

GASKETS

Grinnell® Gasket Grade & Recommendations

The Gasket Recommendation Table has been developed to assure maximum service life. The table was developed from information supplied by the material manufacturers of the elastomer, technical reference literature and testing conducted by Tyco Fire & Building Products.

In evaluating the gasket grade for intended service applications the following consideration must be reviewed: system operating temperature, fluid or solution concentration, and duration of service.

All gasket recommendations are based on a temperature of 70°F (21°C) unless otherwise noted.

Technical and Engineering Services should be consulted (Phone 866-500-4768, Fax 401-781-7317) if combinations of service solutions are being considered.

Contact Tyco Fire & Building Products for recommendations for services not listed.

Gasket recommendations apply to Grinnell gaskets and valves only.

Grade	Temp. Range	Compound	Color Code	General Service Application
E	-30°F (-34°C) to +230°F (+110°C)	EPDM	Green	Hot water, dilute acids, alkalies, oil free air, and many chemical services not involving petroleum products. Excellent oxidation resistance. NOT FOR USE WITH HYDROCARBONS.
E Tri- Seal	-30°F (-34°C) to +230°F (+110°C)	EPDM	Green	Hot water, dilute acids, alkalies, and many chemical services not involving petroleum products. Excellent oxidation resistance. NOT FOR USE WITH HYDROCARBONS. Recommended for low temperature and vacuum services.
T	-20°F (-29°C) to +180°F (+82°C)	Nitrile	Orange	Petroleum products, vegetable oils, mineral oils and air with oils. Not Recommended for Hot Water Systems. Not Recommended for Hot Dry Air Systems.
O	+20°F (-7°C) to +300°F (+149°C)	Fluoroelastomer	Blue	Oxidizing acids, petroleum products, hydraulic fluids, lubricants, halogenated hydrocarbons.
L	-30°F (-34°C) to +350°F (+177°C)	Silicone	Red Gasket	Air without hydrocarbons, dry heat.
EN & EN Tri-Seal	Cold and Hot Potable Water up to +180°F (+82°C)		Copper	NSF 61 Approved for potable water. Not recommended for petroleum service.

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- Contact Tyco Fire & Building Products for an engineering evaluation and recommendation where the gasket grade is shown in parenthesis.
- Specify gasket grade when ordering.
- For vacuum or low temperature systems, use tri-seal gasket. For low temperature applications, use a petroleum-free silicone lubricant.
- Check gasket color code to be certain it is recommended for the service intended.
- Unless otherwise noted, all gasket listings are based upon a temperature of 70°F (21°C).
- For services not listed, contact Tyco Fire & Building Products for recommendation.
- Where more than one gasket is shown, the preferred gasket grade is listed first.

AIR AND WATER

Service	Gasket Grade
Air, (no oil vapors) Temp. -30°F (-34°C) to +230°F (+110°C)	E
Air, Oil Vapor Temp. -20°F (-29°C) to +150°F (+66°C)	T
Water, Temp. to +230°F (+110°C) (NOT RECOMMENDED FOR STEAM SERVICE)	E
Water, Acid Mine	E/T
Water, Chlorine	E
Water, Deionized	E
Water, Seawater	E
Water, Waste (NO PETROLEUM PRODUCTS)	E

Chemical Composition	Gasket Grade	Chemical Composition	Gasket Grade	Chemical Composition	Gasket Grade	Chemical Composition	Gasket Grade
Acetic Acid up to 10%	E	Carbon Dioxide, Wet	E/T	Hexylene Glycol	T	Soda Ash, Sodium Carbonate	E/T
Acetone	E	Carbon Monoxide	E	Hydrochloric Acid to 36%, 75°F (24°C) Max	E	Sodium Bicarbonate	E/T
Acetylene	E/T	Caustic Potash	T	Hydrofluosilicic Acid	E	Sodium Bisulphate	E/T
Alkalis	E	Chrome Alum	T	Isobutyl Alcohol	E	Sodium Bisulphite (black liquor)	E/T
Aluminum Chloride	E/T	Citric Acid	E/T	Isopropyl Alcohol	E	Sodium Bromide	E/T
Aluminum Fluoride	E/T	Copper Chloride	T	Lead Acetate	T	Sodium Chlorate	E
Aluminum Hydroxide	E	Copper Cyanide	E/T	Lithium Bromide	T	Sodium Chloride	E/T
Aluminum Nitrate	E/T	Copper Sulphate	E/T	Magnesium Chloride	E/T	Sodium Cyanide	E/T
Aluminum Salts	T	Cupric Fluoride	E	Magnesium Hydroxide	E/T	Sodium Hydroxide, to 50%	E
Ammonia Gas, Cold	E	Cupric Sulphate	E/T	Magnesium Sulphate	E/T	Sodium Hypochlorite, to 20%	E
Ammonia Liquid	E	Diocetyl Phthalate	E	Methyl Alcohol, Methanol	E/T	Sodium Metaphosphate	T
Ammonium Chloride	E/T	Ethane	E	Methyl Isobutyl Carbinol	E	Sodium Nitrate	E
Amyl Acetate	E	Ethanolamine	E	Mineral Oils	T	Sodium Peroxide	E
Amyl Alcohol	E	Ethyl Alcohol	E	Nickel Chloride	E/T	Sodium Phosphate	T
Aniline	E	Ethyl Chloride	E	Nickel Plating Solution	E/T	Sodium Silicate	T
Arsenic Acid to 75%	T	Ethylene Chlorohydrin	E	125°F (52°C) Max		Sodium Sulphide	T
Barium Carbonate	E	Ethylene Diamine	T	Nitric Acid, to 10%, 75°F (24°C) Max	E	Sodium Sulphite Solution, to 20%	T
Barium Chloride	E/T	Ethylene Glycol	E/T	Nitrous Oxide	E	Sodium Thiosulphate, "Hypo"	T
Barium Hydroxide	E/T	Ferric Sulphate	T	Ozone	E	Stannous Chloride, to 15%	T
Benzoic Acid	E	Fluboric Acid	E/T	Phosphate Ester	E	Stearic Acid	T
Benzyl Alcohol	E	Fly Ash	E	Phosphoric Acid to 75%, 70°F (21°C) Max	E/T	Sulphur	E
Borax Solutions	E	Fomaldehyde	E/T	Potassium Bromide	E/T	Sulphuric Acid, to 25%, 150°F (66°C) Max	E
Boric Acid	E/T	Formamide	E/T	Potassium Carbonate	E/T	Toluene 30%	T
Butyl Alcohol	E/T	Formic Acid	E	Potassium Chloride	E	Triethanolamine	E/T
Butylene	T	Fructose	E/T	Potassium Chromate	T	Trisodium Phosphate - 11lbs./50gal. (5Kg/189L)	E
Calcium Bisulphate	T	Furfuryl Alcohol	E	Potassium Hydroxide	T	Urea	T
Calcium Chloride	E/T	Glycerin	E/T	Propylene Glycol	E	Vegetable Oil	T
Calcium Hydroxide (Lime)	E/T	Glycerol	E/T	Salicylic Acid	E	Vinyl Acetate	E
Calcium Sulfate	E/T	Glycol	E/T	Silver Nitrate	E		
Calcium Sulfide	E	Heptane	T				
Carbitol	E/T	Hexaldehyde	E				
Carbon Dioxide, Dry	E/T	Hexane	T				