



Elastomer Compatibility Guide

This elastomer compatibility is for guidance purposes only as the material may be affected by temperature.

The 'Viscous Behavior Type' shown is related to general terms, i.e. in some cases Pseudoplastic fluids can have Thixotropic tendencies.

Name of Product Pumped	Elastomer Material				Viscous Behavior Type
	NBR	EPDM	FPM	PTFE	
Acetic acid		✓		✓	Newtonian
Acetone		✓		✓	Newtonian
Ammonium hydroxide		✓		✓	Newtonian
Animal fat			✓	✓	Newtonian
Baby bath			✓	✓	Pseudoplastic
Baby lotion			✓	✓	Pseudoplastic
Baby oil			✓	✓	Newtonian
Bath foam			✓	✓	Pseudoplastic
Batter		✓	✓	✓	Pseudoplastic
Beer		✓	✓	✓	Newtonian
Biscuit cream			✓	✓	Pseudoplastic
Black liquor			✓	✓	Newtonian
Bleach		✓	✓	✓	Newtonian
Body lotion			✓	✓	Pseudoplastic
Body scrub			✓	✓	Pseudoplastic
Brine	✓	✓	✓	✓	Newtonian
Butter		✓	✓	✓	Pseudoplastic
Caramel coloring		✓	✓	✓	Newtonian
Caramel toffee		✓	✓	✓	Pseudoplastic
Castor oil	✓		✓	✓	Newtonian
Cheese		✓	✓	✓	Pseudoplastic
Chewing gum				✓	Pseudoplastic
Chocolate			✓	✓	Pseudoplastic
Citric acid	✓	✓	✓	✓	Newtonian
Cocoa butter			✓	✓	Pseudoplastic
Cocoa liquor			✓	✓	Pseudoplastic
Coconut cream			✓	✓	Pseudoplastic
Collagen gel		✓	✓	✓	Pseudoplastic
Condensed milk		✓	✓	✓	Pseudoplastic
Corn syrup	✓	✓	✓	✓	Newtonian
Cosmetic cream			✓	✓	Pseudoplastic

Greensboro Division / Corporate Headquarters
 301 Citation Court
 Greensboro, NC 27409
 Phone: 336.393.0100 / 800.334.0231
 Fax: 336.393.0140

Louisville Division
 4400 Bishop Lane, Suite 112
 Louisville, KY 40218
 Phone: 502.459.7475 / 800.459.7475
 Fax: 502.459.7633

Nashville Division
 334 Free Hill Road, Suite B
 Hendersonville, TN 37075
 Phone: 615.822.3030 / 855.749.4820
 Fax: 615.822.3031

Elastomer Compatibility Guide

Name of Product Pumped	Elastomer Material				Viscous Behavior Type
	NBR	EPDM	FPM	PTFE	
Cough syrup		✓	✓	✓	Pseudoplastic
Custard		✓	✓	✓	Pseudoplastic
Dairy cream		✓	✓	✓	Pseudoplastic
Detergent – amphoteric			✓	✓	Newtonian
Detergent – anionic	✓	✓	✓	✓	Pseudoplastic
Detergent – cationic			✓	✓	Newtonian
Detergent – nonionic		✓	✓	✓	Newtonian
Dye		✓	✓	✓	Newtonian
Egg		✓	✓	✓	Pseudoplastic
Enzyme solution		✓		✓	Newtonian
Fabric conditioner			✓	✓	Pseudoplastic
Fats			✓	✓	Newtonian
Fatty acid			✓	✓	Newtonian
Fish oil			✓	✓	Newtonian
Fondant		✓	✓	✓	Pseudoplastic
Fromage frais		✓	✓	✓	Pseudoplastic
Fructose		✓	✓	✓	Newtonian
Fruit juice concentrate		✓	✓	✓	Pseudoplastic
Fruit puree		✓	✓	✓	Pseudoplastic
Fudge		✓	✓	✓	Pseudoplastic
Gelatine		✓	✓	✓	Pseudoplastic
Glucose		✓	✓	✓	Newtonian
Glycerine	✓	✓	✓	✓	Newtonian
Grease	✓		✓	✓	Pseudoplastic
Hair conditioner			✓	✓	Pseudoplastic
Hair gel			✓	✓	Pseudoplastic
Hand cleanser			✓	✓	Pseudoplastic
Honey		✓	✓	✓	Pseudoplastic
Hydrogen peroxide			✓	✓	Newtonian
Ice cream mix			✓	✓	Pseudoplastic
Jam		✓	✓	✓	Pseudoplastic
Lactic acid			✓	✓	Newtonian
Lactose		✓	✓	✓	Newtonian
Lanolin			✓	✓	Newtonian
Lecithin			✓	✓	Newtonian
Lipstick			✓	✓	Pseudoplastic
Licorice			✓	✓	Pseudoplastic
Maize starch slurry	✓	✓	✓	✓	Pseudoplastic
Malt extract		✓	✓	✓	Pseudoplastic
Mascara			✓	✓	Pseudoplastic
Mashed potato		✓	✓	✓	Pseudoplastic

Elastomer Compatibility Guide

Name of Product Pumped	Elastomer Material				Viscous Behavior Type
	NBR	EPDM	FPM	PTFE	
Mayonnaise				✓	Pseudoplastic
Meat paste		✓	✓	✓	Pseudoplastic
Milk		✓	✓	✓	Newtonian
Mincemeat		✓	✓	✓	Pseudoplastic
Mineral oil	✓		✓	✓	Newtonian
Molasses		✓	✓	✓	Newtonian
Mustard		✓	✓	✓	Pseudoplastic
Neat soap		✓		✓	Pseudoplastic
Peanut butter			✓	✓	Pseudoplastic
Pet food		✓	✓	✓	Pseudoplastic
Potassium hydroxide		✓	✓	✓	Newtonian
Propylene glycol	✓	✓	✓	✓	Newtonian
Sauce – confectionary			✓	✓	Pseudoplastic
Sauce – vegetable		✓	✓	✓	Pseudoplastic
Sausage meat		✓	✓	✓	Pseudoplastic
Shampoo			✓	✓	Pseudoplastic
Shaving cream			✓	✓	Pseudoplastic
Silicone oil	✓	✓	✓	✓	Newtonian
Sodium hydroxide		✓		✓	Newtonian
Sorbic acid				✓	Newtonian
Sorbitol	✓	✓	✓	✓	Newtonian
Starch		✓	✓	✓	Pseudoplastic
Sugar pulp – beet		✓	✓	✓	Pseudoplastic
Sugar pulp – cane		✓	✓	✓	Pseudoplastic
Sugar syrup		✓	✓	✓	Newtonian
Tall oil			✓	✓	Newtonian
Tallow			✓	✓	Newtonian
Tomato ketchup		✓	✓	✓	Pseudoplastic
Tomato puree		✓	✓	✓	Pseudoplastic
Toothpaste			✓	✓	Pseudoplastic
Trub	✓	✓	✓	✓	Pseudoplastic
Vaseline	✓		✓	✓	Pseudoplastic
Vegetable gum		✓	✓	✓	Pseudoplastic
Vegetable oil			✓	✓	Newtonian
Vitamin solution		✓	✓	✓	Newtonian
Water	✓	✓	✓	✓	Newtonian
Wax			✓	✓	Newtonian
Whey		✓	✓	✓	Newtonian
White spirit			✓	✓	Newtonian
Wine		✓	✓	✓	Newtonian
Wort		✓	✓	✓	Newtonian

Elastomer Compatibility Guide

Name of Product Pumped	Elastomer Material				Viscous Behavior Type
	NBR	EPDM	FPM	PTFE	
Yeast		✓	✓	✓	Pseudoplastic
Yogurt		✓	✓	✓	Pseudoplastic

Definitions:

Newtonian – fluid viscosity is constant (i.e. linear) with change in shear rate or agitation

Pseudoplastic – fluid viscosity decreases as shear rate increases (shear thinning)

Thixotropic – fluid viscosity decreases with time under shear condition

NBR – nitrile rubber; copolymer of butadiene and acrylonitrile

EPDM – Ethylene propylene diene rubber; a terpolymer of ethylene, propylene and a diene-component

FPM – fluorinated propylene monomer; commonly sold under the trade name Viton®

PTFE – polytetrafluoroethylene elastomer; commonly sold under the trade name Teflon®