



DANMAT INDUSTRI A/S

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**Bilcare**  
*Research*

**Chemical Resistance of Rigid PVC Films**

Chemical	Temperature °C
Acetaldehyde, 100 %	20 --
aqueous, 40 %	40 +-
Acetic acid, aqueous, up to 25 %	40 ++
up to 25 %	60 +-
25 to 60 %	40 +-
80%	40 +-
Acetic anhydride, 100 %	20 --
100%	40 --
Acetic ester, 100 %	20 --
Acetone, aqueous traces	20 --
100%	20 --
Ammonia, liquid, 100 %	20 +-
gaseous, 100 %	60 ++
Beer	60 ++
Benzene, 100 % (free from aromates)	20 --
Bisulphite lye, containing SO <sup>2</sup> , warm-saturated	50 ++
Brandy	20 ++
Bromine, liquid, 100 %	20 --
Bromine vapours, low concentration	20 +-
Butadiene, 100 %	60 ++
Butanol, up to 100 %	20 ++
up to 100 %	40 ++
up to 100 %	60 +-
Butyl acetate, 100 %	20 --
Butyric acid, concentrated	20 --
aqueous, 20 %	20 ++
Carbon bisulphide, 100 %	20 +-
Carbon tetrachloride, industrial, 100 %	20 +-
100 %	60 --
Caustic potash solution, aqueous, up to 40 %	40 ++
up to 40 %	60 +-
50 to 60 %	60 ++
Caustic soda, aqueous, up to 40 %	40 ++
Caustic soda, aqueous, up to 40 %	40 ++
up to 40 %	60 +-
Ceric alcohol, 100 %	60 ++
50 to 60 %	60 ++
Chlorosulphic acid, 100 %	20 +-
Citric acid, aqueous, up to 10 %	40 ++
up to 10 %	60 +-
saturated	60 ++
Coal gas, free from benzene	20 ++
Cyclohexanol, 100 %	20 --
Cyclohexanone, 100 %	20 --
Dimethylamine, liquid, 100	-30 +-
Ethyl alcohol, aqueous (petrol), any concentration	40 ++
96 %	60 +-
denatured (toluene)	20 ++
Ethyl ether, 100 %	20 --
Ethylene oxide, 100 %	-20 --
Fatty acids, 100 %	60 ++
Fuming sulphuric acid, 10 %	20 --
Formaldehyde, aqueous, diluted	40 ++
Fruit juice	60 ++

++ = satisfactory  
+- = some attack  
-- = unsuitable

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Glycerol, aqueous	60 ++
Glycol, aqueous	60 ++
Hydrochloric acid, aqueous, up to 30 %	40 ++
up to 30 %	60 +-
over 30 %	60 ++
Hydrofluoric acid, aqueous, up to 40 %	20 ++
40 %	60 +-
60%	20 +-
70 %	20 +-
Hydrogen, 100 %	60 ++
Hydrogen bromide, aqueous, up to 10 %	40 ++
up to 10 %	60 +-
48 %	60 ++
gaseous, moist, 0,5 %	20 ++
1 %	20 +-
5,0 %	20 +-
97,0 %	40 +-
liquefied	20 --
Hydrogen chloride, moist	40 ++
dry	60 ++
Hydrogen peroxide, aqueous, up to 30 %	20 ++
up to 20 %	50 ++
Hydrogen sulphide, dry, 100 %	60 ++
aqueous, warm-saturated	40 ++
warm-saturated	60 +-
Javel water	60 +-
Javel water, 12,5 % chlorine	40 ++
Linseed oil, 100 %	40 ++
Mercury	60 ++
Methyl alcohol, 100 %	40 ++
100 %	60 +-
Methylamine, aqueous, 32%	20 +-
Methylene chloride, 100 %	20 --
Milk	20 ++
Mineral oil	60 ++
Nitrous gases, concentrated	20 +-
Nitric acid, aqueous, up to 50 %	50 ++
98 %	20 --
Nitrosulphuric acid (sulphuric acid/nitric acid/water)	
48/49/3 %	20 ++
48/49/3 %	40 +-
50/50/0 %	20 +-
50/50/0 %	40 --
10/20/70 %	50 ++
10/67/3 %	20 +-
50/31/19 %	30 ++
Oils and fats	60 --
Oxides of nitrogen, damp and dry, diluted	60 +-
Oxides of nitrogen, damp, concentrated	20 --
Oxygen	60 ++

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Chemical	Temperature °C
Petrol, 100 %	80 ++
Petrol benzene, 80/20 %	20 --
Phenol, aqueous, up to 90 %	45 +-
1 %	20 ++
Phenylhydrazine, 100 %	20 --
Phosgene, liquid, 100 %	20 --
gaseous, 100 %	20 ++
gaseous, 100 %	60 +-
Phosphoric acid, aqueous, up to 30 %	40 ++
up to 30 %	60 +-
over 30 %	60 ++
Photographic developer, working solution	40 ++
Photographic fixing bath, working solution	40 ++
Phosphorous trichloride, 100 %	20 --
Potash, aqueous, saturated	40 ++
Propane, liquid, 100 %	20 ++
gaseous, 100 %	20 ++
Pure acetic acid, 100 %	20 +-
100 %	40 --
100%	40 ++
Pyridine	20 --
Roaster gases, dry	60 ++
Seawater	40 ++
Seawater	60 --
Soap solution, aqueous, concentrated	20 ++
concentrated	60 +-
Soda solution, diluted	40 ++
diluted	60 +-
saturated	60 ++
Sodium bisulphide, aqueous, diluted	40 ++
diluted	60 +-
saturated	60 ++
concentrated	60 --
Sodium chloride (common salt), aqueous, diluted	40 ++
diluted	60 +-
saturated	60 ++
Sodium sulphide, aqueous, diluted	40 ++
diluted	60 +-
saturated	60 ++
Spirits of all kinds	20 ++
Sulphuric acid, aqueous, 96 %	20 ++
96%	60 --
Sulphur dioxide, aqueous, saturated below	
8 atmospheres	20 ++
Sulphur dioxide, dry	60 ++
moist and aqueous, any concentration	40 ++
50 %	50 ++
any concentration	60 +-
Sulphur dioxide, liquid, 100 %	-10 +-
100 %	20 ++
100 %	60 --
Sulphuric acid, aqueous, up to 40 %	40 ++
up to 40 %	60 +-
40 to 80 %	60 ++
80 to 90 %	40 ++
Tartaric acid, aqueous, up to 10 %	40 ++
up to 10 %	60 +-
saturated	60 ++
Toluene, 100 %	20 --
Trichloroethylene, 100 %	20 --
Triethanolamine, 100 %	20 --
Vinegar	60 +-
Vinegar	40 ++
Vinegar (wine vinegar)	50 ++
Vinyl acetate, 100 %	20 --
Urine	40 ++

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Urine	60	+ -
Waste gases, containing hydrogen fluoride, traces	60	++
Waste gases, containing nitrous constituents, traces	60	++
higher concentration	60	--
containing fuming sulphuric acid,		
lower concentration	20	++
higher concentration	20	--
containing hydrochloric acid, any concentration	60	++
containing sulphuric acid, moist, any concentration	60	++
containing sulphur trioxide, any concentration	20	++
containing sulphur dioxide, low concentration	60	++
Water: Effluent of all kinds (including strongly		
acidic effluent, which does not, however,		
contain organic solvents)	40	++
Effluent containing traces of phenol and		
butanol	20	++
Ammonia water	40	+ -
Condensate	40	++
Potable water	40	++
Spring water	40	++
Distilled water	40	++
Water general	60	+ -
Wine, red and white	20	++
Xylene, 100 %	20	--

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