

**UTEX INDUSTRIES, INC.**

**UPAK<sup>®</sup>**

**INJECTABLE PUMP & VALVE SEALANT**

- Reduces Operating Costs
- Saves on Energy Consumption
- Extends Equipment Life
- Reduces or Eliminates Downtime
- Never Needs Replacing





## INJECTABLE PUMP & VALVE SEALANT

### Features

- Malleable, putty-like consistency makes it easy to use and install
- Utilizes latest chemistry and fiber technology
- Works well on worn shafts by conforming to odd shapes
- Low coefficient of friction reduces heat
- Operates virtually leak free
- Convenient packaging

### Benefits

- Reduces operating costs
- Less costly over the life of the pump or valve
- Saves on energy consumption
- Reduces or eliminates downtime
- Extends equipment life
- Never needs replacing
- Reduces shaft and sleeve wear

Now, U-PAK® injectable pump and valve sealant from UTEX Industries, Inc. combines a malleable packing material with space-age chemistry and technology to produce a superior pump and valve packing material that can be injected while the pump is running without interrupting production.

U-PAK injectable sealant is made from a blend of high-tech, nonasbestos, nonhazardous synthetic fibers and carefully selected blends of greases, oils and other proprietary binders. It is this unique blend of fibers and binding agents that allows the sealant to be run virtually leak free. And, because it does not depend on product leakage for lubrication, the frictional heat buildup that so often leads to compression packing failure is eliminated. The sealant's low friction coefficient and non-stick properties help extend equipment life by reducing shaft and sleeve wear.

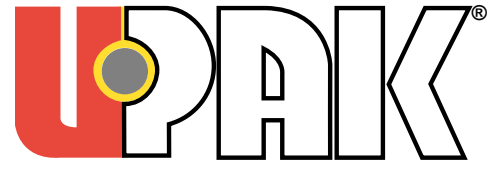
There is no need to worry about sizes, because U-PAK sealant is a malleable, putty-like product packed in bulk form. You can't leave the shop with the wrong size U-PAK!

The U-PAK sealants are easily installed with any flat-bladed tool, such as a putty knife or wide-bladed screwdriver. Or, the material can be finger-packed into the box. An anti-extrusion ring of the appropriate material is placed in the stuffing box around the shaft. A second ring is put in place after the sealant is installed.



When repacking becomes necessary, you do not have to remove the old packing. Just add more sealant packing material by using the U-PAK injection gun to inject new packing through a fitting installed on the pump or valve stuffing box.

All U-PAK injectable sealants, with the exception of Style 300 BP, are available in bulk containers of 1 kg (2.2 lb), 5 kg (11 lb), 10 kg (22 lb) and in convenient 10-pack stick cartridges which greatly simplify injection gun loading. Style 300 BP is available only in bulk containers of 1 kg (2.2lb), 5 kg (11 lb) and 10 kg (22 lb).



### ***An Easy and Convenient Product to Use***

U-PAK injectable sealants are easy to install. The initial installation of packing material is done by hand. Tightening the gland nut compresses the U-PAK material and forces it to conform to any irregular spaces caused by wear. An anti-extrusion ring composed of suitably sized braided packing material is set at the top and bottom of the stuffing box or packing gland to prevent the U-PAK sealant from being forced out when pressure is applied.



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### ***The U-PAK Injection Gun***

The U-PAK injection gun utilizes a button-head or flow-through fitting which is permanently installed on the pump or valve stuffing box.

Since it requires no electricity, the U-PAK injection gun can be used anywhere to replenish sealant easily and conveniently. The all-steel hydraulic gun is completely portable and is very easy to use.

The valve or pump stuffing box fitting allows the U-PAK sealant to be hand-injected into the shaft stuffing box using the injection gun. No downtime is required for the repacking operation since the equipment can continue to run during the repacking operation.



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### ***How to Use the U-PAK Injection Gun***

To properly replenish the packing material, the stuffing box fitting must be located. Next, the injection gun is coupled to the fitting.

When the gun is properly coupled to the fitting, the on-off handle on the fitting is turned to the open position and the new U-PAK sealant is pumped into the fitting until the required amount of sealant is injected.

When the operation is complete, the fitting handle is placed in the off position and the injection gun is disconnected from the stuffing box fitting. Remember to properly disassemble and return your injection gun to its container where it may be stored until needed again.

**Note:** Button-head fittings with check ball valve do not require ball valve for on-line repacking.





Available in five standard grades to suit a variety of applications, the sealants can be used to replace conventional compression packing in centrifugal pumps, valves and other rotating equipment where compression packings are being used.

**Optional Accessories:**

- Ball Valve Brass 1/4" NPT, Female Connection
- Giant Button-Head Fittings w/Check Ball - 1/8" MNPT, 1/4" MNPT, 1/4" MBSPT, 3/8" MNPT & 1/2" MNPT for U-PAK 400 HP
- Giant Button-Head Fittings w/o Check Ball - 1/8" MNPT, 1/4" MNPT, 3/8" MNPT & 1/2" MNPT for all styles
- Flow-Through Fittings with Bull Plug - 1/8" MNPT, 1/4" MNPT, 1/4" MBSPT, 3/8" MNPT & 1/2" MNPT
- Standard Hose Assembly 18" with Giant Button-Head Coupler with Swivel
- Hose Assembly 18" with 15,000 psi Gauge & Giant Button-Head Coupler with Swivel

**U-PAK Injection Gun Kit, containing:**

- U-PAK® Injection Gun
- One standard hose assembly 18" with giant button-head coupler with swivel
- One 10-pack stick cartridges of U-PAK Style 200 GS
- One 10-pack stick cartridges of U-PAK Style 400 HP
- Flow-through fittings with bull plug - one each of sizes 1/8" MNPT, 1/4" MNPT, 1/4" MBSPT, 3/8" MNPT & 1/2" MNPT
- Giant button-head fittings with check ball - one each of sizes 1/8" MNPT, 1/4" MNPT, 1/4" MBSPT, 3/8" MNPT & 1/2" MNPT



A blend of synthetic fibers and non-staining lubricants for general services.

**Available in:**  
 10-pack stick cartridges  
 1 kg (2.2 lb)  
 5 kg (11 lb)  
 10 kg (22 lb)



A high-performance, chemically resistant product with bearing pellets. Ideal for the toughest applications.

**Available in:**  
 1 kg (2.2 lb)  
 5 kg (11 lb)  
 10 kg (22 lb)



A blend of high-performance fibers and chemically resistant lubricants.

**Available in:**  
 10-pack stick cartridges  
 1 kg (2.2 lb)  
 5 kg (11 lb)  
 10 kg (22 lb)



A blend of high-strength abrasion resistant fibers with non-staining lubricants and special binders.

**Available in:**  
 10-pack stick cartridges  
 1 kg (2.2 lb)  
 5 kg (11 lb)  
 10 kg (22 lb)



A blend of exfoliated graphite particles and high-temperature sacrificial lubricants for extreme service applications.

**Available in:**  
 10-pack stick cartridges  
 1 kg (2.2 lb)  
 5 kg (11 lb)  
 10 kg (22 lb)





## UPAK Product Specifications (Supercedes Technical Data in Brochure)



### SEALANT SELECTION GUIDE

Description	A blend of high-strength abrasion resistant fibers w/non-staining lubricants & special binders.	A blend of synthetic fibers & non-staining lubricants for general services.	A high-performance, chemically resistant product with bearing pellets. Ideal for tough applications.	A blend of high-performance fibers & chemically resistant lubricants.	A blend of synthetic high-strength abrasion resistant fibers with lubricants & special binders.	A blend of synthetic high-strength abrasion resistant fibers with lubricants & special binders.
Applications	Centrifugal pumps, Rotating equipment, Reciprocating equipment, Valves	Centrifugal pumps, Rotating equipment, Reciprocating equipment, Valves	Centrifugal pumps, Rotating equipment, Reciprocating equipment, Valves	Centrifugal pumps, Rotating equipment, Reciprocating equipment, Valves	Centrifugal pumps, Rotating equipment, Reciprocating pumps, Valves	Centrifugal pumps, Rotating equipment, Reciprocating pumps, Valves. Cannot be injected by injection gun. Available in bulk or dieformed slugs.
Product Service	Drilling fluids, Produced fluids, Sea water, Brine, Acids, Alkalis, Other aqueous media	Water, Sewage, Brine, Sea water, Mild acids, Caustics	Boiler feed water, Acids, Caustics	Sea water, Brine, Acids, Alkalis, Certain solvents	Drilling fluids, Produced fluids, Sea water, Brine, Acids, Alkalis, Other aqueous media, Light hydrocarbon crude oil, Crude	Drilling fluids, Produced fluids, Sea water, Brine, Acids, Alkalis, Other aqueous media, Light hydrocarbon crude oil, Crude oil water
Color	Gold	Cream	Black	Black	Brownish Grey	Brownish Grey
Volumetric Fill in <sup>3</sup> /lb	25.5	21.6	11.0	18.9	21.1	21.5
Volumetric Fill cc/gm	0.92	0.78	0.40	0.68	0.90	0.91
pH Range	2 - 12	2 - 12	0 - 14	0 - 14	1 - 13	1 - 13

### PERFORMANCE FOR CENTRIFUGAL PUMPS & ROTATING EQUIPMENT

<b>Shaft Speed fpm</b>	4,000	1,500	4,000	3,000	4,500	4,000
<b>Shaft Speed mps</b>	20.3	7.6	20.3	15.21	22.8	20.3
<b>Max. Temp. °F (°C)</b>	400 (204)	400 (204)	500 (260)	500 (260)	500 (260)	600 (312)
<b>Max. Pressure psi</b>	500	150	500	250	1000	500
<b>Max. Pressure bar</b>	34.4	10.3	34.4	17.2	68.8	34.4
<b>Utex Anti-Extrusion Ring*</b>	213, 1657, 1659	210, 237	210	210	279, 1657, 1659	279, 1657, 1659

### PERFORMANCE FOR RECIPROCATING EQUIPMENT\*\* OR VALVES

<b>Rod Speed fpm</b>	150	150	150	150	150	150
<b>Rod Speed mps</b>	0.76	0.76	0.76	0.76	0.76	0.76
<b>Max. Temp. °F (°C)</b>	400 (204)	400 (204)	500 (260)	500 (260)	500 (260)	600 (312)
<b>Max. Pressure psi</b>	3,000***	1,200***	3,000***	3,000***	5,000***	5,000***
<b>Max. Pressure bar</b>	206.8	82.6	206.8	206.8	344.6	344.6
<b>Utex Anti-Extrusion Ring*</b>	212, 1658	210, 238	210	210	279, 1658, 1659	279, 1658, 1659

\* Other styles of packing and other types of end rings such as cut gaskets or lip seals may be substituted for end rings with varying performance. Higher pressures may have special requirements. Consult factory for these recommendations.

\*\* U-PAK is suitable for some reciprocating applications such as rod pumps, plunger pumps and actuators. Consult factory.

\*\*\* Requires special molded end rings and assembly.

\*\*\*\* Valves only in non-oxidizing atmosphere or steam.

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## UPAK Product Specifications (Supercedes Technical Data in Brochure)



### SEALANT SELECTION GUIDE

Description	A blend of high-strength abrasion resistant fibers with non-staining lubricants & special binders.	A blend of high-strength abrasion resistant fibers & non-staining lubricants & special binders.	A blend of high-performance fibers, chemical resistant lubricants & special binders.	A blend of high-strength abrasion resistant fibers with lubricants & special binders. Flexible to -50°F.	A blend of exfoliated graphite particles & high-temperature sacrificial lubricants for extreme service applications
Applications	Centrifugal pumps, Rotating equipment	Reciprocating pumps, Valves	Centrifugal pumps, Rotating equipment, Reciprocating equipment, Valves	Centrifugal pumps, Rotating equipment, Reciprocating equipment, Valves	Centrifugal pumps, Rotating equipment, Reciprocating equipment, Valves
Product Service	Sea water, Brine, Acids, Alkalis, Other aqueous media	Sea water, Brine, Acids, Alkalis, Other aqueous media, Hydrocarbon based fluids	Sea water, Brine, Acids, Alkalis, Certain solvents, Hydrocarbon based fluids	Drilling fluids, Produced fluids, Sea water, Brine, Acids, Alkalis, Other aqueous media, Hydrocarbon based fluids	Chemicals, Steam, Petroleum fuels, Hydrocarbons
Color	Yellow	Yellow	Black	Grey	Black
Volumetric Fill in <sup>3</sup> /lb	25.2	21.6	18.9	21.6	21.5
Volumetric Fill cc/gm	0.91	0.78	0.91	0.78	0.78
pH Range	2 - 12	2 - 12	0 - 14	2 - 12	0 - 14

### PERFORMANCE FOR CENTRIFUGAL PUMPS & ROTATING EQUIPMENT

<b>Shaft Speed fpm</b>	4,000	N/A	3,000	3,000	4,000
<b>Shaft Speed mps</b>	20.3	N/A	15.2	15.7	20.3
<b>Max. Temp. °F (°C)</b>	500 (260)	N/A	500 (260)	350 (177)	700 (370)
<b>Max. Pressure psi</b>	500	N/A	250	200	250
<b>Max. Pressure bar</b>	34.4	N/A	17.2	13.7	17.2
<b>Utex Anti-Extrusion Ring*</b>	213	N/A	210, 1657	213, 1657	226, 229

### PERFORMANCE FOR RECIPROCATING EQUIPMENT\*\* OR VALVES

<b>Rod Speed fpm</b>	150	150	150	150	150
<b>Rod Speed mps</b>	0.76	0.76	0.76	0.76	0.76
<b>Max. Temp. °F (°C)</b>	250 (121)	250 (121)	500 (260)	350 (177)	700 (371) 1,200 (649)****
<b>Max. Pressure psi</b>	3,000***	15,000***	3,000***	3,000***	3,000***
<b>Max. Pressure bar</b>	206.8	1,034.0	206.8	206.8	206.8
<b>Utex Anti-Extrusion Ring*</b>	212, 1658	212, 1658	210, 1658	212, 1658	226, 220

\* Other styles of packing and other types of end rings such as cut gaskets or lip seals may be substituted for end rings with varying performance. Higher pressures may have special requirements. Consult factory for these recommendations.

\*\* U-PAK is suitable for some reciprocating applications such as rod pumps, plunger pumps and actuators. Consult factory.

\*\*\* Requires special molded end rings and assembly.

\*\*\*\* Valves only in non-oxidizing atmosphere or steam.

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