

# 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<sup>23</sup>).

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

<sup>1</sup> May cause surface etching or deglossing after 16 hours exposure.

<sup>2</sup> May cause slight lightening after 16 hours exposure.

<sup>3</sup> 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)
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### 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.

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