

# Pump Packing and Solvent Chamber Fluid Guide

This guide covers the following:

- Packing and Solvent Chamber Fluid Compatibility
- Packing Material and Application
- Solvent Chamber Fluid Composition and Application
- Solvent Chamber Fluid Parts List
- Type Q Concentrate Mixing Instructions

## Packing and Solvent Chamber Fluid Compatibility

MATERIAL TYPE	SOLVENT FAMILY	ABRASIVE QUALITY	PACKING TYPE	SOLVENT FLUID
Waterborne	Water	Mild	D	T, Q
		Medium	G	T, Q
		High	U	T, Q
	Alcohols	Mild	D	T, Q
		Medium	G	T, Q
		High	U	T, Q
Solventborne	Ketones (e.g., acetone, MEK, MAK, etc.)	Mild	F	K, S
		Medium	F	K, S
		High	U	K, S
	Aromatic Hydrocarbons (e.g., xylene, toluene, etc.)	Mild	F	K, S
		Medium	F	K, S
		High	F, U <sup>(1)</sup>	K, S
	Alcohols	Mild	D	K, Q
		Medium	G	T, Q
		High	U	K, Q
	Aliphatic Petroleum Naphthas	Mild	D	K, S
		Medium	D	K, S
		High	G	T, Q
	Chlorinated Solvents	Mild	F	K, S
		Medium	F	K, S
		High	F	K, S

**Note 1:** Type U packings may swell slightly when exposed to aromatic hydrocarbon solvents.

## Packing Material and Application

Packing Type	Material	Application
A	Cotton duck saturated with buna-nitrile and coated with graphite	Good for less abrasive applications where strong solvents are not used. Contains graphite coating to reduce friction.
D	Cotton duck and synthetic fabric saturated with buna-nitrile and PTFE	Good for less abrasive applications where strong solvents are not used. Contains PTFE to reduce friction.
F	PTFE V-rings stacked with leather V-rings	Most commonly used packing in the finishing industry. Use for strong solvents and abrasive materials.
G <sup>(1)</sup>	Polyurethane U-cups	Frequently used with waterborne materials. Not compatible with some solvents. <sup>(1)</sup>
U <sup>(2)</sup>	Ultra-high molecular weight polyethylene (UHMWPE)	Good for highly abrasive materials. Compatible with waterborne and most solventbornes. <sup>(2)</sup>

**NOTE 1:** Do not use Type G packing glands with aromatic hydrocarbon solvents or with Type K or S solvent chamber fluids.

**NOTE 2:** Type U packings may swell slightly when exposed to aromatic hydrocarbon solvents.

## Solvent Chamber Fluid Composition and Application

Solvent Type	Material	Application
T	Mixed propylene glycol	Use for waterborne systems. (Thinner than Type-Q and best used on smaller pump models.)
Q	Liquid anionic flocculant mixed with distilled water.	Use for waterborne systems. (Thicker than Type-T and best used on larger pump models.)
K	Epoxidized soybean oil	Use for solventborne applications. Do not use for waterborne and catalyzed alkyd urea applications.
S	Mixed aliphatic dimethyl esters	Use for solventborne applications.

**NOTE:** Type K solvent is highly viscous. At room temperature, it is not appropriate for use in Model 25B or 64B pumps where the solvent must flow through a filler cup and small ID passage into the solvent chamber.

## Solvent Chamber Fluid Parts List

Part	Description
248831	FLUID, type-S, pump chamber, one quart
900255	FLUID, type-K, pump chamber, one quart
140029	FLUID, type-T, pump chamber, one quart
244854	FLUID, type-Q concentrate (2.6 fluid ounce, makes one gallon)

## Type Q Concentrate Mixing Instructions



**WARNING:** Do not take internally. For industrial use only. Avoid direct contact. Eye and skin irritant. Refer to the MSDS shipped with the solvent chamber fluid for more information.

Mix one gallon of distilled water with 2.6 fluid ounces of Type Q concentrate as follows:

1. Fill a 1-gallon-(3.8-liter) round container  $\frac{3}{4}$  full of distilled water at 70–100 °F.
2. Use a rotating agitator to mix the water until it forms a whirlpool at the container's center.
3. Slowly pour one full bottle (2.6 oz.) of Type Q concentrate into the whirlpool.
4. Add the remaining distilled water to make one gallon, and mix for an additional 15 minutes.

**NOTE:** The mixture may separate after prolonged shelf time. If it does, mix again before using.

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