

CHEMICAL RESISTANCE OF BELZONA® 7311

FN10213

	Chemical name (Synonym)	Chemical formula (CAS number)	Concentration	Chemical Resistance Rating at 20 °C (68 °F)
Inorganic Acids	Hydrochloric acid	HCl (7647-01-0)	37%	P
			20%	G
			10%	Ex
			5%	Ex
	Phosphoric acid (orthophosphoric acid)	H ₃ PO ₄ (7664-38-2)	5%	M
	Nitric acid	HNO ₃ (7697-37-2)	5%	M
	Sulphuric acid	H ₂ SO ₄ (7664-93-9)	30%	P
			20%	M
10%			Ex	
5%			Ex	
Organic Acids	Acetic acid (ethanoic acid)	CH ₃ COOH (64-19-7)	5%	P
	Lactic acid (2-hydroxypropanoic acid)	CH ₃ CH(OH)(COOH) (50-21-5/79-33-4/10326-41-7)	1%	G
	Phenol (hydroxybenzene)	C ₆ H ₅ OH (108-95-2)	5%	P
Alcohols, Aldehydes and Ketones	Acetone (propanone)	(CH ₃) ₂ CO (67-64-1)	-	P
	Amyl alcohol	C ₅ H ₁₁ OH (71-41-0)	-	Ex
	n-Butanol (butyl alcohol)	C ₄ H ₉ OH (71-36-3)	-	Ex
	Ethanol (ethyl alcohol)	CH ₃ CH ₂ OH (64-17-5)	-	G
	Ethylene glycol (ethan-1,2-diol, monoethylene glycol, MEG)	(CH ₂ OH) ₂ (107-21-1)	-	Ex
	Glycerol (glycerine, propane-1,2,3-triol)	HOCH ₂ CH(OH)CH ₂ OH (56-81-5)	-	Ex
	n-Hexanol (hexyl alcohol)	C ₆ H ₁₃ OH (111-27-3)	-	Ex

Excellent	Ex	no significant deterioration / barrier properties retained for greater than 52 weeks <i>suitable for all applications including long term immersion</i>
Good	G	no significant deterioration / barrier properties retained for 12 - 52 weeks <i>suitable for short-term immersion and general chemical contact</i>
Moderate	M	no significant deterioration / barrier properties retained for 1 - 12 weeks <i>suitable for applications involving short term chemical contact e.g. spillage, splashing or secondary containment</i>
Poor	P	significant deterioration / loss of barrier properties after 1 week or less <i>not suitable for any application</i>
Ex		Bold text highlights real life data obtained via chemical resistance testing
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Alcohols, Aldehydes and Ketones	Higher alcohols	$C_nH_{(2n+1)}OH$ where $n > 2$	-	Ex
	Isopropyl alcohol (IPA) (isopropanol, propan-2-ol)	$CH_3CH(OH)CH_3$ (67-63-0)	-	Ex
	Isobutyl alcohol (IBA) (isobutanol, 2-methylpropan-1-ol)	$(CH_3)_2CHCH_2OH$ (78-83-1)	-	Ex
	Methanol (methyl alcohol)	CH_3OH (67-56-1)	-	P
	Methyl ethyl ketone (MEK) (2-butanone, methyl acetone)	$CH_3C(O)CH_2CH_3$ (78-93-3)	-	P
	Methyl isobutyl ketone (MIBK) (hexone, 4-Methylpentan-2-one)	$(CH_3)_2CHCH_2C(O)CH_3$ (108-10-1)	-	M
	Propan-1-ol (Propyl alcohol)	$CH_3CH_2CH_2OH$ (71-23-8)	-	Ex
	Propylene glycol (1,2-Propanediol)	$CH_3CH(OH)CH_2OH$ (57-55-6)	-	Ex
Alkalis / Bases	Ammonia solution (ammonium hydroxide)	NH_3 (aq) (1336-21-6)	20%	Ex
	Potassium hydroxide (caustic potash)	KOH 1310-58-3	40%	Ex
			20%	Ex
			10%	Ex
	Sodium hydroxide (caustic soda)	NaOH 1310-73-2	50%	Ex
			20%	Ex
10%			Ex	
Amines & Amides	Diethanolamine (DEA) (2,2'-iminodiethanol)	$HN(CH_2CH_2OH)_2$ (111-42-2)	-	Ex
	Diethylene glycolamine (DGA) (2-(2-aminoethoxy) ethanol)	$H_2NCH_2CH_2OCH_2CH_2OH$ (929-06-6)	-	P
	N-Methyl diethanolamine (MDEA)	$CH_3N(CH_2CH_2OH)_2$ (105-59-9)	-	Ex
	Monoethanolamine (MEA) (2-aminoethanol)	$H_2NCH_2CH_2OH$ (141-43-5)	-	P
	Triethanolamine (TEA) (2,2',2''-nitrilotriethanol)	$N(CH_2CH_2OH)_3$ (102-71-6)	-	Ex

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Gases	Butane	CH ₃ CH ₂ CH ₂ CH ₃ (106-97-8)	-	Ex
	Carbon dioxide	CO ₂ (124-38-9)	-	Ex
	Carbon monoxide	CO (630-08-0)	-	Ex
	Chlorine (dry)	Cl ₂ (7782-50-5)	-	Ex
	Chlorine (wet)	Cl ₂ (7782-50-5)	-	Ex
	Ethane	C ₂ H ₆ (74-84-0)	-	Ex
	Hydrogen	H ₂ (1333-74-0)	-	Ex
	Hydrogen sulphide	H ₂ S (7783-06-4)	-	Ex
	Methane (natural gas)	CH ₄ (74-82-8)	-	Ex
	Nitrogen	N ₂ (7727-37-9)	-	Ex
	Nitrous oxide (dinitrogen monoxide)	N ₂ O (10024-97-2)	-	Ex
	Ozone (dry)	O ₃ (10028-15-6)	-	Ex
	Ozone (wet)	O ₃ (10028-15-6)	-	M
	Sulphur dioxide	SO ₂ (7446-09-5)	-	Ex
	Sulphur trioxide (sulphuric anhydride)	SO ₃ (7446-11-9)	-	Ex
Hydrocarbons	Aviation fuel (AVCAT, AVGAS, AVTAG, AVTUR)	N/A	-	Ex
	Crude Oil	N/A	-	Ex
	Cyclohexane	C ₆ H ₁₂ (110-82-7)	-	G

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Hydrocarbons	Diesel	N/A	-	Ex
	Ethyl benzene (ethyl benzol, EB)	C ₆ H ₅ CH ₂ CH ₃ (100-41-4)	-	G
	Gasoline (petrol)	N/A (8032-32-4)	-	Ex
	Heptane	CH ₃ CH ₂ CH ₂ CH ₂ CH ₂ CH ₂ CH ₃ (142-82-5)	-	Ex
	Hexane	CH ₃ CH ₂ CH ₂ CH ₂ CH ₂ CH ₃ (110-54-3)	-	Ex
	Iso-octane (2,2,4-trimethylpentane)	(CH ₃) ₃ CCH ₂ CH(CH ₃) ₂ (540-84-1)	-	Ex
	Kerosene	N/A (8008-20-6)	-	Ex
	Mesitylene (1,3,5-Trimethylbenzene)	C ₆ H ₃ (CH ₃) ₃ (108-67-8)	-	G
	Mineral spirits / White spirits (Stoddard solvent)	N/A (8052-41-3)	-	Ex
	Naphthalene (naphthalin, white tar)	C ₁₀ H ₈ (91-20-3)	-	Ex
	Paraffin	N/A (8002-74-2)	-	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)	-	G
	Xylene (dimethyl benzene, xylo)	C ₆ H ₄ (CH ₃) ₂ (95-47-6/108-38-3/106-42-3/1330-20-7)	-	G
	Salts	Aluminium chloride	AlCl ₃ (7446-70-0)	10%
Aluminium sulphate		Al ₂ (SO ₄) ₃ (10043-01-3)	10%	Ex
Ammonium chloride		NH ₄ Cl (12125-02-9)	10%	Ex
Ammonium sulphate		(NH ₄) ₂ SO ₄ (7783-20-2)	10%	Ex

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Salts	Copper sulphate	CuSO ₄ (7758-98-7)	10%	Ex
	Ferric chloride	FeCl ₃ (7705-08-0)	10%	Ex
	Ferric sulphate	Fe ₂ (SO ₄) ₃ (10028-22-5)	10%	Ex
	Ferrous chloride	FeCl ₂ (7758-94-3)	10%	Ex
	Ferrous sulphate	FeSO ₄ (7720-78-7)	10%	Ex
	Magnesium chloride	MgCl ₂ (7786-30-3)	10%	Ex
	Magnesium sulphate (Epsom salt)	MgSO ₄ (7487-88-9)	10%	Ex
	Potassium chloride	KCl (7447-40-7)	10%	Ex
	Potassium sulphate	K ₂ SO ₄ (7778-80-5)	10%	Ex
	Sodium hypochlorite (bleach)	NaClO (7681-52-9)	12%	G
	Sodium nitrate	NaNO ₃ (7631-99-4)	10%	Ex
	Sodium sulphate	Na ₂ SO ₄ (7757-82-6)	10%	Ex
	Sodium sulphide	Na ₂ S (1313-82-2)	10%	Ex

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