

CHEMICAL RESISTANCE OF BELZONA® 1593

FN10151



				Chemical Resistance			
	Chemical name (Synonym)	Chemical formula (CAS number)	Concentration	20 °C	60 °C	90 °C	Other
				68 °F	140 °F	194 °F	
Inorganic Acids	Carbonic acid	H ₂ CO ₃ (463-79-6)	-	Ex	Ex	Ex	-
	Hydrochloric acid	HCl (7647-01-0)	20%	Ex	Ex	M	-
			10%	Ex	Ex	M	-
			5%	Ex	Ex	Ex	-
			3%	Ex	Ex	Ex	-
	Nitric acid	HNO ₃ (7697-37-2)	10%	Ex	G	G	-
	Nitrous acid	HNO ₂ (7782-77-6)	10%	Ex	G	G	-
Phosphoric acid (orthophosphoric acid)	H ₃ PO ₄ (7664-38-2)	10%	Ex	Ex	Ex	-	
		5%	Ex	Ex	Ex	-	
Sulphuric acid	H ₂ SO ₄ (7664-93-9)	20%	M	Ex	G	-	
		10%	Ex	Ex	G	-	
		5%	Ex	Ex	Ex	-	
		3%	Ex	Ex	Ex	-	
Organic Acids	Acetic acid (ethanoic acid)	CH ₃ COOH (64-19-7)	10%	Ex*	P	P	-
			5%	Ex*	M	P	-
			1%	Ex*	G	G	-
			0.1%	Ex*	Ex	Ex	-
	Phenol (hydroxybenzene)	C ₆ H ₅ OH (108-95-2)	80%	M*	P	P	-

Excellent	Ex	no significant deterioration / barrier properties retained for greater than 52 weeks <i>suitable for all applications including long term immersion</i>
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Alcohols, Aldehydes and Ketones	Acetone (propanone)	(CH ₃) ₂ CO (67-64-1)	-	Ex	-	-	-
	Amyl alcohol	C ₅ H ₁₁ OH (71-41-0)	-	Ex	Ex	Ex	-
	n-Butanol (butyl alcohol)	C ₄ H ₉ OH (71-36-3)	-	Ex	Ex	Ex	-
	Ethanol (ethyl alcohol)	CH ₃ CH ₂ OH (64-17-5)	-	Ex	Ex	-	-
	Ethylene glycol (ethan-1,2-diol, monoethylene glycol, MEG)	(CH ₂ OH) ₂ (107-21-1)	-	Ex	Ex	Ex	-
	Glycerol (glycerine, propane-1,2,3-triol)	HOCH ₂ CH(OH)CH ₂ OH (56-81-5)	-	Ex	Ex	Ex	-
	n-Hexanol (hexyl alcohol)	C ₆ H ₁₃ OH (111-27-3)	-	Ex	Ex	Ex	-
	Higher alcohols	C _n H _(2n+1) OH where n > 2	-	Ex	Ex	Ex	-
	Isopropyl alcohol (IPA) (isopropanol, propan-2-ol)	CH ₃ CH(OH)CH ₃ (67-63-0)	-	Ex	Ex	-	-
	Isobutyl alcohol (IBA) (isobutanol, 2-methylpropan-1-ol)	(CH ₃) ₂ CHCH ₂ OH (78-83-1)	-	Ex	Ex	Ex	-
	Methanol (methyl alcohol)	CH ₃ OH (67-56-1)	-	Ex	Ex	-	-
	Methanol solution (aqueous)	CH ₃ OH _(aq) (67-56-1)	55%	Ex	Ex	-	79 °C 174 °F Ex
	Methyl ethyl ketone (MEK) (2-butanone, methyl acetone)	CH ₃ C(O)CH ₂ CH ₃ (78-93-3)	-	Ex	G	-	-

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Alcohols, Aldehydes and Ketones	Propan-1-ol (Propyl alcohol)	CH ₃ CH ₂ CH ₂ OH (71-23-8)	-	Ex	Ex	Ex	-
	Propylene glycol (1,2-Propanediol)	CH ₃ CH(OH)CH ₂ OH (57-55-6)	-	Ex	Ex	Ex	-
	Secondary alcohols	R ₁ R ₂ CHOH	-	Ex	Ex	Ex	-
	Tertiary alcohols	R ₁ R ₂ R ₃ COH	-	Ex	Ex	Ex	-
	Triethylene glycol (triglycol)	HOCH ₂ CH ₂ OCH ₂ CH ₂ OCH ₂ CH ₂ OH (112-27-6)	-	Ex	Ex	Ex	-
	Tetraethylene glycol (tetraglycol)	HOCH ₂ CH ₂ OCH ₂ CH ₂ OCH ₂ CH ₂ OCH ₂ CH ₂ OH (112-60-7)	-	Ex	Ex	Ex	-
Alkalis / Bases	Barium hydroxide	Ba(OH) ₂ (17194-00-2)	-	Ex	Ex	Ex	-
	Calcium hydroxide (lime water)	Ca(OH) ₂ (1305-62-0)	-	Ex	Ex	Ex	-
	Magnesium hydroxide (milk of magnesia)	Mg(OH) ₂ (1309-42-8)	-	Ex	Ex	Ex	-
	Potassium hydroxide (caustic potash)	KOH (1310-58-3)	40%	Ex	Ex	Ex	-
			20%	Ex	Ex	Ex	-
10%			Ex	Ex	Ex	-	
Sodium hydroxide (caustic soda)	NaOH (1310-73-2)	50%	Ex	Ex	Ex	-	
		40%	Ex	Ex	Ex	-	
		20%	Ex	Ex	Ex	-	
			10%	Ex	Ex	Ex	-

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Amines & Amides	Diethanolamine (DEA) (2,2'-iminodiethanol)	$\text{HN}(\text{CH}_2\text{CH}_2\text{OH})_2$ (111-42-2)	-	Ex	Ex	Ex	-
	Diethylene glycolamine (DGA) (2-(2-aminoethoxy) ethanol)	$\text{H}_2\text{NCH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{OH}$ (929-06-6)	-	Ex	Ex	Ex	-
	N-Methyl diethanolamine (MDEA)	$\text{CH}_3\text{N}(\text{CH}_2\text{CH}_2\text{OH})_2$ (105-59-9)	-	Ex	Ex	Ex	-
	N-Methylethanolamine (2-methylaminoethanol)	$\text{CH}_3\text{NHCH}_2\text{CH}_2\text{OH}$ (109-83-1)	-	Ex	Ex	Ex	-
	Monoethanolamine (MEA) (2-aminoethanol)	$\text{H}_2\text{NCH}_2\text{CH}_2\text{OH}$ (141-43-5)	-	Ex	Ex	Ex	-
	Sulfinol solution (50% diisopropanolamine, 25% tetramethylene sulphone, 25% water)	N/A	-	Ex	Ex	Ex	-
	Triethanolamine (TEA) (2,2',2''-nitrilotriethanol)	$\text{N}(\text{CH}_2\text{CH}_2\text{OH})_3$ (102-71-6)	-	Ex	Ex	Ex	-
Esters and Ethers	Butyl acetate (butyl ethanoate)	$\text{CH}_3\text{C}(\text{O})\text{OCH}_2\text{CH}_2\text{CH}_2\text{CH}_3$ (123-86-4)	-	Ex	Ex	Ex	-
	Dibutyl phthalate (DBP) (phthalic acid dibutyl ester)	$\text{C}_6\text{H}_4(\text{C}(\text{O})\text{OCH}_2\text{CH}_2\text{CH}_2\text{CH}_3)_2$ (84-74-2)	-	Ex	Ex	Ex	-
	Diethyl ether (ether, ethoxyethane)	$\text{CH}_3\text{CH}_2\text{OCH}_2\text{CH}_3$ (60-29-7)	-	Ex	-	-	-
	Diocetyl phthalate (DOP) (bis(2-ethylhexyl) phthalate, DEHP)	$\text{C}_8\text{H}_{17}(\text{C}(\text{O})\text{OCH}_2\text{CH}(\text{CH}_2\text{CH}_3)\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3)_2$ (117-81-7)	-	Ex	Ex	Ex	-
	Ethyl acetate (ethyl ethanoate, acetic ester)	$\text{CH}_3\text{C}(\text{O})\text{OCH}_2\text{CH}_3$ (141-78-6)	-	Ex	Ex	-	-

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Gases	Butane	CH ₃ CH ₂ CH ₂ CH ₃ (106-97-8)	-	Ex	Ex	Ex	-
	Carbon dioxide	CO ₂ (124-38-9)	-	Ex	Ex	Ex	-
	Carbon monoxide	CO (630-08-0)	-	Ex	Ex	Ex	-
	Chlorine (dry)	Cl ₂ (7782-50-5)	-	Ex	Ex	Ex	-
	Ethane	C ₂ H ₆ (74-84-0)	-	Ex	Ex	Ex	-
	Hydrogen	H ₂ (1333-74-0)	-	Ex	Ex	Ex	-
	Hydrogen sulphide	H ₂ S (7783-06-4)	-	Ex	Ex	Ex	-
	Methane (natural gas)	CH ₄ (74-82-8)	-	Ex	Ex	Ex	-
	Nitrogen	N ₂ (7727-37-9)	-	Ex	Ex	Ex	-
	Nitrous oxide (dinitrogen monoxide)	N ₂ O (10024-97-2)	-	Ex	Ex	Ex	-
	Ozone (dry)	O ₃ (10028-15-6)	-	Ex	Ex	Ex	-
	Ozone (wet)	O ₃ (10028-15-6)	-	G*	M	M	-

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Gases	Sulphur dioxide	SO ₂ (7446-09-5)	-	Ex	Ex	Ex	-
	Sulphur trioxide (sulphuric anhydride)	SO ₃ (7446-11-9)	-	Ex	Ex	Ex	-
Halocarbons	Chlorobenzene (benzene chloride, phenyl chloride)	C ₆ H ₅ Cl (108-90-7)	-	Ex	G	M	-
	Chloroform (trichloromethane)	HCCL ₃ (67-66-3)	-	Ex	-	-	-
	Dichloromethane (DCM) (methylene chloride)	CH ₂ Cl ₂ (75-09-2)	-	Ex*	-	-	-
Hydrocarbons	Aviation fuel (AVCAT, AVGAS, AVTAG, AVTUR)	N/A	-	Ex	Ex	Ex	-
	Benzene (benzol)	C ₆ H ₆ (71-43-2)	-	Ex	Ex	-	-
	Crude Oil	N/A	-	Ex	Ex	Ex	-
	Cyclohexane	C ₆ H ₁₂ (110-82-7)	-	Ex	Ex	-	-
	Gasoline (without Ethanol) (petrol)	N/A (8032-32-4)	-	Ex	Ex	Ex	-
	Heptane	CH ₃ CH ₂ CH ₂ CH ₂ CH ₂ CH ₂ CH ₃ (142-82-5)	-	Ex	Ex	Ex	-
	Hexane	CH ₃ CH ₂ CH ₂ CH ₂ CH ₂ CH ₃ (110-54-3)	-	Ex	Ex	-	-
	Iso-octane (2,2,4-trimethylpentane)	(CH ₃) ₃ CCH ₂ CH(CH ₃) ₂ (540-84-1)	-	Ex	Ex	Ex	-

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Hydrocarbons continued	Kerosene	N/A (8008-20-6)	-	Ex	Ex	Ex	-
	Mesitylene (1,3,5-Trimethylbenzene)	C ₆ H ₃ (CH ₃) ₃ (108-67-8)	-	Ex	Ex	Ex	-
	Mineral spirits / White spirits (Stoddard solvent)	N/A (8052-41-3)	-	Ex	Ex	Ex	-
	Naphtha	N/A (8030-30-6)	-	Ex	Ex	Ex	-
	Naphthalene (naphthalin, white tar)	C ₁₀ H ₈ (91-20-3)	-	Ex	Ex	Ex	-
	Paraffin	N/A (8002-74-2)	-	Ex	Ex	Ex	-
	Pentane	CH ₃ CH ₂ CH ₂ CH ₂ CH ₃ (109-66-0)	-	Ex	-	-	-
	Toluene (methylbenzene, phenylmethane, toluol)	C ₆ H ₅ CH ₃ (108-88-3)	-	Ex	Ex	Ex	-
	Xylene (dimethyl benzene, xylol)	C ₆ H ₄ (CH ₃) ₂ (95-47-6/108-38-3/106-42-3/1330-20-7)	-	Ex	Ex	Ex	-

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