

# DUPONT™ CORIAN® CHEMICAL RESISTANCE

## INTRODUCTION

This technical bulletin discusses the chemical resistance of DuPont™ Corian® solid surface. Chemical resistance is evaluated by placing a material 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® 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 (\* † ‡).

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

\* May cause surface etching or deglossing after 16 hours exposure

† May cause slight lightening after 16 hours exposure

‡ May cause slight darkening after 16 hours exposure.

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

### 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	safranin (safranin)
gentian violet (crystal violet)	

#### C.2. DENTAL

Dental treatment materials may degloss, etch, or slightly stain Corian® surfaces. Affected areas may be restored by scrubbing with a wet Scotch-Brite™ cleaning pad. Dental products are often proprietary blends of materials. The MSDS 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 Material Safety Data Sheet (MSDS) 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 or evaporate. But, in some cases exposure can be much longer. A leaking hand-soap dispenser may cause a liquid puddle under for periods greater than 16 hours, days, or more. Similarly some containers have poorly designed spouts/caps from which product leaks every time they are used, so that they stand constantly 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 DuPont™ Joint Adhesive is slightly less than that of Corian® sheet and shape.

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