BELZONA® PRODUCT DATA M516
CHEMICAL RESISTANCE OF BELZONA® 1591

	Chemical name (Synonym)	Chemical formula (CAS number)	Concentration	Chemical Resistance 20 ˚C 68 ˚F	60 ˚C 140 ˚F	90 ˚C 194 ˚F	Other
Inorganic Acids	Hydrochloric acid	HCl (647-01-0)	10%	M*	**M**	M	-
			5%	G*	G	M	-
			3%	G*	**G**	**G**	-
	Nitric acid	HNO_3 (7697-37-2)	10%	G*	**M**	**M**	-
	Nitrous acid	HNO_2 (7782-77-6)	10%	G*	M	M	-
	Phosphoric acid (orthophosphoric acid)	H_3PO_4 (7664-38-2)	10%	G*	M	**M**	-
	Sulphuric acid	H_2SO_4 (7664-93-9)	20%	G*	M	**M**	-
			10%	Ex*	**G**	G	-
			5%	Ex*	**G**	G	-
			3%	Ex*	Ex	**Ex**	-
Organic Acids	Acetic acid (ethanoic acid)	CH_3COOH (64-19-7)	10%	**G***	**M**	**P**	-
			5%	G*	**M**	P	-
	Carbonic acid	H_2CO_3 (463-79-6)	-	Ex*	Ex	Ex	-
	Phenol (hydroxybenzene)	C_6H_5OH (108-95-2)	80%	M*	P	P	-

Excellent	**Ex**	no significant deterioration / barrier properties retained for greater than 52 weeks *suitable for all applications including long term immersion*
Good	**G**	no significant deterioration / barrier properties retained for 12 - 52 weeks *suitable for short-term immersion and general chemical contact*
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Alcohols, Aldehydes and Ketones	Acetone (propanone)	$(CH_3)_2CO$ (67-64-1)	-	Ex*	-	-	55°C 131°F G*
	Amyl alcohol	$C_5H_{11}OH$ (71-41-0)	-	Ex*	Ex	Ex	-
	n-Butanol (butyl alcohol)	C_4H_9OH (71-36-3)	-	Ex*	Ex	Ex	-
	Ethanol (ethyl alcohol)	CH_3CH_2OH (64-17-5)	-	Ex*	Ex	-	-
	Ethylene glycol (ethan-1,2-diol, monoethylene glycol, MEG)	$(CH_2OH)_2$ (107-21-1)	-	Ex*	Ex	**Ex**	**160°C 320°F M**
	Glycerol (glycerine, propane-1,2,3-triol)	$HOCH_2CH(OH)CH_2OH$ (56-81-5)	-	Ex*	Ex	Ex	-
	n-Hexanol (hexyl alcohol)	$C_6H_{13}OH$ (111-27-3)	-	Ex*	Ex	Ex	-
	Higher alcohols	$C_nH_{(2n+1)}OH$ where n > 2	-	Ex*	Ex	Ex	-
	Isopropyl alcohol (IPA) (isopropanol, propan-2-ol)	$CH_3CH(OH)CH_3$ (67-63-0)	-	Ex*	Ex	-	-
	Isobutyl alcohol (IBA) (isobutanol, 2-methylpropan-1-ol)	$(CH_3)_2CHCH_2OH$ (78-83-1)	-	Ex*	Ex	Ex	-
	Methanol (methyl alcohol)	CH_3OH (67-56-1)	-	Ex*	Ex	-	-
	Methanol solution (aqueous)	$CH_3OH_{(aq)}$ (67-56-1)	55%	Ex*	Ex	-	**79°C 174°F Ex**
	Methyl ethyl ketone (MEK) (2-butanone, methyl acetone)	$CH_3C(O)CH_2CH_3$ (78-93-3)	-	Ex*	Ex	-	-

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Alcohols, Aldehydes and Ketones	Propan-1-ol (Propyl alcohol)	$CH_3CH_2CH_3OH$ (71-23-8)	-	Ex*	Ex	Ex	-
	Propylene glycol (1,2-Propanediol)	$CH_3CH(OH)CH_2OH$ (57-55-6)	-	Ex*	Ex	Ex	-
	Secondary alcohols	R_1R_2CHOH	-	Ex*	Ex	Ex	-
	Tertiary alcohols	$R_1R_2R_3COH$	-	Ex*	Ex	Ex	-
	Triethylene glycol (triglycol)	$HOCH_2CH_2OCH_2CH_2OCH_2CH_2OH$ (112-27-6)	-	Ex*	Ex	Ex	**140˚C 284˚F G**
	Tetraethylene glycol (tetraglycol)	$HOCH_2CH_2OCH_2CH_2OCH_2CH_2OCH_2CH_2OH$ (112-60-7)	-	Ex*	Ex	Ex	**140˚C 284˚F G**
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)	$HN(CH_2CH_2OH)_2$ (111-42-2)	-	Ex*	Ex	Ex	**145˚C 293˚F G**
	Diethylene glycolamine (DGA) (2-(2-aminoethoxy) ethanol)	$H_2NCH_2CH_2OCH_2CH_2OH$ (929-06-6)	-	Ex*	G	G	**120˚C 248˚F G**
	N-Methyl diethanolamine (MDEA)	$CH_3N(CH_2CH_2OH)_2$ (105-59-9)	-	Ex*	Ex	**Ex**	**140˚C 284˚F G**
	N-Methylethanolamine (2-methylaminoethanol)	$CH_3NHCH_2CH_2OH$ (109-83-1)	-	Ex*	Ex	Ex	-
	Monoethanolamine (MEA) (2-aminoethanol)	$H_2NCH_2CH_2OH$ (141-43-5)	-	Ex*	Ex	**Ex**	-
	Sulphanol solution (50% diisopropanolamine, 25% tetramethylene sulphone, 25% water)	N/A	-	Ex*	Ex	Ex	-
	Triethanolamine (TEA) (2,2',2"-nitrilotriethanol)	$N(CH_2CH_2OH)_3$ (102-71-6)	-	Ex*	Ex	Ex	-
Esters and Ethers	Butyl acetate (butyl ethanoate)	$CH_3C(O)OCH_2CH_2CH_2CH_3$ (123-86-4)	-	Ex*	Ex	Ex	-
	Dibutyl phthalate (DBP) (phthalic acid dibutyl ester)	$C_6H_4(C(O)OCH_2CH_2CH_2CH_3)_2$ (84-74-2)	-	Ex*	Ex	Ex	-
	Diethyl ether (ether, ethoxyethane)	$CH_3CH_2OCH_2CH_3$ (60-29-7)	-	Ex*	-	-	-
	Dioctyl phthalate (DOP) (bis(2-ethylhexyl) phthalate, DEHP)	$C_6H_4(C(O)OCH_2CH(CH_2CH_3)CH_2CH_2CH_2CH_3)_2$ (117-81-7)	-	Ex*	Ex	Ex	-
	Ethyl acetate (ethyl ethanoate, acetic ester)	$CH_3C(O)OCH_2CH_3$ (141-78-6)	-	**Ex***	Ex	-	-

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Gases	Butane	$CH_3CH_2CH_2CH_3$ (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	-
	Chlorine (wet)	Cl_2 (7782-50-5)	-	G*	M	M	-
	Ethane	C_2H_6 (74-84-0)	-	Ex	Ex	Ex	-
	Hydrogen	H_2 (1333-74-0)	-	Ex	Ex	Ex	-
	Hydrogen sulphide	H_2S (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_2O (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_6H_5Cl (108-90-7)	-	Ex*	G	M	-
	Chloroform (trichloromethane)	$HCCl_3$ (67-66-3)	-	Ex*	-	-	-
	Dichloromethane (DCM) (methylene chloride)	CH_2Cl_2 (75-09-2)	-	**Ex***	-	-	-
Hydrocarbons	Aviation fuel (AVCAT, AVGAS, AVTAG, AVTUR)	N/A	-	Ex*	Ex	Ex	-
	Benzene (benzol)	C_6H_6 (71-43-2)	-	Ex*	Ex	-	-
	Cyclohexane	C_6H_{12} (110-82-7)	-	Ex*	Ex	-	-
	Gasoline (petrol)	N/A (8032-32-4)	-	Ex*	Ex	Ex	-
	Heptane	$CH_3CH_2CH_2CH_2CH_2CH_2CH_3$ (142-82-7)	-	**Ex***	Ex	Ex	-
	Hexane	$CH_3CH_2CH_2CH_2CH_2CH_3$ (110-54-3)	-	Ex*	Ex	-	-
	Iso-octane (2,2,4-trimethylpentane)	$(CH_3)_3CCH_2CH(CH_3)_2$ (540-84-1)	-	Ex*	Ex	Ex	-
	Kerosene	N/A (8008-20-6)	-	Ex*	Ex	Ex	-

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Hydrocarbons	Mesitylene (1,3,5-Trimethylbenzene)	$C_6H_3(CH_3)_3$ (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	$CH_3CH_2CH_2CH_2CH_3$ (109-66-0)	-	Ex*	-	-	-
	Toluene (methylbenzene, phenylmethane, toluol)	$C_6H_5CH_3$ (108-88-3)	-	Ex*	**Ex**	**Ex**	-
	Xylene (dimethyl benzene, xylol)	$C_6H_4(CH_3)_2$ (95-47-6/108-38-3/106-42-3/1330-20-7)	-	Ex*	Ex	Ex	-
Miscellaneous	Deionised water	H_2O (7732-18-5)	-	Ex*	Ex	Ex	160˚C 320˚F Ex
	Sour oil / Brine mix	N/A	-	Ex*	Ex	Ex	160˚C 320˚F Ex

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