CHEMICAL RESISTANCE OF BELZONA® 4331

FN10085

	Chemical name	Chemical Formula (CAS number)	Concentration	Suitable for 72 hours chemical exposure at:			Service at:		
				20°C (68°F)	40°C (104°F)	90°C (194°F)	20°C (68°F)	40°C (104°F)	90°C (194°F)
Inorganic acids	Hydrochloric acid	HCl (7647-01-0)	37%	**Yes**	**Yes**	**Yes***	**Ex**	**Ex**	**M***
			25%	**Yes**	**Yes**	**Yes***	**Ex**	**Ex**	**M***
			15%	**Yes**	**Yes**	**Yes***	**Ex**	**Ex**	**M***
			5%	**Yes**	**Yes**	**Yes***	**Ex**	**Ex**	**M***
	Nitric Acid	HNO_3 (7697-37-2)	70%	**No**	No	No	**P**	P	P
			50%	**Yes***	No	No	**M***	P	P
			40%	**Yes***	Yes*	No	**G***	M*	P
			30%	**Yes***	Yes*	No	**Ex***	M*	P
			15%	**Yes***	**Yes***	**No**	**Ex***	**Ex***	**P**
			5%	**Yes***	**Yes***	**No**	**Ex***	**Ex***	**P**
	Phosphoric acid (Orthophosphoric acid)	H_3PO_4 (7664-38-2)	85%	**Yes**	**Yes**	**No**	**Ex**	**Ex**	**P**
			50%	**Yes**	**Yes**	**No**	**Ex**	**Ex**	**P**
			25%	**Yes**	**Yes**	**No**	**Ex**	**Ex**	**P**
			15%	**Yes**	**Yes**	**Yes***	**Ex**	**Ex**	**M***
	Sulphuric acid	H_2SO_4 (7664-93-9)	98%	**Yes**	**Yes**	**No**	**Ex***	**Ex***	**P**
			75%	**Yes**	**Yes**	**Yes***	**Ex**	**Ex**	**M***
			50%	**Yes**	**Yes**	**Yes***	**Ex**	**Ex**	**M***
			25%	**Yes**	**Yes**	**Yes***	**Ex**	**Ex**	**M***
			10%	**Yes**	**Yes**	**Yes***	**Ex**	**Ex**	**M***
			5%	**Yes**	**Yes**	**No**	**Ex**	**Ex**	**P**
Organic acids	Acetic Acid (Ethanoic acid)	CH_3COOH (64-19-7)	100%	**Yes***	No	No	**M***	P	P
			50%	**Yes***	No	No	**M***	P	P
			25%	**Yes***	**Yes***	**No**	**Ex***	**M***	**P**
			15%	**Yes***	**Yes***	**Yes***	**Ex***	**Ex***	**M***
			5%	**Yes***	**Yes***	**Yes***	**Ex***	**Ex***	**M***
			1%	Yes*	Yes*	**Yes**	Ex*	Ex*	**M**
			0.1%	Yes*	Yes*	**Yes**	Ex*	Ex*	**M**
	Acrylic acid	$C_3H_4O_2$ (79-10-7)	100%	**Yes**	**Yes**	**No**	**M**	**M**	**P**
	Citric acid	$C_6H_8O_7$ (77-92-9)	50%	**Yes**	**Yes**	**Yes**	**Ex**	**Ex**	**M**
	Formic acid (Methanoic acid)	CHOOH (64-18-6)	90%	**No**	**No**	**No**	**P**	**P**	**P**
			20%	**No**	**No**	**No**	**P**	**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*
Moderate	**M**	No significant deterioration / barrier properties retained for 1-12 weeks *Suitable for applications involving short term chemical contact e.g. spillage, splashing or secondary containment*
Poor	**P**	Significant deterioration / loss of barrier properties after 1 week or less *Not suitable for any applications*
*		Product must be post cured to deliver quoted chemical resistance
Ex		**Bold** text highlights real life data obtained via chemical resistance testing
Ex		Normal font indicates that the resistance has been predicted based upon partial test data and /or similar reagents

CHEMICAL RESISTANCE OF BELZONA® 4331

FN10085

	Chemical name	Chemical Formula (CAS number)	Concentration	Suitable for 72 hours chemical exposure at:			Service at:		
				20°C (68°F)	40°C (104°F)	90°C (194°F)	20°C (68°F)	40°C (104°F)	90°C (194°F)
Organic acids	Lactic acid (2-hydroxypropanoic acid)	$C_3H_6O_3$ (50-21-5/79-33-4/10326-41-7)	85%	**Yes**	**No**	**No**	**M**	**P**	**P**
	Methacrylic acid	$C_4H_6O_2$ (79-41-4)	100%	**Yes**	Yes	-	**Ex***	G*	-
Alkalis	Ammonia Solution	NH_3 (7664-41-7)	25%	**Yes**	**Yes**	**Yes**	**G**	**M**	**M**
	Sodium Hydroxide	NaOH (1310-73-2)	40%	Yes*	Yes*	**Yes***	M*	M*	**M***
			10%	**Yes***	Yes*	Yes*	**M***	M*	M*
	Sodium Hypochlorite solution	NaClO (7681-52-9)	12%	**Yes***	Yes*	-	**M***	M*	-
Hydrocarbons	Acetone	C_3H_6O (67-64-1)	100%	Yes*	Yes*	-	M*	M*	-
	Crude Oil	N/A (8002-05-9)	100%	**Yes**	**Yes**	**Yes**	**Ex**	**Ex**	**Ex**
	Dimethylformamide	C_3H_7NO (68-12-2)	100%	No	No	**No**	P	P	**P**
	Ethanol (Ethyl alcohol)	CH_3CH_2OH (64-17-5)	100%	**Yes**	Yes	**-**	**Ex**	G	-
	Kerosene	N/A (8008-20-6)	100%	**Yes**	Yes	**-**	**Ex**	Ex	**-**
	Methanol (Methyl alcohol)	CH_3OH (67-56-1)	100%	**Yes**	**Yes**	**-**	**G**	**G**	-
	Methylene Chloride (Dichloromethane)	CH_2Cl_2 (75-09-2)	100%	Yes*	**Yes***	**-**	M*	**M***	-
	Methyl ethyl ketone (MEK, butanone)	C_4H_8O (78-96-3)	100%	**Yes**	Yes	**-**	**Ex**	G	-
	Trimethylbenzene	C_9H_{12} (108-67-8)	100%	Yes*	Yes*	Yes*	G*	G*	M*
Amines and Amides	2-(2-Aminoethoxy)ethanol (DGA)	$H_2NCH_2CH_2OCH_2CH_2OH$ (929-06-6)	100%	**Yes**	**Yes**	**Yes**	**G**	**M**	**M**
	Diethylenetriamine (DETA)	$HN(CH_2CH_2NH_2)_2$ (111-40-0)	100%	**Yes**	**No**	**No**	**M**	**P**	**P**
	Ethanolamine (MEA)	$H_2NCH_2CH_2OH$ (141-43-5)	100%	**Yes**	**Yes**	Yes	**Ex**	**Ex**	M
Other	Aluminium Sulphate	$Al_2(SO_4)_3$ (10043-01-3)	36%	**Yes**	Yes	-	**Ex**	Ex	**-**
	Ferric Chloride	$FeCl_3$ (7705-08-0)	91%	**Yes**	Yes	-	**Ex**	Ex	**-**
	Ferrous Sulphate	$FeSO_4$ (7720-78-7)	29%	**Yes**	Yes	-	**Ex**	Ex	**-**
	Hydrogen peroxide	H_2O_2 (7722-84-1)	6%	**Yes***	Yes*	-	**G***	M*	**-**

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*
Moderate	**M**	No significant deterioration / barrier properties retained for 1-12 weeks *Suitable for applications involving short term chemical contact e.g. spillage, splashing or secondary containment*
Poor	**P**	Significant deterioration / loss of barrier properties after 1 week or less *Not suitable for any applications*
*		Product must be post cured to deliver quoted chemical resistance
Ex		**Bold** text highlights real life data obtained via chemical resistance testing
Ex		Normal font indicates that the resistance has been predicted based upon partial test data and /or similar reagents

CHEMICAL RESISTANCE OF BELZONA® 4331

FN10085

	Chemical name	Chemical Formula (CAS number)	Concentration	Suitable for 72 hours chemical exposure at:			Service at:		
				20°C (68°F)	40°C (104°F)	90°C (194°F)	20°C (68°F)	40°C (104°F)	90°C (194°F)
Other	Potassium permanganate	$KMnO_4$ (7722-64-7)	10%	**Yes***	No	-	**M***	P	-
	Sodium Nitrate	$NaNO_3$ (7631-99-4)	91%	**Yes**	Yes	-	**Ex**	Ex	-

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*
Moderate	**M**	No significant deterioration / barrier properties retained for 1-12 weeks *Suitable for applications involving short term chemical contact e.g. spillage, splashing or secondary containment*
Poor	**P**	Significant deterioration / loss of barrier properties after 1 week or less *Not suitable for any applications*
*		Product must be post cured to deliver quoted chemical resistance
Ex		**Bold** text highlights real life data obtained via chemical resistance testing
Ex		Normal font indicates that the resistance has been predicted based upon partial test data and /or similar reagents