

INTRODUCTION

Wattyl's Tank Lining Resistance Guide provides a list of chemicals and their suitability in contact with Epinamel® TL710, Galvit® ES600 and Galvit® ES510.

GUIDE TO DATA

R	Recommended cargo
R, note	Recommended, but refer to specific note (below)
NR	Not recommended
Maximum Temperature	Recommendations are based on a maximum storage temperature of 35 °C unless otherwise listed.

NOTES

- 1** Product may cause discolouration of the coating. This will not detract from the performance of the coating.
- 2** Suitable for storage providing pH is between 4 - 11. After tank cleaning diluted solutions of molasses should be removed within 24 hours or neutralised by an alkaline tank cleaning product to a pH between 5 - 9.
- 3** Suitable for storage providing pH is between 5.5 – 9.0.

Animal or vegetable oils contain varying amounts of free fatty acids depending on origin and age. Contact with water at elevated temperature will result in hydrolysis and increased levels of fatty acids. The acid value determined in accordance with ASTM D-1980 should not exceed 20. In addition the allowable water content is 1% maximum. No free mineral acid content is permitted.
- 5** This is a generic name. Most of these products can be stored however it should be established that no notes are included under the specific chemical name elsewhere in the list.
- 6** Esters can hydrolyse in the presence of moisture to form acidic compounds that may attack the coating. Such products must therefore be free from moisture and stored in completely dry tanks. Water content should not exceed 0.02%.
- 7** Approved to AS/NSZ4020:2005, minimum tank size shall be 180 litres. Fully cured coating must be cleaned before putting into service. Tank cleaning procedure shall be performed in accordance with local council or water authority procedures. If no such procedures exist, the following procedure should be used. Clean tank by high pressure water washing with potable water. Then fill tank with potable water, allow to stand for 24 hours, drain, then perform a final high pressure water wash with potable water. Maximum water temperature for washing shall be 40 °C.
- 8** Unleaded petrol may contain considerable amounts of oxygenated solvents or additives. The coating system is only suitable for contact with grades of ULP and PULP not containing ethanol and complying with the Australian Fuel Standard (Petrol) Determination 2001. When blending fuels the additives must be added to the petrol with thorough mixing to avoid high localised concentrations that could be detrimental to the coating system.
- 9** Crude oils, fuel oils and other crude products may contain variable amounts of acidic materials and water detrimental to ethyl silicate zinc rich coatings. The acid value should be determined prior to storage. Maximum acceptable neutralisation is 0.4 (ASTM D-664). The pH of any water present must be within the range 5.5 – 9.0

For information on chemicals not listed, please contact Wattyl Technical Service for advice on 132 101 (Australia), 0800 735 551 (New Zealand).

Chemical	Epinamel TL710	Max Temp °C	Galvit ES600/ Galvit ES510	Max Temp °C
Acetic Acid	NR		NR	
Acetone	NR		R	
Alcohol, dehydrated	NR		R, note 3	
Alcohol, industrial	NR		R, note 3	
Alcohols, (C4 - C16)	R		R	
Aliphatic Hydrocarbons	R, note 5		R, note 5	
Ammonia Gas	NR		NR	
Ammonia Aqueous (0 - 28%)	NR		NR	
Ammonium Hydroxide (0 - 28%)	NR		NR	
Ammonium Nitrate Solution (0 - 95%)	R		NR	
Ammonium Phosphate (40%)	R		NR	
Ammonium Sulphate (50%)	R		NR	
Amyl Alcohol (all isomers)	R		R	
Anti-freeze (Glycol based)	R, note 5		R, note 3, 5	
Aromatic Hydrocarbons	R, note 5		R	
Aviation Fuel	NR		NR	
Aviation Kerosene	NR		NR	
Benzene	NR		R	
Benzyl Alcohol	NR		R	
Black Oils	R, note 1	60	R, note 1	60
Brake Fluid (Glycol Based)	R			
Brine	R		NR	
Butanol	R		R	
Butanol normal	R		R	
Butanol, 1	R		R	
Butanol, 2	R		R	
Butyl Acetate, normal	NR		R, note 6	
Butyl Acetate, sec	NR		R, note 6	
Butyl Acrylate	NR		NR	
Butyl Alcohol	R		R	
Butyl Alcohol; iso, normal, sec.	R		R	
Butyl Benzyl Phthalate	R		R	
Butyl Glycol	NR		R	
Butyl Glycol Acetate	NR		R, note 6	
Calcium Chloride (Saturated)	R		NR	
Calcium Hydroxide (0 - 50%)	R		NR	
Carbon Dioxide Gas (Dry)	R		R	
Carbon Tetrachloride	NR		R, note 6	
Carbonic Acid 10%	R		NR	
Castor Oil	R, note 4		R, note 4	
Castor Oil Fatty Acid	NR		NR	
Caustic Potash (0 - 29%)	NR		NR	
Caustic Potash (30 - 49%)	R	40	NR	
Caustic Potash (50%)	R	60	NR	
Caustic Soda (0 - 29%)	NR		NR	
Caustic Soda (30 - 49%)	R	40	NR	
Caustic Soda (50 - 75%)	R	60	NR	
Cement (Dry)	R		R	
Chlorinated Paraffins	R		R	
Citric Acid Solution (0 - 70%)	R, note 1		NR	
Coal Tar	R, note 1, 3	70	R, note 1, 3	70
Coal Tar Oil (Creosote)	NR		NR	
Coconut Oil	R, note 4	60	NR	
Coconut Oil Fatty Acid	NR		NR	
Cresol	NR		NR	
Cresosote (Coal Tar Oil)	NR		NR	
Crude Naptha	R		R, note 9	
Crude Naptha Petroleum	R		R, note 9	

Chemical	Epinamel TL710	Max Temp °C	Galvit ES600/ Galvit ES510	Max Temp °C
Crude Oil	R, note 1	70	R, note 1, 9	70
Crude Oil (Low Sulphur)	R, note 1	70	NR	
Crude Oil (High Sulphur)	R, note 1	70	NR	
Crude Petroleum	R, note 1	70	R, note 1, 9	70
Cyclohexane	R		R	
Cyclohexanol	R		R	
Cyclohexanone	NR		R	
DCO Fatty Acid	NR		NR	
Demineralised Water	R		R	
Denatured Alcohol	NR		R	
Dialkyl (C7-C13) Phthalates	R, note 5, 6		R, note 5, 6	
Dibutyl Ether	NR		R	
Dibutyl Phthalate	R		R	
Diesel Fuel	R		R	
Diesel Oil	R		R	
Diethyl Ether	NR		R	
Diethylene Glycol	R		NR	
Diethylene Glycol Ethers	NR		R	
Diglycol	R		NR	
Diisooctyl Phthalate	R		R	
Dimethyl Ketone	NR		R	
Diocetyl Phthalate	R		R	
Dipropylene Glycol Ether	NR		R, note 5	
Dipropylene Glycol Methyl Ether	NR		R	
Distilled Water	R		R	
Drilling Oil	R		R	
Engine Oil (Motor Oil)	R	60	NR	
Ethanol	NR		R, note 3	
Ether	NR		R	
Ethyl Acetate	NR		R, note 6	
Ethyl Acrylate	NR		R, note 5	
Ethyl Alcohol	NR		R, note 3	
Ethyl Diglycol Acetate	NR		R, note 6	
Ethylene Glycol	R		R	
Ethylene Glycol Monobutyl Ether	NR		R	
Fatty Acids (C10-C20)	NR		NR	
Fatty Acids, Refined (Animal/Vegetable)	NR		NR	
Fatty Alcohols	R, note 5		R	
Fertilizers	R, note 5		NR	
Fuel Oil	R	60	R	
Furfuryl Alcohol	NR		R	
Glycerine	R	60	NR	
Hexane (all isomers)	R		R	
Hexanol (all isomers)	R		R	
Hydrocarbons Aliphatic	R, note 5		R, note 5	
Hydrocarbons Aromatic	R, note 5		R, note 5	
Hydrochloric Acid & Solutions	NR		NR	
Hydrogen Sulphide (Solutions)	R		NR	
Hypochloride Bleach	NR		NR	

Chemical	Epinamel TL710	Max Temp °C	Galvit ES600/ Galvit ES510	Max Temp °C
Isobutanol	R		R	
Isobutyl Acetate	NR		R, note 6	
Isobutyl Alcohol	R		R	
Isopropanol	NR		R	
Isopropyl Acetate	NR		R, note 6	
Isopropyl Glycol Acetate	NR		R, note 6	
Jet Fuel	NR		NR	
Jet Fuel Additives	NR		NR	
Kerosene	R		R	
Lactic Acid	NR		NR	
Lactic Acid (5% - 20%)	R		NR	
Lecithin	R		NR	
Lime	R		NR	
Lime Slaked	R		NR	
Linseed Oil	R, note 4	60	R, note 4	60
Linseed Oil Fatty Acids	NR		NR	
Lube Oil	R, note 5		R, note 5	
Lubricating Oils	R, note 5		R, note 5	
MEK	NR		R	
Methane	R		R	
Methanol	NR		R	
Methyl Amyl Ketone	NR		R	
Methyl Butyl Ketone	NR		R	
Methyl Ethyl Ketone	NR		R	
Methyl Isoamyl Ketone	NR		R	
Methyl Isobutyl Ketone	NR		R	
Methylated Spirits	NR		R, note 3	
MIAK	NR		R	
MIBK	NR		R	
Mineral Oils	R	70	R	70
Mineral Spirits	R, note 5		R, note 5	
Mineral Turpentine	R		R	
Molasses	R, note 2	50	NR	
Naphtha Refined Aromatic	R		R	
Nitric Acid Solutions	NR		NR	
Nonyl Phenol	R		R	
Octanol (All Isomers)	R		R	
Oils Mineral	R	70	R	70
Oils Refined Coconut	R, note 4	60	R, note 4	60
Oils Refined Cottonseed	R, note 4	40	R, note 4	60
Oils Refined Linseed	R, note 4	60	R, note 4	60
Oils Refined Oiticica	R, note 4	60	R, note 4	60
Oils Refined Palm	R, note 4	60	R, note 4	60
Oils Refined Safflower	R, note 4	50	R, note 4	50
Oils Refined Soya	R, note 4	50	NR	
Oils Refined Tung	R, note 4	60	R, note 4	60
Oils Vegetable	R, note 5		R, note 5	
Oiticica Oil	R, note 4	60	R, note 4	60
Ortho Cresol	NR		NR	

Chemical	Epinamel TL710	Max Temp °C	Galvit ES600/ Galvit ES510	Max Temp °C
Pentanol, 1	R		R	
Pentyl Alcohol	R		R	
Petrol Premium Grade Leaded	R		R	
Petrol Premium Grade Unleaded	R, note 8		R	
Petrol Regular Grade Leaded	R		R	
Petrol Regular Grade Unleaded	R, note 8		R	
Petrol Unleaded E10 (10% Ethanol)	NR		R, note 3	
Petroleum Refined	R, note 5		R	
Petroleum Solvents	R, note 5		R	
Phenol	NR		NR	
Phosphoric Acid & Solutions	NR		NR	
Phthalates	R, note 5		R, note 5	
Polyethylene Glycol	R		R	
Potassium Hydroxide (0 - 29%)	NR		NR	
Potassium Hydroxide (30 - 49%)	R	40	NR	
Potassium Hydroxide (50%)	R	60	NR	
Propanol	NR		R	
Propanone, 2-	NR		R	
Propyl Acetate	NR		R, note 6	
Propyl Alcohol	NR		R	
Refined Tar	R, note 1,3	70	R, note 1,3	70
Safflower Oil	R, note 4	50	R, note 4	50
Safflower Oil Fatty Acid	NR		NR	
Salt Water	R		NR	
Sea Water	R		NR	
Sodium Hydroxide (0 - 29%)	NR		NR	
Sodium Hydroxide (30 - 49%)	R	40	NR	
Sodium Hydroxide (50 - 75%)	R	60	NR	
Sodium Sulphate Solutions	R		NR	
Sodium Sulfide Solutions (0 - 25%)	R		NR	
Sodium Sulphite Solutions	NR		NR	
Soya Oil	R, note 4	50	R, note 4	50
Soya Oil Fatty Acids	NR		NR	
Styrene monomer	NR		NR	
Sugar (Dry)	R		R	
Sugar Solution	R, note 2	50	NR	
Sugar Syrup	R, note 2	50	NR	
Sulphuric Acid & Solutions	NR		NR	
Sunflower Oil Fatty Acid	NR		NR	
Sweet Oil	R, note 4	60	NR	
Tall Oil (Crude or Refined)	NR		NR	
Tetrachloromethane	NR		R, note 6	
Toluene	R		R	
Trichloroethane	NR		R, note 6	
Trichloroethane, 1,1,1-	NR		R, note 6	
Trichloroethane, 1,1,2-	NR		R, note 6	
Tung Oil	R, note 4	60	R, note 4	50
Urea	R		NR	
Vegetable Oils	R, note 5		R, note 5	

Chemical	Epinamel TL710	Max Temp °C	Galvit ES600/ Galvit ES510	Max Temp °C
Vinegar	NR		NR	
Vinyl Acetate	NR		NR	
Water, deionised	R		R	
Water, distilled	R		R	
Water, drinking	R, note 7		NR	
Water, potable	R, note 7		NR	
Water, salt	R		NR	
Water, sea	R		NR	
Water, tap	R		R	
White Spirits	R		R	
Wine	NR		NR	
Xylene (all isomers)	R		R	



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