Chemical Resistance of Velstone Laboratory Tops

There are thousands of known chemicals. It is not practical to assess chemical resistance of Velstone Laboratory Tops against all chemicals. It is recommended to test a piece of Velstone for a specific use. The reactivity with chemicals depends upon the concentration of the chemical, temperature of the chemical and the exposure time. The following is a list of some substances commonly encountered in school, college laboratories and in households. The effect they may have on Velstone Laboratory Tops in case of accidental spillage or short time exposure is listed.

The effect of the chemicals in lists A, B, & C can be removed and the surface appearance restored by cleaning with household cleaners and water or abrasive cleaning powder (AJAX or similar) and Scotch-Brite pad.

LIST A: Minimal or No effect.

acetylsalycylic acid
acid alcohol
agar
alkylbenzene hydrocarbon
aluminium powder coarse
aluminium powder fine
aluminium ammonium sulphate
aluminium carbonate
aluminium chloride anhydrous
aluminium chloride-6-water
aluminium nitrate-9-water
aluminium oxide - calcined
aluminium potassium sulphate
aluminium sulphate-n6-water
amberlyst resin acidic
amberlyst resin basic
aminopenicillanic acid(6)
ammonium bromide
ammonium carbonate powder
ammonium cerium (iv) sulphate
amonium chloride
ammonium copper (ii) chloride
ammonium dichromate (vi)
ammonium ethanedioate
ammonium ethanoate
ammonium iodide
ammonium iron (ii) sulphate-6-water
ammonium iron (iii) sulphate
ammonium metavanadate
ammonium methanoate
ammonium molybdate
ammonium nickel (ii) sulphate
ammonium nitrate
ammonium peroxodisulphate (vi)
ammonium sulphate
ammonium sulphide
ammonium thiocyanate
anti-bumping granules
aspartic acid
aspirin tablets
barium
barium bromide
barium carbonate
barium chloride-2-water
barium diphenylamine sulphonate (4)
barium hydroxide-8-water
barium nitrate
barium peroxide
barium sulphate
barium thiosulphate
benzene
benzenedicarboxilic acid 1,2
benzenedicarboxylic 1,2
benzenediol -1-4
benzenetriol 1,2,3
benzoic acid
bismuth (iii) chloride
bismuth nitrate
blood
boric acid
bromosuccinamide
buffer tablets ph 4
buffer tablets ph 7
buffer tablets ph 9
butandioic acid
butanoic acid
butanol-1-
butanol-2-
butanone
cadmium sulphate
caffeine
calcium turnings
calcium bromide
calcium carbide
calcium carbonate
calcium chloride
calcium chloride-6-water
calcium ethanedioate
calcium ethanoate
calcium flouride
calcium hydride 85.9%
calcium hydroxide
calcium methanoate
calcium nitrate-4-water
calcium oxide
calcium sulphate-2-water
calcium sulphide
camphor
carbon disulphide
castor oil
cedarwood oil
cement
chloroacetic acid
chromium (iii) chloride
chromium (iii) potassium sulphate
chromium (iii) sulphate
cigarette (Nicotine)
cobalt (ii) chloride-6-water
cobalt sulphate-7-water
coffee
copper foil 0.1 mm
copper powder
copper turnings
copper (i) chloride
copper (i) oxide
copper (ii) bromide
copper (ii) carbonate
copper (ii) chloride-2-water
copper (ii) chromate (vi)
copper (ii) ethanedioate
copper (ii) ethanoate
copper (ii) nitrate
copper (ii) oxide-powder
copper (ii) oxide-wire form
copper (ii) sulphate-5-water
copper ore
crown ether 18-6
cyclohexane
cyclohexanol
cyclohexene
d.n.p. soln (2,4)
decanediol chloride
devarda's alloy
diaminoethane (1,2,-)
diaminoethanetetra acetic acid
diaminohexane (1,6-)
dibutylbenzene-1'2-dicarboxylate
dichloroethane
dichloroethanoic acid
dichloromethane
dichlorophenolindophenol
didodecanoylperoxide
diethylaminomethylcoumarin (7-4)
diethylethandioate
dihydroxybenzene (1,2-)
dihydroxybutanedioic acid (2,3)
dimethyldichlorosilane
dimethylethandioate
dimethylglyoxime
dinitrophenylhydrazine (2,4-)
diphenylamine
dodecan-1-ol
dutch metal leaf
ethanamide
ethanedioic acid
ethanediol (1,2-)
ethanol
ethanoyl chloride
ethoxyethane
ethoxyethanol (2-)
ethyl benzoate
ethyl ethanoate
ethyl methanoate
ethylaminobenzoate 4
ethylammonium hydrochloride
fehlings solution no.1
fehlings solution no.2
glucose
guar gum
heptane
hexane
hexanol-1
hexene-1
hydrogen-gas
hydrogen peroxide
hydrogen sulphide-aqueous
hydroxibenzoic acid-2
hydroxybutanedioic acid (2)
hydroxy-dinitrobenzoic acid (2-3,5)
hydroxyl ammonium chloride
hydroxypropane 1,2,3-
indicator papers-blue
indicator papers-la
indicator papers-red
indicator papers-si
indicator papers-uni
iodine soln in ki
iodine water
iodobutane
iodoethane
iodomethane
iodomethylpropane (2-2)
iron filings coarse
iron filings fine
iron reduced by hydrogen
iron (ii) carbonate
iron (ii) ethanedioate
iron (ii) ethanoate
iron (ii) sulphate
iron (ii) sulphide
iron (ii) chloride
iron (ii) chloride-anhydrous
iron (ii) nitrate
iron (ii) oxide
iron (ii) sulphate-monsels
iron (ii) sulphate-technical
iron nail
iron sulphate tablets
ketchup
l-ascorbic acid
lead foil-0.15mm
lead shot
lead (ii) 2,3-hydroxybutanedioate
lead (ii) bromide
lead (ii) carbonate
lead (ii) chloride
lead (ii) ethanoate
lead (ii) nitrate
lead (ii) oxide
lead (ii) sulphide
lead (iv) oxide
lead tetroxide (tri)
limonene
liquid paraffin
lithium chloride
litmus solid
litmus solution
lycopodium powder
magnesium powder
magnesium ribbon
magnesium carbonate-light
magnesium chloride
magnesium chloride-anhydrous
magnesium hydroxide
magnesium nitrate
magnesium oxide heavy
magnesium oxide light
magnesium sulphate
magnesium sulphate
manganese (iv) oxide
manganese carbonate
manganese chloride
manganese ethandioate
manganese ethanoate
manganese sulphate
marble chips large
marble chips small
mercury (ii) chloride
mercury (ii) nitrate
mercury (ii) oxide
methanol
methyl benzoate
methyl hydroxybenzoate
methylaminophenolsulphate 4
methylammonium chloride
methylbenzene
methylbutane(2-)
methylbutanol (2-2)
methylbutylethanoate (3-)
methylmethanoate
methylpropanol(2-1)
methylpropanol(2-2)
milk
mineral oil
molybdenum trioxide
mustard
napthol (2-)
needles hypodermic
nickel metal foil
nickel (ii) carbonate
nickel (ii) chloride
nickel (ii) methanoate
nickel (ii) sulphate
octanoic acid
octanol-1
octanol 2
oleic acid
oxygen gas
paraffin
pentanal
pentane
pentanol-1
pentanol-2
pentanone-3
perspex
petroleum crude
petroleum ether 40/60
petroleum ether 80/100
petroleum jelly
petroleum unleaded
ph10 buffer
ph4 buffer
ph7 buffer
phenantroline (1,10)
phenolpthalein
pheoxyethanoic acid
phenylammonium chloride
phenylbenzoate(prepared)
phenylethanol (2-)
phenylethanone
phenylethene
phenylhydroxybenzoate-2
phenylmethanol
phenylproponal(3)
phenylpropanoic acid (3-)
phosphoric acid crystals
phosphorus yellow
phosphorus pentachloride
polyvinylalcohol
potassium bromate (v)
potassium bromide
potassium carbonate
potassium chlorate (v) ar
potassium chloride
potassium dihydrogen phosphate
potassium ethandioate
potassium ethanoate
potassium hydrogen carbonate
potassium hydrogen ethanedioate
potassium hydrogen phosphate
potassium iodate (v)
potassium iodate (vii)
potassium iodide
potassium manganate (vii)
potassium nitrate
potassium nitrite
potassium peroxodisulphate (vi)
potassium sodium tartrate
potassium sulphate
potassium thiocyanate
propandiol-1-2
propanol-1
propanol-2
propanone
propantriol-1-2,3
pyrrole
salicylaldehyde
silica gell
silicon fused
silicon (iv) chloride
silicon (iv) oxide
silver foil
silver chloride
silver nitrate
soap
soda lime large
soda lime small
sodium benzene caboxylate
sodium benzene sulphonate
sodium bismuthate
sodium bromate
sodium bromide
sodium carbonate a.r.
sodium carbonate-10 water
sodium carbonate-anhydrous
sodium chloride
sodium chloride-rock salt
sodium cobalt nitrite
sodium dihydrogen
sodium diphenylamine sulphonate (4)
sodium ethanedioate
sodium ethanoate-3water
sodium ethanoate anhydrous
sodium ethanoate -fused
sodium fluoride
sodium hydrogen carbonate
sodium hydrogen orthophosphate
sodium hydrogen sulphate a.r.
sodium hydrogen sulphate-1-water
sodium hydrogen sulphite
sodium hydroxybenzoate (2)
sodium iodate
sodium iodide
sodium meta bisulphate
sodium methanoate
sodium nitrate
sodium nitrite
sodium nitroprusside
sodium sesqui-carbonate
sodium silicate
sodium stearate
sodium sulphate anhydrous
sodium sulphate -10-water
sodium sulphide
sodium sulphite anhydrous
sodium sulphite-7-water
sodium tetra borate
sodium tetraoxodisulphate
sodium thiosulphate
soy sauce
starch
steel
strontium carbonate
strontium chloride
strontium nitrate
sucrose
sugar
sulphur roll
sulphur dioxide-aqueous
sulphur dioxide-gas
talcum
tea

tetra chloro methane
tetra ethyl orthosilicate
thiourea
thymol
tin foil
tin granulated
tin (ii) chloride
tin (ii) oxide
tin (iv) chloride anhyd.
tin (iv)chloride-5-water
tin (iv) oxide
tolunesulphonicacid-na salt
trichloro acetic acid
triethanolamine
tungsten metal powder
universal indicator
universal indicator f.r.
urea
vanadium pentoxide
vaseline
vinegar
water
yeast dried
zinc foil
zinc granulated
zinc powder
zinc bromide
zinc carbonate
zinc chloride
zinc ethanoate
zinc nitrate
zinc oxide
zinc sulphate
zinc sulphide

LIST B: Superficial surface stain or chalking or whitening.

acid blue 40
alkaline 2-napthol
aminobenzoic acid (2-)
aminobutandioic acid
aminoethanoic acid
amino-hydroxybenzene (4-1)
aminophthaloylhydrazine (3-)
ammonia/ammonium chloride buffer
bromine in cyclohexane
bromine in trichloroethane
bromine water
bromomethylpropane (2-2)
bromophenol blue
bromothymol blue
charcoal activated
chlorine-gas
congo red
fast sulphon black f
fluorescein sodium salt
food colouring
graphite powder
hydroiodic acid
iodine
methnoic acid
methyl orange
methyl orange-screened solution
methyl red
methylene blue
ninhydrin
patton & reeders reagent
phenol red
phenylammonium chloride stain
phosphoric acid (v)
phosphorus (iii) chloride
potassium chromate (vi)
potassium dichromate (vi)
potassium hexacyanoferrate (ii)
potassium hexacyanoferrate (iii)
procion red mx5b
rhodamine b
sodium chromate
sodium dichromate
sodium hypochlorite solution
sulphanilic acid
trichloroethane (1,1,1,)
trichloroethylene
trichloromethane

LIST C: Some effect.

aminosulphonic acid
ammonia solution
benzaldehyde
benzenediamine 1,3
benzenediamine 1,4
benzoyl chloride
benzyl chloride
bromobenzene
bromobutane (1-)
bromobutane (2-)
bromocresol green
butanal
butylamine
chlorine-aqueous
chloromethyl propane (2-2)
cresol-m
cresol-p
cyclohexanone
diethylamine
dimethylbenzene
direct red 23
disperse yellow 7
durazol red 2b
erichrome black
ethanal
ethanoic acid
ethanoic anhydride
ethyl amine
hair dyes
hydrochloric acid
ink
lipstick
lithium metal
mercaptoacetic acid
methanal
methylmethylpropenoate (2)
methylpentanone (4-2)
nail polish remover
nitric acid
pencil lead
phenylalanine
phenylamine
phosphorous acid crystals
phosphorus red
phosphorus (v) oxide
potassium metal
propanal
propandioic acid
propionic acid
sodium metal
sodium hydroxide flake
sodium hydroxide pearl
sodium hydroxide pellet
sodium hydroxide powder
sulphuric acid
triethylamine
urine

The effect of the chemicals in list D can be removed and the surface appearance restored by sanding.

LIST D: Considerable Effect.

bromine
chlorobenzene
chlorbutane (1-)
chlorbutane (2-)
nitrobenzene
nitrophenol (2-)
nitrophenol (4-)
phenol
potassium hydroxide
sulphur dichloride (di)
thionyl chloride

Notes:
The effect of chemicals is normally determined by a combination of visual Inspection, change in weight, reduction in hardness and changes in flexural properties. The effect of chemicals can be, none, superficial on the surface (colour change, stain, whitening or chalking), deeper penetration and softening. The damage is considered permanent if the material has softened or flexural properties have diminished or the surface of the Laboratory top can not be restored. The ratings are for accidental spillage or short period of exposure or contact. It is recommended that the spillage should be cleaned immediately using recommended methods and long term contact be avoided.

Fire Properties

Velstone has been awarded the Certificate of Royal Institute of Health & Hygiene annually since 1994.

Velstone is one the very few Solid surface brands to hold both BS476 PART 6 Class 0 and Part 7 Class 1 Fire Ratings Certificate.

If you wish to carry out your own tests for specific Chemicals please do not hesitate to contact us and we will send you an appropriate size Velstone sample for testing.