CORIAN® SOLID SURFACE CHEMICAL RESISTANCE

Introduction

This technical bulletin discusses the chemical resistance of Corian® Solid Surface. Chemical resistance is evaluated by placing a chemical on Corian® Solid Surface and covering it for 16 hours. Time of exposure is an important factor; prompt removal of chemicals will prevent most damage.

The concentration tested is listed where applicable, unless specified the chemical is a solution in water. Use caution if using higher concentrations as they may increase the likelihood of damage. Concentrations reported as <X% were tested at multiple concentrations, with the result indicated up to the listed concentration.

A. Class I Reagents

The following reagents generally show no permanent effect on Corian® Solid Surface sheet when left in contact for periods of 16 hours. Wipe the surface clean using adequate personal protection for the chemical such as gloves and eye protection. Any chemical residues may be removed with a wet Scotch-Brite™ pad and bleaching cleanser. Sometimes, minimal effects have been observed, particularly those indicated by footnotes ([1][2][3]).

acetic acid (10%)	ethyl ether[2]	methyl red (1%)	sodium sulfate
acetone	eucalyptol	mineral oil	soy sauce
ammonium hydroxide (<28%) (ammonia in water)	ferric chloride	mustard	sugar (sucrose)
	food colouring	nail polish	sulfuric acid (<60%)
amyl acetate	formalin (10% neutral buffered formaldehyde)	nail polish remover (acetone)	tannic acid
amyl alcohol		naphthalene (naphtha)	tea
aromatic ammonia (smelling salts)	gasoline	n-Hexane	tetrahydrofuran (THF)
ball point pen ink	gentian violet (crystal violet)	nitric acid (<6%)	tetramethylrhodamine
benzene[2]	hair dyes	olive oil	thymol (alcohol solution)
bleach (household type)	hemastoxlin stain	pencil lead	toluene
blood	household soaps	perchloric acid	tomato sauce
butanol (butyl alcohol)	hydrochloric acid (<30%)	permanent marker ink	trisodium phosphate (30%)
calcium thiocyanate (78%)	hydrogen peroxide	phenolphthalein (1%)	trypan blue
carbon disulfide	iodine (1% in alcohol)[3]	phosphorus pentoxide	urea (6%)
carbon tetrachloride	iodine, tincture of	potassium permanganate (2%)	uric acid
cigarette (nicotine)	isopropanol (isopropyl alcohol)[2]	povidone-iodine (PVP-I), “Betadine” Solution	urine
citric acid (10%)	kerosene		vinegar
coffee	ketchup	saffron	washable inks
cooking oils	lemon juice	salt (sodium chloride)	wine (all varieties)
cotton seed oil	lipstick	shoe polish	Wright’s stain
dimethyl formamide	liquid shoe polish	silver nitrate (10%)	xylenes
dishwashing liquids/powders	lye (1%)	sodium bisulfate	zinc chloride
ethyl acetate (in acetone-free nail polish remover)	methanol[2]	sodium hydroxide flake[2]	zinc oxide (paste, ointment)
	methyl ethyl ketone (MEK)	sodium hydroxide solution (<40%)[2]	
ethanol (ethyl alcohol)[2]	methyl orange (1%)	sodium hypochlorite (<15%)	

[1] May cause surface etching or deglossing after 16 hours exposure.
[2] May cause slight lightening after 16 hours exposure.
[3] May cause slight darkening after 16 hours exposure.

B. Class II Reagents

Corian® Solid Surface is not recommended for working areas where it likely to come in contact with CLASS II reagents. Concentrations reported as >X% were tested at multiple concentrations, with the result indicated above the listed concentration. The occasional stain that might result from inadvertent exposure to Class II reagents can often be removed. Scrubbing with household cleanser will remove light stains. More stubborn surface stains will require sanding with fine to coarse sandpaper, followed by typical fabrication finishing steps. Exposure to the following materials may cause damage that requires sanding for complete removal.

acetic acid (>90%)	dioxane	methylene chloride	phosphoric acid (>75%)
acid drain cleaners	formic acid (>50%)	methylene chloride-based products: paint removers, brush cleaners, some metal cleaners	sodium hydroxide (>50%)
aqua regia	furfural		sulfuric acid (>77%)
chlorobenzene	hydrochloric acid 10M		trichloroacetic acid (>10%)
chloroform (100%)	hydrofluoric acid (48%)	nitric acid (>25%)	
cresol	methyl methacrylate	phenol (>40%)	

C. Specialized Products

C.1. Biochemistry

Biochemistry staining agents will stain Corian® Solid Surface in most instances after a few minutes exposure. These stains can often be removed by prompt scrubbing with acetone. Residual stains may be restored by scrubbing with a Scotch-Brite™ cleaning pad. Example stains are listed, but all staining agents should be handled with caution and promptly removed if spilled.

acridine orange	gentian violet (crystal violet)	safranine (safranin)

C.2. Dental

Dental treatment materials may degloss, etch, or slightly stain Corian® surface. Affected areas may be restored by scrubbing with a wet Scotch-Brite™ cleaning pad. Dental products are often proprietary blends of materials. The SDS may list some, but generally not all of the components. One common component is eugenol, which may affect the surface if not removed promptly.

Products that are not listed may be similar to the ones that are. Please compare the ingredients listed on their label or in their Safety Data Sheet (SDS) to the ones mentioned.

The published results are for 16 hours exposure time. In many cases, actual exposure is much less as the material may be removed by cleaning or through rapid evaporation. However, in some cases exposure can be much longer. For example, a leaking hand-soap dispenser may create a liquid puddle for periods greater than 16 hours, even days or longer, creating almost constant exposure. Similarly, some containers have poorly designed spouts/caps from which product leaks every time they are used, so that the containers stand constantly in the spilled material. If needed, a drip cup or a spill tray of a suitable material would address these situations.

The resistance to staining of Corian® Joint Adhesive is slightly less than that of Corian® Solid Surface sheet and shape.

PLEASE VISIT OUR WEB SITE: WWW.CORIAN.UK OR CONTACT YOUR CORIAN® REPRESENTATIVE FOR MORE INFORMATION ABOUT CORIAN® SOLID SURFACE.