

# KBL and KML Series

## Chemical Resistance Guide

This guide is offered as a general aid in selecting the appropriate materials used for a broad spectrum of aggressive chemicals routinely handled by the products we manufacture. Because chemicals and their properties can vary greatly, this chart is to be used at your discretion. The accuracy of these ratings cannot be guaranteed. Your chemical supplier is the best source for definitive material compatibility. Careful consideration must be given to all characteristics of the chemical and process system including chemical concentration, installation conditions, pressure, and temperature before a final material is selected.



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### LMI KBL and KML Tube Materials

**LMI XL** - Extended Life tubing has excellent acid and alkali resistance, and is compatible with numerous oxidizing agents such as sodium hypochlorite. LMI XL is best for fatigue life and is the longest-lasting tube in compatible applications. Min/max temperature: 0-80°C (32-176°F).

**LMI CR** - Chemical Resistant is suited for handling strong acids and bases, and is virtually unaffected by most commercial sanitizers & cleaners. Min/max temperature: 0-54°C (32-130°F).

**LMI PT** - Petro-Tough can be used with fats and oils, lubricants, and some solvents. Min/max temperature: 0-54°C (32-130°F).

Contact your LMI Pump distributor for additional support  
or visit <http://www.lmipumps.com>





## RATINGS - CHEMICAL EFFECT

**A** - Excellent, little or no swelling, softening, or surface deterioration.

**B** - Good chemical resistance. Minor chemical attack, swelling, softening, or surface deterioration.

**C** - Limited chemical resistance. Moderate chemical attack. Conditional service.

**D** - Severe attack, swelling, or softening. Not recommended.

	XL - Extended Life	CR - Chemical Reistant	PT - Petro-Tough	Tube Fittings (PVDF)
Acetic Acid 10%	A	A	B	A
Acetic Acid 100%, 70F	B	A	D	A
Acetic Acid 50-60%	B	A	D	C
Acetone	D	B	D	D
Aluminum Chloride (Alum)	A	A	A	A
Aluminum Chloride 20%	NA	NA	NA	A
Aluminum Chloride 53%	A	A	A	NA
Aluminum Hydroxide 2%	A	A	A	A
Aluminum Sulfate 50%	A	A	A	A
Amines	A	D	D	NA
Ammonia 10%	NA	NA	NA	A
Ammonia Anhydrous	B	B	C	A
Ammonium Sulfate 30%	A	A	A	A
Barium Hydroxide 5%	A	A	A	A
Benzene	D	D	D	A
Boric Acid	A	A	A	A
Calcium Carbonate	A	A	A	A
Calcium Chloride	A	A	A	A
Calcium Hydroxide	A	A	D	A
Calcium Hypochlorite 20%	A	A	B	A
Calcium Nitrate 55%	A	A	A	A
Chromic Acid 20%	A	A	D	A
Citric Acid 20%	A	A	B	A
Copper Sulfate 5%	NA	NA	NA	NA



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Fluosilicic Acid, 25%	A	A	A	A
Glue, p.v.a., 70F	NA	NA	NA	NA
Glycerin	A	A	A	A
Hydrochloric Acid 10%	A	A	C	NA
Hydrochloric Acid 100%	NA	NA	NA	A
Hydrochloric Acid 20%	NA	NA	NA	A
Hydrochloric Acid 37%	B	A	D	A
Hydrofluosilicic Acid 100%	NA	NA	NA	A
Hydrofluosilicic Acid 20%	NA	NA	NA	A
Hydrogen Peroxide 10%	A	A	A	A
Hydrogen Peroxide 100%	NA	NA	NA	A
Hydrogen Peroxide 30%	A	A	C	A
Hydrogen Peroxide 50%	NA	NA	NA	A
Hydrogen Peroxide 90%	B	A	D	NA
Ink (water-based)	NA	NA	NA	A
Iodine	A	A	A	A
Magnesium Chloride 35%	A	A	A	A
Magnesium Hydroxide 10%	A	A	A	A
Magnesium Sulfate (Epsom Salts)	A	A	A	A
Mineral Oil	D	D	A	A
Nitric Acid (35%)	A	A	D	A
Nitric Acid (5-10%)	A	A	D	A
Nitric Acid (68-71%)	D	A	D	A
Prosporic Acid (40%)	A	A	A	B
Phosphoric Acid (85%)	A	A	D	B
Potash (Potassium Carbonate)	A	A	A	A
Potassium Hydroxide 100%	A	A	D	NA
Potassium Hydroxide 25%	A	A	D	A
Potassium Permanganate 6%	A	A	A	A
Propylene Glycol	A	A	A	NA



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Salt Brine (NaCl saturated)	NA	NA	NA	A
Silicone	C	A	A	A
Silver Nitrate 55%	A	A	A	A
Soap Solutions	B	A	A	A
Sodium Bicarbonate	A	A	A	A
Sodium Bisulfate	NA	NA	NA	A
Sodium Bisulfite	NA	NA	NA	A
Sodium Carbonate (Soda Ash)	A	A	A	A
Sodium Chloride	A	A	A	A
Sodium Fluoride	A	A	A	A
Sodium Hydroxide (20%)	A	A	D	A
Sodium Hydroxide (50%)	A	A	D	A
Sodium Hydroxide (80%)	NA	NA	NA	A
Sodium Hypochlorite (<20%)	A	A	B	A
Sodium Silicate	NA	NA	NA	A
Styrene	D	D	D	NA
Sulfuric Acid (<10%)	A	A	A	A
Sulfuric Acid (30%)	A	A	D	NA
Sulfuric Acid (75%)	NA	NA	NA	A
Sulfuric Acid (95-98%)	D	A	D	A
Toluene (Toluol)	D	D	D	A
Turpentine	D	D	B	A
Urea	A	A	A	A
Vegetable Oil	C	B	A	A
Vinyl Acetate	B	D	D	A
Xylene	D	D	D	A
Zinc Chloride	A	A	A	A