BELZONA® PRODUCT DATA Q507

CHEMICAL RESISTANCE OF BELZONA® 4411 (Granogrip)

INORGANIC ACIDS	RATING		RATING
Carbonic acid	Ex	Nitrous acid (20%)	Ex
Chromic acid (10%)	P	Oleum (20-65% SO_3)	P
Chromic acid (40%)	P	Perchloric acid (60%)	P
Fluorosilicic acid (10%)	F	Phosphoric acid (10%)	F
Fluorosilicic acid (30%)	F	Phosphoric acid (30%)	F
Hydrobromic acid (10%)	Ex	Phosphoric acid (85%)	P
Hydrobromic acid (40%)	G	Sulfuric acid (10%)	Ex
Hydrochloric acid (10%)	Ex	Sulfuric acid (20%)	Ex
Hydrochloric acid (36%)	G	Sulfuric acid (50%)	G
Hydrofluoric acid (52%)	P	Sulfuric acid (98%)	P
Nitric acid (10%)	Ex	Sulfuric acid (100%)	P
Nitric acid (30%)	F	Sulfurous acid (6%)	G
Nitric acid (65%)	P		

ORGANIC ACIDS	RATING		RATING
Acetic acid (0-10%)	F	Lactic acid (0-10%)	F
Acetic acid (10-20%)	P	Lactic acid (10-85%)	P
Acetic acid (20-50%)	P	Maleic acid	Ex
Acrylic acid	P	Phenol (80%)	P
Chlorosulfonic acid	P	Salicylic acid	Ex
Citric acid	G	Stearic acid (solid)	Ex
Cresylic acid	P	Tannic acid	G
Formic acid (20%)	P	Tartaric acid	G

ALCOHOLS	RATING		RATING
Butanol	F	Isobutanol	F
Cellosolve	G	Methanol	F
Ethanol	F	2-Methoxy ethanol	F
Ethylene glycol	Ex	Methyl "cellosolve"	F
Glycerol	Ex	Propylene glycol	Ex
Hexanol	G		

The technical data contained herein is based on the results of long term tests carried out in our laboratories and to the best of our knowledge is true and accurate on the date of publication. It is however subject to change without prior notice and the user should contact Belzona to verify the technical data is correct before specifying or ordering. No guarantee of accuracy is given or implied. We assume no responsibility for rates of coverage, performance or injury resulting from use. Liability, if any, is limited to the replacement of products. No other warranty or guarantee of any kind is made by Belzona, express or implied, whether statutory, by operation of law or otherwise, including merchantability or fitness for a particular purpose.

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BELZONA® Repair • Protect • Improve

ALKALIS	RATING		RATING
Ammonia solution (0-10%)	G	Potassium hydroxide (10%)	G
Ammonia solution (10-30%)	F	Potassium hydroxide (20%)	G
Calcium hydroxide	Ex	Sodium hydroxide (10%)	G
Lime	Ex	Sodium hydroxide (40%)	G

AMINES & AMIDES	RATING		RATING
Aniline	P	Hydrazine	P
Dibutylamine	P	Methylamine (40% aqueous)	F
Diethanolamine	Ex	Methylamine gas	G
Diethylenetriamine	P	Pyridine	P
Dimethylamine	P	Triethanolamine	G
Dimethylformamide	P	Triethylenetetramine	P

BEVERAGES & FOODSTUFFS	RATING		RATING
Apple juice	Ex	Mayonnaise	Ex
Beer	G	Milk	G
Beet sugar	Ex	Molasses	Ex
Butter	F	Mustard	Ex
Buttermilk	G	Salad Oil	Ex
Cider	Ex	Sugar liquids	Ex
Citric juice	Ex	Tomato juice	Ex
Fermentation liquor	G	Vinegar	F
Glucose	Ex	Whiskey and Wine	G
Ketchup	Ex	Yeast	Ex
Margarine	Ex		

ESTERS & ETHERS	RATING		RATING
Amyl acetate	P	Dioctyl phthalate	Ex
Butyl acetate	P	Dioctyl sebacate	Ex
Butyl ether	Ex	Ethyl acetate	P
Dibutyl phthalate	Ex	Methyl acetate	P
Dibutyl sebacate	Ex	Propylene glycol monomethyl ether acetate	F
Diethyl ether	G		
Dioctyl adipate	Ex	Tributyl phosphate	Ex

GASES	RATING		RATING
Butane	Ex	Methane	Ex
Carbon dioxide	Ex	Natural gas	Ex
Carbon monoxide	Ex	Nitrous oxide	Ex
Chlorine gas	G	Ozone (aqueous solution)	P
Hydrogen gas	Ex	Sulfur dioxide	Ex
Hydrogen sulfide	Ex	Sulfur trioxide	Ex

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HALOCARBONS	RATING		RATING
Carbon tetrachloride	G	Methylene chloride	P
Chlorobenzene	P	Perchloroethylene	F
Chloroform	P	1, 1, 1, - Trichloroethane	F
Ethylene dichloride	P	Trichlorotrifluoroethane	F

HYDROCARBONS	RATING		RATING
Benzene	F	Naphtha	G
Cyclohexane	G	Paraffin	Ex
Ethane	Ex	Petroleum naphtha	G
Gasoline	Ex	Stoddard solvent	G
Heptane	Ex	Styrene	F
Hexane	Ex	Toluene	F
Iso-octane	Ex	Turpentine	G
Kerosene	Ex	White spirit	G
Mineral spirits	G	Xylene	F

KETONES	RATING		RATING
Acetone	P	Methyl amyl ketone	F
Formaldehyde (37%)	G	Methyl ethyl ketone	P

MISCELLANEOUS	RATING		RATING
Bleach	F	Naphthalene	G
Brake Fluid	G	Pyrrole	P
Bromine water (saturated)	Ex	Resins & rosins (natural)	Ex
Carbon disulfide	P	Roof pitch	Ex
Chlorine water (saturated)	G	Rubber latex emulsions	Ex
Dimethyl sulfoxide	P	Sewage	Ex
Emulsion paint	Ex	Skydrol	G
Ethylethoxypropionate	F	Starch	Ex
Fertilizer solutions	Ex	Tar	Ex
Grease	Ex	Tetraethyl lead	P
Hydrogen peroxide (35%)	F	Tetrahydrofuran	F
Ink (water based)	Ex	Urea	G
Isothiazolinone	Ex	Water, fresh	Ex
Mesitylene	F	Water, sea	Ex
N-Methylpyrrolidone	P	Water, distilled	Ex

OILS - MINERAL	RATING		RATING
Castor oil	Ex	Oil, petroleum	G
Coconut oil	Ex	Oil/water mixtures	Ex
Cod liver oil	Ex	Silicone oil	Ex
Corn oil	Ex	Soybean oil	Ex
Diesel oil	G	Transfer oil	Ex
Hydraulic oil	Ex	Tung oil	Ex
Lubricating oil	Ex		

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SALTS	RATING		RATING
Alum	Ex	Potassium chlorate	Ex
Aluminium chloride	Ex	Potassium chloride	Ex
Aluminium sulfate	Ex	Potassium cyanide	Ex
Ammonium bicarbonate	Ex	Potassium dichromate	Ex
Ammonium fluorosilicate	G	Potassium diphosphate	Ex
Ammonium nitrate	Ex	Potassium ferricyanide	Ex
Ammonium phosphate	Ex	Potassium ferrocyanide	Ex
Ammonium sulfate	Ex	Potassium iodide	Ex
Barium carbonate	Ex	Potassium nitrate	Ex
Barium chloride	Ex	Potassium permanganate	G
Barium sulfate	Ex	Potassium sulfate	Ex
Barium sulfide	Ex	Potassium sulfide	Ex
Brines	Ex	Potassium sulfite	Ex
Bromine chloride	G	Quaternary ammonium salts	Ex
Calcium carbonate	Ex	Silver nitrate	Ex
Calcium chloride	Ex	Sodium acetate	Ex
Calcium fluoride	Ex	Sodium aluminate	Ex
Calcium hypochlorite	G	Sodium bicarbonate	Ex
Calcium sulfate	Ex	Sodium bisulfate	Ex
Chromium potassium sulfate	G	Sodium bisulfite	Ex
Copper acetate	Ex	Sodium borate	Ex
Copper chloride	Ex	Sodium bromide	Ex
Copper nitrate	Ex	Sodium carbonate	Ex
Copper sulfate	Ex	Sodium chlorate	Ex
Epsom salts	Ex	Sodium chloride	Ex
Ferric chloride	Ex	Sodium chromate	Ex
Ferric nitrate	Ex	Sodium cyanide	Ex
Ferric sulfate	Ex	Sodium fluoride	Ex
Ferrous chloride	Ex	Sodium fluorosilicate	Ex
Ferrous sulfate	Ex	Sodium hypochlorite (15%)	F
Magnesium bisulfate	Ex	Sodium metaphosphate	Ex
Magnesium carbonate	Ex	Sodium metasilicate	Ex
Magnesium chloride	Ex	Sodium nitrate	Ex
Magnesium sulfate	Ex	Sodium phosphate (dibasic)	Ex
Mercuric chloride	Ex	Sodium phosphate (tribasic)	Ex
Mercuric cyanide	Ex	Sodium silicate	Ex
Nickel ammonium sulfate	Ex	Sodium sulfate	Ex
Nickel chloride	Ex	Sodium sulfide	Ex
Nickel nitrate	Ex	Stannic chloride	Ex
Nickel sulfate	Ex	Stannous chloride	Ex
Potassium bisulfite	Ex	Zinc chloride	Ex
Potassium bromide	Ex	Zinc hydrosulfite	Ex
Potassium carbonate	Ex	Zinc sulfate	Ex

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These tables are based upon immersion tests carried out under static conditions at 68°F (20°C).

They should only be considered as a guide to the performance which might be expected under practical conditions.

In these tables, the following nomenclature has been used:-

(Ex)	Excellent	-	Suitable for all reasonable applications including immersion
(G)	Good	-	Suitable for applications involving immersion for short periods, splashing and contact with fumes.
(F)	Fair	-	Suitable for use in environments contaminated by the chemical or in situations where accidental splashing can be removed either by cleaning or, in the case of volatile solvents, by evaporation.
(P)	Poor	-	Not suitable for any applications involving contact with the chemical itself or fumes evolved from it.

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BELZONA® PRODUCT DATA Q507

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