

CHEMICAL RESISTANCE OF BELZONA® 3411

FN10153



	Chemical name (Synonym)	Chemical formula (CAS number)	Concentration	Suitable for repeated accidental contact (1 month continuous exposure)	Chemical Resistance Rating (12 months continuous exposure)
Inorganic Acids	Hydrochloric acid	HCl (7647-01-0)	10%	No	M
			5%	Yes	M
			3%	Yes	G
			1%	Yes	G
	Nitric acid	HNO ₃ (7697-37-2)	5%	No	P
			3%	No	P
			1%	Yes	M
	Phosphoric acid (orthophosphoric acid)	H ₃ PO ₄ (7664-38-2)	10%	Yes	G
			5%	Yes	G
	Sulphuric acid	H ₂ SO ₄ (7664-93-9)	20%	Yes	G
			10%	Yes	G
			5%	Yes	G
3%			Yes	G	
1%			Yes	G	
Organic Acids	Acetic acid (ethanoic acid)	CH ₃ COOH (64-19-7)	5%	No	P
			2%	No	P
	Cresylic acid (cresol)	C ₇ H ₈ O (1319-77-3)	-	No	P
	Lactic acid (2-hydroxypropanoic acid)	CH ₃ CH(OH)(COOH) (50-21-5/79-33-4/10326-41-7)	5%	No	P
			2%	No	P
	Salicylic acid	C ₆ H ₄ (OH)COOH (69-72-7)	-	Yes	Ex
	Stearic acid (solid)	CH ₃ (CH ₂) ₁₆ CO ₂ H (57-11-4)	-	Yes	Ex
Tannic acid	C ₇₆ H ₅₂ O ₄₆ (1401-55-4)	-	Yes	Ex	
Tartaric acid	HO ₂ CCH(OH)CH(OH)CO ₂ H (526-83-0)	-	Yes	Ex	
Alcohols	Ethanol (ethyl alcohol)	CH ₃ CH ₂ OH (64-17-5)	-	No	P
	Glycerol (glycerine, propane-1,2,3-triol)	HOCH ₂ CH(OH)CH ₂ OH (56-81-5)	-	Yes	M
	1-Hexanol	CH ₃ (CH ₂) ₅ OH (111-27-3)	-	No	P
	Methanol (methyl alcohol)	CH ₃ OH (67-56-1)	-	No	P
	Propylene glycol (1,2-Propanediol)	CH ₃ CH(OH)CH ₂ OH (57-55-6)	-	Yes	G
	Tetraethylene Glycol (tetraglycol)	HO(CH ₂ CH ₂ O) ₃ CH ₂ CH ₂ OH (112-60-7)	-	Yes	Ex

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Alkalis	Ammonia	NH ₃ (7664-41-7)	20%	No	M
			10%	No	M
			5%	Yes	M
	Calcium hydroxide (lime water)	Ca(OH) ₂ (1305-62-0)	20%	Yes	M
			10%	Yes	M
	Potassium hydroxide (caustic potash)	KOH (1310-58-3)	20%	Yes	M
			10%	Yes	M
	Sodium hydroxide (caustic soda)	NaOH (1310-73-2)	50%	Yes	M
			20%	Yes	M
			10%	Yes	M
5%			Yes	M	
3%			Yes	M	
1%			Yes	M	
Amines & Amides	Diethanolamine (DEA) (2,2'-iminodiethanol)	HN(CH ₂ CH ₂ OH) ₂ (111-42-2)	-	Yes	M
	Monoethanolamine (MEA) (2-aminoethanol)	H ₂ NCH ₂ CH ₂ OH (141-43-5)	-	Yes	M
	Triethanolamine (TEA) (2,2',2''-nitrilotriethanol)	N(CH ₂ CH ₂ OH) ₃ (102-71-6)	-	Yes	G
Beverages & Foodstuffs	Apple juice	N/A	-	Yes	Ex
	Beet sugar	N/A	-	Yes	Ex
	Butter	N/A	-	Yes	Ex
	Buttermilk	N/A	-	Yes	M
	Citrus juices	N/A	-	Yes	Ex
	Fermentation liquor	N/A	-	Yes	M
	Glucose	N/A	-	Yes	Ex
	Margarine	N/A	-	Yes	Ex
	Mayonnaise	N/A	-	Yes	Ex
	Milk	N/A	-	Yes	M
	Molasses	N/A	-	Yes	Ex
	Mustard	N/A	-	Yes	M
	Salad oil	N/A	-	Yes	Ex
	Sugar liquids	N/A	-	Yes	Ex
	Tomato juice	N/A	-	Yes	M
Vinegar	N/A	-	No	P	
Yeast	N/A	-	Yes	Ex	

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Esters & Ethers	Dibutyl phthalate	C ₁₆ H ₂₂ O ₄ (84-74-2)	-	Yes	Ex
	Dibutyl sebacate	C ₁₈ H ₃₄ O ₄ (109-43-3)	-	Yes	Ex
	Diocetyl adipate	C ₂₂ H ₄₂ O ₄ (123-79-5)	-	Yes	Ex
	Diocetyl phthalate	C ₆ H ₄ (C ₈ H ₁₇ COO) ₂ (117-81-7)	-	Yes	Ex
	Diocetyl sebacate	(CH ₂) ₈ (COOC ₈ H ₁₇) ₂	-	Yes	Ex
	Ethyl acetate	CH ₃ COOCH ₂ CH ₃ (141-78-6)	-	No	M
	Tributyl phosphate	(CH ₃ CH ₂ CH ₂ CH ₂ O) ₃ PO (126-73-8)	-	Yes	M
Gases	Butane	C ₄ H ₁₀ (106-97-8)	-	Yes	Ex
	Natural gas (methane)	CH ₄	-	Yes	Ex
	Nitrous oxide (dinitrogen monoxide)	N ₂ O (10024-97-2)	-	Yes	Ex
	Sulphur dioxide	SO ₂ (7446-09-5)	-	Yes	Ex
Hydrocarbons	Cyclohexane	C ₆ H ₁₂ (110-82-7)	-	Yes	M
	Gasoline – Ethanol free (Petrol)	N/A	-	No	P
	Kerosene	N/A (8008-20-6)	-	Yes	Ex
	Mesitylene (1,3,5-trimethylbenzene)	C ₆ H ₃ (CH ₃) ₃ (108-67-8)	-	Yes	Ex
	Naphtha	N/A	-	Yes	Ex
	Naphthalene	C ₁₀ H ₈ (91-20-3)	-	Yes	Ex
	Paraffin	N/A (8002-74-2)	-	Yes	Ex
	Petroleum naphtha	N/A	-	Yes	Ex
	Roof pitch	N/A	-	Yes	Ex
	Toluene (methylbenzene, phenylmethane, toluol)	C ₆ H ₅ CH ₃ (108-88-3)	-	No	M
	Turpentine	N/A (8006-64-2)	-	No	M
	White Spirit (Stoddard solvent, mineral spirit)	N/A (8052-41-3)	-	Yes	M
	Xylene (dimethyl benzene, xylol)	C ₆ H ₄ (CH ₃) ₂ (95-47-6/108-38-3/106-42-3/1330-20-7)	-	Yes	M

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Ketones	Methyl ethyl ketone (MEK, butanone)	CH ₃ C(O)CH ₂ CH ₃ (78-93-3)	-	No	P
	Brake fluid	N/A	-	Yes	Ex
Miscellaneous	Emulsion paint	N/A	-	Yes	Ex
	Fertilizer solutions	N/A	-	Yes	Ex
	Grease	N/A	-	Yes	Ex
	Ink (water based)	N/A	-	Yes	Ex
	Isothiazolinone	C ₃ H ₃ NO ₅ (1003-07-2)	-	Yes	Ex
	Rubber latex emulsions	N/A	-	Yes	Ex
	Sewage	N/A	-	Yes	Ex
	Skydrol	N/A	-	Yes	Ex
	Starch	N/A	-	Yes	Ex
	Tar	N/A	-	Yes	Ex
	Urea	CO(NH ₂) ₂ (57-13-6)	-	Yes	M
	Water, distilled	N/A	-	Yes	Ex
	Water, fresh	N/A	-	Yes	Ex
	Water, sea	N/A	-	Yes	Ex
Oils - Minerals	Castor oil	N/A	-	Yes	Ex
	Coconut oil	N/A	-	Yes	Ex
	Cod liver oil	N/A	-	Yes	Ex
	Corn oil	N/A	-	Yes	Ex
	Diesel oil	N/A	-	Yes	Ex
	Lubricating oil	N/A	-	Yes	Ex
	Oil, petroleum	N/A	-	Yes	Ex
	Oil/water mixtures	N/A	-	Yes	Ex
	Silicone oil	N/A	-	Yes	Ex
	Soybean oil	N/A	-	Yes	Ex
	Transfer oil	N/A	-	Yes	Ex
Tung oil	N/A	-	Yes	Ex	

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Salts	Aluminium chloride	AlCl ₃ (7446-70-0)	10%	Yes	G
	Aluminium sulphate	Al ₂ (SO ₄) ₃ (10043-01-3)	-	Yes	Ex
	Alums	N/A	-	Yes	Ex
	Ammonium bicarbonate	(NH ₄)HCO ₃ (1066-33-7)	-	Yes	Ex
	Ammonium fluorosilicate	(NH ₄) ₂ SiF ₆ (16919-19-0)	-	Yes	Ex
	Ammonium nitrate	NH ₄ NO ₃ (6484-52-2)	-	Yes	Ex
	Ammonium phosphate	(NH ₄) ₃ PO ₄ (10361-65-6)	-	Yes	Ex
	Ammonium sulfate	(NH ₄) ₂ SO ₄ (7783-20-2)	-	Yes	Ex
	Barium carbonate	BaCO ₃ (513-77-9)	-	Yes	Ex
	Barium chloride	BaCl ₂	-	Yes	Ex
	Barium sulfate	BaSO ₄ (7727-43-7)	-	Yes	Ex
	Barium sulphide	BaS (21109-95-5)	-	Yes	Ex
	Brines	N/A	-	Yes	Ex
	Bromine chloride	BrCl (13863-41-7)	-	Yes	Ex
	Calcium carbonate	CaCO ₃ (471-34-1)	-	Yes	Ex
	Calcium chloride	CaCl ₂ (10043-52-4)	-	Yes	Ex
	Calcium fluoride	CaF ₂ (7789-75-5)	10%	Yes	Ex
	Calcium hypochlorite	Ca(ClO) ₂ (7778-54-3)	-	Yes	Ex
	Calcium sulphate	CaSO ₄ (7778-18-9)	-	Yes	Ex
	Chromium potassium sulphate (Chrome alum)	KCr(SO ₄) ₂ (10141-00-1)	-	Yes	Ex
Copper acetate	Cu(CH ₃ COO) ₂ (142-71-2)	-	Yes	G	
Copper chloride	CuCl ₂ (7447-39-4)	-	Yes	G	
Copper nitrate	Cu(NO ₃) ₂ (3251-23-8)	-	Yes	G	
Copper sulphate	CuSO ₄ (7758-98-7)	10%	Yes	G	
Ferric chloride (dry)	FeCl ₃ (7705-08-0)	-	No	M	
Ferric nitrate	Fe(NO ₃) ₃ (10421-48-4)	-	No	M	

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Salts	Ferric sulfate	Fe ₂ (SO ₄) ₃ (10028-22-5)	-	Yes	M
	Ferrous chloride	FeCl ₂ (7758-94-3)	10%	No	M
	Ferrous sulfate	FeSO ₄ (7720-78-7)	10%	Yes	G
	Magnesium bisulfate	Mg(HSO ₄) ₂ (10028-26-9)	-	Yes	Ex
	Magnesium carbonate	MgCO ₃ (546-93-0)	10%	Yes	Ex
	Magnesium chloride	MgCl ₂ (7786-30-3)	-	Yes	Ex
	Magnesium sulphate (Epsom salt)	MgSO ₄ (7487-88-9)	-	Yes	Ex
	Mercuric chloride	HgCl ₂ (7487-94-7)	-	Yes	Ex
	Mercuric cyanide	Hg(CN) ₂ (592-04-1)	-	Yes	Ex
	Nickel ammonium sulfate	(NH ₄) ₂ Ni(SO ₄) ₂ (7785-20-8)	-	Yes	Ex
	Nickel chloride	NiCl ₂ (7718-54-9)	-	Yes	Ex
	Nickel nitrate	Ni(NO ₃) ₂ (13138-45-9)	-	Yes	Ex
	Nickel sulphate	NiSO ₄ (7786-81-4)	-	Yes	Ex
	Potassium bisulfite	KHSO ₃ (7773-03-7)	-	Yes	Ex
	Potassium bromide	KBr (7758-02-3)	-	Yes	Ex
	Potassium carbonate	K ₂ CO ₃ (584-08-7)	-	Yes	Ex
	Potassium chlorate	KClO ₃ (3811-04-9)	-	Yes	Ex
	Potassium chloride	KCl (7447-40-7)	-	Yes	Ex
	Potassium cyanide	KCN (151-50-8)	-	Yes	Ex
	Potassium dichromate	K ₂ Cr ₂ O ₇ (7778-50-9)	-	Yes	Ex
	Potassium diphosphate	K ₂ HPO ₄ (7758-11-4)	-	Yes	Ex
	Potassium ferricyanide	K ₃ [Fe(CN) ₆] (13746-66-2)	-	Yes	Ex
	Potassium ferrocyanide	K ₄ [Fe(CN) ₆] (13943-58-3)	-	Yes	Ex
Potassium iodide	KI (7681-11-0)	-	Yes	Ex	
Potassium nitrate	KNO ₃ (7757-79-1)	-	Yes	Ex	
Potassium permanganate	KMnO ₄ (7722-64-7)	-	Yes	Ex	

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Salts	Potassium sulfate	K ₂ SO ₄ (7778-80-5)	-	Yes	Ex
	Potassium sulfide	K ₂ S (1059-82-5)	-	Yes	Ex
	Potassium sulphite	K ₂ SO ₃ (10117-38-1)	-	Yes	Ex
	Quaternary ammonium salts	N/A	-	Yes	Ex
	Silver nitrate	AgNO ₃ (7761-88-8)	-	Yes	Ex
	Sodium acetate	CH ₃ COONa (127-09-3)	-	Yes	Ex
	Sodium aluminate	NaAlO ₂ (1302-42-7)	-	Yes	Ex
	Sodium bicarbonate	NaHCO ₃ (144-55-8)	-	Yes	Ex
	Sodium bisulfate	NaHSO ₄ (7681-38-1)	-	Yes	Ex
	Sodium bisulfite	NaHSO ₃ (7631-90-5)	-	Yes	Ex
	Sodium borate (Borax)	Na ₂ B ₄ O ₇ (1303-96-4)	-	Yes	Ex
	Sodium bromide	NaBr (7647-15-6)	-	Yes	Ex
	Sodium carbonate (soda ash)	Na ₂ CO ₃ (497-19-8)	-	Yes	Ex
	Sodium chlorate	NaClO ₃ (7775-09-9)	-	Yes	Ex
	Sodium chloride	NaCl (7647-14-5)	-	Yes	Ex
	Sodium chromate	Na ₂ CrO ₄ (7775-11-3)	-	Yes	Ex
	Sodium cyanide	NaCN (143-33-9)	-	Yes	Ex
	Sodium fluoride	NaF (7681-49-4)	10%	Yes	Ex
	Sodium fluorosilicate	Na ₂ SiF ₆ (16893-85-9)	-	Yes	Ex
	Sodium hypochlorite (bleach)	NaClO (7681-52-9)	12%	Yes	M
	Sodium metaphosphate	(NaPO ₃) ₆ (10124-56-8)	-	Yes	Ex
Sodium metasilicate (sodium silicate)	Na ₂ SiO ₃ (6834-92-0)	-	Yes	Ex	
Sodium nitrate	NaNO ₃ (7631-99-4)	-	Yes	Ex	
Sodium phosphate (dibasic)	Na ₂ HPO ₄ (7558-79-4)	-	Yes	Ex	
Sodium phosphate (tribasic)	Na ₃ PO ₄ (7601-54-9)	-	Yes	Ex	

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Salts	Sodium sulfate	Na ₂ SO ₄ (7757-82-6)	-	Yes	Ex
	Sodium sulfide	Na ₂ S (1313-82-2)	-	Yes	Ex
	Stannous chloride (tin chloride)	SnCl ₂ (7772-99-8)	-	Yes	Ex
	Zinc chloride	ZnCl ₂ (7646-85-7)	-	Yes	Ex
	Zinc hydrosulfite	ZnS ₂ O ₄ (7779-86-4)	-	Yes	Ex
	Zinc sulfate	ZnSO ₄ (7733-02-0)	-	Yes	Ex

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