, slightly increased pliability	Slight discoloration, slightly increased pliability
Phosphoric Acid 50%	336 hrs	No Effect	No Effect
Potash Lye 20%	336 hrs	No Effect	Slight distention, surface appearance altered slightly

<i>Immersion Liquid</i>	<i>Exposure Time</i>	<i>Room Temp.</i>	<i>49° C</i>
Soda solution 20%	336 hrs	No Effect	Slight distention, surface appearance altered slightly
20% Sodium Chloride in H ₂ O	336 hrs	No Effect	No Effect
Sodium Hydroxide 50%	336 hrs	Surface appearance altered, extreme pliability	Surface appearance altered, increased pliability
Sodium Hypochlorite 1%	336 hrs	No Effect	No Effect
Sulfuric Acid 5%	336 hrs	No Effect	No Effect
Sulfuric Acid 10%	336 hrs	Slight discoloration and cracking	Slight discoloration and cracking
Sulfuric Acid 25%	336 hrs	Discoloration and moderate surface cracking	Discoloration and moderate surface cracking
Sulfuric Acid 50%	336 hrs	Discoloration and severe cracking	Discoloration and severe cracking
Toluene	336 hrs	Slight discoloration, moderate swelling	Not Tested
Trichloroethane	336 hrs	Slight discoloration, moderate swelling	Not Tested
Xylene	336 hrs	Slightly increased pliability	Slightly glutinous

Important note:

The information presented in this document is in accordance with our knowledge to date, but do not absolve the user from checking all supplies immediately on receipt, especially where other companies raw materials are also being used.