

# S E R V I C E M A N U A L



**DEACON<sup>®</sup>**

# DEACON®

Phone: 724-225-8008  
800-552-2896 (24 hr answering)  
Fax: 724-228-6353  
Email: [info@deaconindustries.com](mailto:info@deaconindustries.com)  
Web: [deaconindustries.com](http://deaconindustries.com)

Founded in 1988, Deacon has become the premier name for On-Line Injectable Leak Sealing Products world-wide. Our extensive product line is formulated to meet the needs of a diverse range of industries. Deacon products are sealing leaks in refineries, steel mills, pulp and paper mills, chemical plants, and power generators every day. Our products in conjunction with the expertise of our valued customers, the On-Line Leak Sealing contractors, are keeping plants up and running, preventing costly shutdowns. Deacon will continue to provide the highest quality, most reliable leak sealing products our customers have come to rely on. We are proud of our reputation and are committed to providing the best products and service in the industry.



*"Cured Deacon 454 removed from clamp January 1999"*

## DEACON THEORIES OF INJECTION

Deacon's goal was to create a line of on-line injectable leak sealing products that required less injection pressure and had excellent travel properties. This would create less stress on the pipe and piping joints and require less injection ports than other products that existed at the time. With these excellent travel properties and less injection pressure, the compounds can flow easily into tight gaps and up around threads creating a void free sealant cross section requiring less hydraulic pressure to compact the entire void area. Deacon also wanted to create injectable sealants that were not only user friendly, but removable (will not cement the joint), flexible (will expand and contract with piping systems) and can be re-pumped if necessary. With these goals in mind, Deacon created the premier line of injectable leak sealing products, trusted around the world since 1988.

**Please read**

This Deacon Service Manual (Version 020) replaces any Deacon literature, product manual or application reference guide you may have received previously. Please discard all other Deacon literature and replace it with this Deacon Service Manual 020.

**Important Notice:**

The chemical/compound guide enclosed has been developed to assist DEACON customers in choosing the sealant/ packing best suited for use in certain process and chemical applications. It should be noted DEACON has not laboratory tested all of the chemicals listed in this guide. Some of the chemicals have been field tested and the balance of the information has been acquired through a cross-reference system utilizing three separate reference sources, computer software, and customer feedback. The compound selections were based on reactivity data and performance requirements.

The DEACON compound compatibility guide in the back of this manual will continue to be updated, as acquisition of information for chemical and process applications is an ongoing, dynamic function at DEACON. The guide will be updated as additional information is obtained from technical bulletins, SDS, and packing/gasket recommendations from the manufacturers of the process chemicals.

When you are called to service an application that your personnel have no previous experience with, please call. We will provide you with whatever safety and technical information we may have available.

Always consult DEACON product information sheets to determine thermal limitations on each compound.

Disclaimer: The information and recommendations of DEACON concerning these products, is based upon laboratory tests, customer feedback and experience, and to the best of our knowledge and belief are true and accurate. Since conditions of actual use are beyond our control, the recommendations or suggestions are made without warranty, expressed or implied.

**Warranty:**

**LIMITED WARRANTY:** This product is subject to a limited warranty, which can be found at <https://www.jetlube.com/assets/documents/Deacon-Limited-Warranty.pdf>.

No other warranties are made with respect to this product. The responsibility for determining whether this product is suitable for use on a particular application rests solely with the end user. DEACON recommends that the product be tested prior to use.

Note: For industrial use by professionally trained personnel only. Consult SDS & Tech Sheet for all safety, technical, and warranty information before use.

# CONTENTS

- High Temperature Heat Curing Compounds..... 2-4
- Rubber Compounds..... 5
- PTFE Compounds..... 6-7
- Non-Curing Sealants and Packings..... 8
- Pump Packing and Epoxy..... 9
- Bulk Fiber Additives..... 10
- Maintenance Products..... 11
- Injection Guns..... 12-13
- Injection Hardware and Wire..... 14
- Braided Packing ..... 15
- Conversions and Equations ..... 16
- Steam Service and Water Service..... 17-18
- Boiler Feed Water and Condensate ..... 19
- Extreme Heat..... 20
- Hot Oil, Dowtherm and Gasoline..... 21
- Specialty Applications ..... 22
- Safety..... 23-24
- Chemical Compatibility Application Chart ..... 25-38
- Troubleshooting..... 39
- Tips for Success..... 40



# HIGH TEMPERATURE HEAT CURING COMPOUNDS

## Steam – Feed Water – Condensate – Hydrocarbons



### **CV-600** **INJECTABLE SEALANT** **250°F to 950°F (121°C to 510°C)** **#1 Seller for STEAM**

Brown color, putty-like compound with long fiber concentration. Good Travel. Excellent bridging capability. Below 550°F (288°C), speed up the cure by adding 103-P Accelerator (always use accelerator when sealing boiler feed water). For use on boiler feed water, condensate, high pressure steam, killing or plugging lines and valves.

Shelf life is 6 months in closed container. Refrigerated storage recommended.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks, Bulk Gallons

### **F-250, F-150, F-50** **INJECTABLE SEALANT** **250°F to 950°F** **(121°C to 510°C)**

#### **Steam Service Sealant/Packing**

Black, fibrous, sealant/packing. Good Travel. Cures to a flexible seal. Below 550°F (288°C), speed up the cure by adding 103-P Accelerator.

Some customers prefer F-250 for the initial injection and F-150 for re-pumps. F-150 has a higher resin content (more moist than F-250). Good for re-pumps. F-50 has a lower resin content (more dry than F-250), better for plug customers.

Shelf life is 6 months in closed container.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks, Bulk Gallons



### **990** **INJECTABLE SEALANT** **250°F to 950°F** **(121°C to 510°C)** **Boiler Feed Water – Steam**

Brown colored, thick fibrous injectable compound. Good Travel. Below 550°F (288°C), speed up the cure by adding 103-P Accelerator: (always use accelerator when sealing boiler feed water) For use on boiler feed water, condensate, high pressure steam, killing or plugging lines and valves.

Shelf life is 6 months in closed container. Refrigerated storage recommended.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks, Bulk Gallons



### **560** **INJECTABLE SEALANT** **250°F to 950°F** **(121°C to 510°C)** **STEAM – Condensate – Boiler Feed Water – Line Kill – Valve Kill**

Brown color, dense paste impregnated with metal and ceramic fibers. FAST CURING with accelerator: (always use accelerator when sealing Boiler Feed Water) Excellent Travel. Low injection pressure. Below 550°F (288°C), speed up the cure by adding 103-P Accelerator.

Shelf life is 6 months in closed container. Refrigerated storage recommended.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks, Bulk Gallons



### **454, 454-T** **INJECTABLE SEALANT** **250°F to 950°F** **(121°C to 510°C)** **Steam – Hydrocarbons – Oils – Chemicals – Gases**

Brown color, dense sealant compound. Pliable Putty-like compound with heavy fiber concentration. Good Travel when heat is present. Below 550°F (288°C), speed up the cure by adding 103-P Accelerator. 454-T is a thinner consistency than 454 (closer to consistency of 3100-S). 454 contains no solvent to gas off. Very inert mixture for chemical compatibility.

Shelf life is 6 months in closed container. Refrigerated storage recommended.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks, Bulk Gallons



# HIGH TEMPERATURE HEAT CURING COMPOUNDS

## Steam – Feed Water – Condensate – Hydrocarbons

### 909

#### INJECTABLE SEALANT

250°F to 1000°F

(121°C to 537°C)

*Bad Blows – High Pressure*

Brown color, very dense fibrous compound. Limited Travel. Below 550°F (288°C), speed up the cure by adding 103-P Accelerator. High pressure steam, condensate, plugging holes and bad blows.

Shelf life is 6 months in closed container. Refrigerated storage recommended.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks



### 440-440-T

#### Heat Curing Liquid

200°F to 950°F

(93°C to 510°C)

*Thick Liquid (440), Thin Pourable Liquid (440-T)*

Characteristics: Liquid sealant compound. Cures to a flexible seal that remains pliable during expansion and contraction. Good traveling capabilities. Will not adhere to metal surfaces.

Applications: Excellent for injecting threads, metal to metal joints. Can be thickened by adding Dry-Pak. Cure time can be accelerated by adding Deacon 103-P Accelerator. No solvents.

Shelf life is 1 year in closed containers.

Packaged: Quarts and Gallons



### 770-L, 770-P

#### INJECTABLE Liquid or Paste Sealant

250°F to 950°F

(121°C to 510°C)

*Excellent Travel – Threads and Tight Gaps*

Dark brown liquid, injectable sealant. Available in paste or liquid. Excellent Travel. Below 550°F (288°C), speed up the cure by adding 103-P Accelerator. Use with any Deacon heat curing compound to increase travel and aid in injection.

Shelf life is 12 months in closed container. Add a Dry-Pak mix to thicken if needed.

Packaged: Quarts, Gallons, 5 Gallon Pails



### 720-SF

#### INJECTABLE SEALANT

250°F to 950°F

(121°C to 510°C)

*Silica Free – Boiler Feed Water*

Tan color, dense putty impregnated with metal and carbon fibers. (Contains less than 1% Silica). Good Travel. Below 550°F (288°C), speed up the cure by adding SF-ACC Accelerator (always use accelerator when sealing boiler feed water). For use on boiler feed water, condensate, high pressure steam, killing or plugging lines and valves.

Shelf life is 6 months in closed container. Refrigerated storage recommended.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks



### 103-P

#### ACCELERATOR

75% FASTER CURE

*Used to speed up the cure of Deacon heat curing compounds*

Granular Powder. Will accelerate cure of heat curing compounds to aid in achieving a seal in situations of lower temperatures. 103-P will accelerate the curing process, but must be used in conjunction with heat. (a minimum of 150°F/ 65°C) Not recommended above 600°F (316°C). Unlimited shelf life. Mix Ratio: (1 tablespoon or 16 grams) per J-Stick (2 oz. or 62 grams) per quart (1/2 lb. or .22 kg) per gallon. Mix ratio recommendations are general, does not have to be exact to achieve a quicker cure.

Packaged: Pints, Quarts, Gallons



# HIGH TEMPERATURE HEAT CURING COMPOUNDS

## Super Heated Steam – Extreme Hot Air



### CJ-429, CJ-650

#### INJECTABLE SEALANT

**600°F to 1800°F (315°C to 982°C)**

**Extreme Heat – Super Heated Steam - 1800°F**

Brown color, dense sealant paste (gallons) or putty (extruded) compound with heavy fiber concentration. Hard Setting, Sealant/Refractory Hybrid. Excellent for EXTREME temperatures experienced with superheated steam, catalyst, flue gas. Service Examples: Super Heated Steam (3000#) & 1000°F (537°C), Hydrogen 1000°F (537°C) and up, Hot Air 1800°F (982°C), Flue Gas 1100°F (593°C).

CJ-429 was designed to be a hybrid between sealant and refractory. In applications where conventional sealants would become brittle and powder, because of extreme heat and temperature, this compound is un-surpassed. CJ-650 is a thinner version of CJ-429, great for pumping from 5 gallon pails.

**TIP: When using bulk gallons of CJ-429, Coat your gloves and the CJ-429 in Dry-Pak 3 to make it easier to handle.**

Shelf life is 6 months in closed container. Refrigerated storage recommended. (Extruded Only)

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks, Bulk Gallons, 5 gallon pails.

### 464

#### INJECTABLE SEALANT

**600°F to 1350°F**

**(315°C to 732°C)**

**High Temp – Hot Hydrocarbons**

Brown color, dense sealant compound. Pliable compound with heavy fiber concentration. Good Travel in high temp application. Excellent chemical resistance at extreme temperatures.

Use with 411 Liquid to help travel and get travel into threads and tight gaps.

Shelf life is 6 months in closed container. Refrigerated storage recommended.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks



### 411

#### INJECTABLE LIQUID SEALANT

**600°F to 1350°F**

**(315°C to 732°C)**

**High Temp Curing Liquid To 1350°F**

Brown colored, injectable heat curing liquid sealing compound. Excellent Travel.

Perfect for injecting into threads or metal to metal joints. Thicken with Dry-Pak 6. Use to improve high temp travel of 464. Pourable.

Shelf life is 12 months in closed container.

Packaged: Quarts, Gallons.



## Dowtherm – Hot Oil – Hydrocarbons

### 3100-S

#### INJECTABLE SEALANT

**250°F to 950°F**

**(121°C to 510°C)**

**Hot Oils – Dowtherm – Hydrocarbons**

Gray color, dense, pliable putty-like sealant. Excellent Travel. Customer feedback reports applications up to 1250°F (677°C). Below 550°F (288°C), speed up the cure by adding 103-P Accelerator.

Shelf life is 6 months in closed container. Refrigerated storage recommended.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks, Bulk Gallons.



### 800-T

#### INJECTABLE SEALANT

**250°F to 950°F**

**(121°C to 510°C)**

**Hot Oils – Dowtherm – Hydrocarbons – Great for re-pumps**

Gray color, soft, pliable putty-like sealant. Excellent Travel. Below 550°F (288°C), speed up the cure by adding 103-P Accelerator. Great for re-pumps. Thinner version of 3100-S. Very low injection pressure.

Shelf life is 6 months in closed container. Refrigerated storage recommended.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks, Bulk Gallons.



# RUBBER COMPOUNDS

## Heat Curing Rubber Compound

### 402, 402-CF

**-50°F to 500°F**  
**(-45°C to 260°C)**  
*One-part heat curing rubber extrusion*



Black Color. Some acids, water, steam, ketones, esters, alcohols, alkalis, aldehydes, silicone oils, and acetic acid. Not recommended for hydrocarbons or oils. Cures in service at temperatures above 150°F (65°C) Store under 90°F (32°C).

Deacon 402-CF: contains carbon and aramid fibers. Pressure Containment: 1/8" Hole 450 psi (uncured) 1/8" Hole 8000 psi (cured)

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks, 25 lb. box 3/4" random lengths.

### 460

**FLUOROSILICONE INJECTABLE RUBBER**  
**-90°F to 450°F**  
**(-68°C to 232°C)**

*Heat Curing One Part Extruded Rubber*



Blue color. Good Travel. Applications: Dilute acids, Alcohols, Alkalies, Petroleum Oils, Chlorinated Hydrocarbons, Hydrogenated Solvents, Halogenated Hydrocarbons, L.P. Gas, Fuel Oil, Freon, Gasoline, Motor Oil, Mineral Spirits.

Shelf life is 2 years in closed container.

Packaged: 5/8" x 3" Plugs

## Chemically Curing Two Part Rubber

### 404, 404-LIQUID

**-88°F to 230°F**  
**(-66°C to 110°C)**  
*Two Part Rubber – Fast Cure – Oil – Gasoline*



Dark Gray Color when mixed.

Gasoline, Hydrocarbons, Solvents (Mineral Spirits, Naphtha, etc.) Alcohols, Water, HF Acid (Under 25%), Sodium Hydroxide, Transformer Oils.

Curing: Work life one (1) hour at 70°F (21°C). Work life is significantly reduced at elevated temperatures (30 min. or less above 75°F (23°C). Product can be kept on ice to extend application life.

Note: Information on Dielectric Properties Available. 404 LIQUID is pourable for void fill applications. Cleaning: Use Xylene or Toluene to clean equipment of uncured sealant.

Shelf life is 6 months in original unopened containers. Cool storage recommended.

Packaged: pint kits (.47 L), quart kits (.94 L), gallon kits (3.7 L)

### 409

**-60°F to 500°F**  
**(-51°C to 260°C)**  
*Two Part Rubber – Pourable*



Red color: Mild steam, water applications, Acetic Acid, Mineral Oil, Propane, various other applications.

Cures to a flexible solid. Remains flexible from -60°F (-51°C) to 500°F (260°C) with intermittent exposure to 600°F (315°C) Working Time: 45 minutes. Cure Time: 6.5 hours @ 70°F (21°C) Lower temperatures will extend cure time. Minimum cure time 40°F (4°C).

Shelf life is 6 months in closed containers. Store below 90°F (32°C)

Packaged: quart kit (.94 L), gallon kit (3.7 L)

## Moisture and Air Curing One Part Rubber



### 400, 410

**One Part Rubber**

**(400) -50°F to 450°F (-45°C to 232°C)**  
**(410) -85°F to 600°F (-65°C to 315°C)**

*Air/Moisture Cure*

Black Color (400) Red Color (410). Cures to a low durometer solid. DO NOT expose unused material to air or moisture. A partial cure occurs in approx. 5 minutes. Mix with a Dry-Pak fiber mixture to ensure curing as quickly as possible throughout the cross section, and to increase the bridging capabilities of the rubber (wetting the fibers with water will speed up the curing process). Whenever possible, try to expose the rubber to water or steam as it is injected.

Shelf life is 1 year in closed container.

Packaged: caulking tubes, Gallons, 4.5 gallon pails.



# PTFE COMPOUNDS



## 300 PTFE INJECTABLE SEALANT/PACKING -180°F to 500°F (-117°C to 260°C) Extremely Low Temperatures – Pumps Easily

100% PTFE (fibers, fillers and particles). Lubricant carrier: Grayish color. Great Travel. Customers feedback reports use to -240°F (-151°C) Excellent resistance to most solvents and acids. (Not for use on Oxidizing Chemicals)

Shelf life is 2 years in closed container.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks, Bulk Gallons

## 333 PTFE INJECTABLE SEALANT/PACKING -100°F to 500°F (-73°C to 260°C) Low Temperature Rated – High Fiber Concentration

100% PTFE (fibers, fillers and particles). Lubricant carrier: White color. Excellent Travel. High fiber concentration for good bridging, but flows easily. Excellent resistance to most solvents and acids. (Not for use on Oxidizing Chemicals)

Shelf life is 2 years in closed container.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks, Bulk Gallons



## 340 PTFE – GRAPHITE – ARAMID SEALANT/PACKING -40°F to 500°F (-40°C to 260°C) Very Dense – Compacts To Form A High Pressure Barrier

Good chemical resistance, good bridging capabilities, good lubricity, non-curing, remains flexible. Greenish yellow color. Average Travel. High fiber concentration for good bridging.

Shelf life is 2 years in closed container.

Packaged: 5/8" x 3" Plugs, 7/8 x 6 Sticks



## 325 PTFE INJECTABLE SEALANT/PACKING -25°F to 500°F (-31°C to 260°C) Best Price – 100% PTFE Solids - #1 Selling PTFE

100% PTFE (fibers, fillers and particles). Organic carrier: Brown color. Good Travel. High fiber concentration for good bridging. Excellent resistance to most solvents and acids. (Not for use on Oxidizing Chemicals)

Shelf life is 2 years in closed container.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks, Bulk Gallons



## 350 PTFE INJECTABLE SEALANT/PACKING -25°F to 500°F (-31°C to 260°C) 100% PTFE Solids – Flagship product since 1988

100% PTFE (fibers, fillers and particles). Organic carrier: Yellow color. Good Travel. High fiber concentration for good bridging. Excellent resistance to most solvents and acids. (Not for use on Oxidizing Chemicals)

Shelf life is 2 years in closed container.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks, Bulk Gallons





# PTFE COMPOUNDS



**360-FG**  
**PTFE INJECTABLE SEALANT/PACKING**  
**-50°F to 500°F (-45°C to 260°C)**  
*Food Grade*

100% PTFE (fibers, fillers and particles). Lubricant carrier. White color. Excellent Travel. High fiber concentration for good bridging, but flows easily. Excellent resistance to most solvents and acids. (Not for use on Oxidizing Chemicals)

Shelf life is 2 years in closed container.

Packaged: Quarts, Gallons



**375 – 375-P**  
**PTFE INJECTABLE SEALANT/PACKING**  
**-50°F to 400°F (-45°C to 204°C)**  
*Chlorine Grade – Dense Consistency*

100% PTFE (fibers, fillers and particles). Non-Reactive carrier. White color. Average Travel. High fiber concentration for good bridging. Excellent resistance to chlorine, chemicals, oxidizers, solvents and acids.

**NOTE: DO NOT INJECT WITH ANY POSSIBILITY OF CONTAMINATION FROM HYDRAULIC FLUID**

Shelf life is 2 years in closed container. 375-P is a paste version.

Packaged: Quarts (3 lb.)



**383**  
**PTFE BASED INJECTABLE SEALANT/**  
**PACKING**  
**-25°F to 500°F (-31°C to 260°C)**  
*Dense Formulation – Less Carrier Extrusion*

Yellowish color. For large void fills, will bleed less carrier. Good Travel. High fiber concentration for good bridging. Excellent resistance to most solvents and acids. (Not for use on Oxidizing Chemicals)

Shelf life is 2 years in closed container.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks, Bulk Gallons



**375-OX – 375-OXP**  
**PTFE INJECTABLE SEALANT/PACKING**  
**-50°F to 400°F (-45°C to 204°C)**  
*Oxygen Grade – Dense Consistency*

100% PTFE (fibers, fillers and particles). Non-Reactive carrier. White color. Average Travel. High fiber concentration for good bridging. Excellent resistance to oxygen, chlorine, chemicals, oxidizers, solvents and acids.

**NOTE: DO NOT INJECT WITH ANY POSSIBILITY OF CONTAMINATION FROM HYDRAULIC FLUID**

Shelf life is 2 years in closed container. 375-OXP is a paste version.

Packaged: Quarts (3 lb.)

# NON-CURING SEALANTS AND PACKINGS

## 302

### COMPRESSION SEAL INJECTABLE SEALANT

0°F to 400°F  
(-17°C to 204°C)

Gasoline – Oils –  
Hydrocarbons

Good resistance to water, Di-Ester type fluids, Diesel Fuels, Gasoline, Lubricating Oils, Greases, Aliphatic Hydrocarbons.

Shelf life is 6 months in closed container. Does not bleed carrier.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks



## 289

### GRAPHITE BASED INJECTABLE SEALANT /PACKING

-30°F to 1800°F  
(-34°C to 982°C)

V.O.C. Free – Excellent Travel

Reduce or eliminate Fugitive Emissions in V.O.C. valve packings. Low injection pressure required. It is highly lubricous, low friction, valve packing.

Compatible for use: Alcohols, Benzene, Butane, Carbon Dioxide, Fuel Oils, Hydrocarbons, Hydrogen, Ketones, Steam, Synthetic Gases and Oils.

Shelf life is unlimited.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks, Bulk Gallons  
Also available in a paste form (Deacon 489).



## 389

### GRAPHITE INJECTABLE SEALANT /PACKING

-30°F. to 1800°F  
(-34°C to 982°C)

V.O.C. Free –  
100% Graphite Solids

Reduce or eliminate Fugitive Emissions in V.O.C. valve packings. Average travel. It is highly lubricous, low friction, valve packing.

Compatible for use: Alcohols, Benzene, Butane, Carbon Dioxide, Fuel Oils, Hydrocarbons, Hydrogen, Ketones, Steam, Synthetic Gases and Oils.

Shelf life is unlimited.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks, Bulk Gallons



## VP-1000, VP-1200

### VALVE PACKING

VP-1000: -25°F to 600°F (-31°C to 315°C)

VP-1200: up to 1200°F (649°C)

Non Curing – Highly Lubricating

Recommended valve packing on water, steam, and air leaks. Good Bridging. It is highly lubricous, low friction, valve packing.

Shelf life is unlimited.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks, Bulk Gallons

Have a question, we are here to help.

Call: 724-225-8008 • 24-Hour: 800-552-2896



# PUMP PACKING AND EPOXY

## PUMP 99, PUMP 77

### PTFE BASED INJECTABLE PUMP PACKING

**-50°F to 450°F  
(-45°C to 232°C)**

*For Rotating Shaft  
Packing Glands*

Pressure: 0 to 300 PSI Shaft

Speed: up to 4150 SFM

pH range: 0 – 14 Typical

Applications: Rotary Pumps, Valves, Centrifugal Pumps, Agitators, Reciprocating Pumps, Mixers, Turbine Pumps, Refiners, Dryers.

Chemical resistance.

Shelf life is 2 years in closed container. PUMP 77 is NON-STAINING.

Packaged: 5/8" x 3" Plugs, J-Sticks, 7/8" x 6" Sticks



## PUMP 44

### GRAPHITE BASED INJECTABLE PUMP PACKING

**-100°F to 1000°F  
(-73°C to 537°C)**

*For Rotating Shaft Packing Glands*

Applications: HIGH TEMPERATURE RATED. Rotary Pumps, Valves, Centrifugal Pumps, Agitators, Reciprocating Pumps, Mixers, Turbine Pumps, Refiners, Dryers. Chemical resistance.

Shelf life is 2 years in closed container.

Packaged: 1 lb. and 10 lb. containers



## 427

### 2 PART EPOXY

**Up to 400°F (204°C)**

*Excellent For Void Fill Applications*

Deacon 427 Epoxy is a two-part system that cures at room temperature (65 to 70°F / 18 to 21°C) in 24 hours. Heat curing is also an option for a faster set up time and to further increase temperature resistance.

Chemical Resistance: Highly resistant to a wide range of compounds including Caustics, Acids, Fuels, Solvents. Not recommended for a high concentration of amines.

Characteristics: Deacon 427 contains no solvents which aids in the low shrinkage characteristics. Ultimate tensile strength is 7,500PSI. (liquid mix)

Adhesion: Good adhesion characteristics. Surface preparation is critical. Adheres well to clean dry rough surfaces.

Available in Liquid Mix, Medium Mix and Heavy Fiber Mix.

Mix Procedure: Deacon 427 is a two-part system mixed equally in a one to one ratio. Mix time varies depending upon mixing equipment and formulation. A homogeneous blend is preferred. exp. Deacon 427 paste, a drill type mixer, mixer blade: approximately 3 to 5 minutes.

Pot Life: Based on a one to one mix ratio by volume : approximately 2.5 hours at 70°F (21°C) Note :Actual time may vary based on volume of material, mixing equipment, and temperature.

Clean up: SOLVENTS : M.E.K., Acetone, Isopropyl Alcohol, Dowanol PM. All mixing and spraying equipment should be cleaned IMMEDIATELY after use ! Packaging: Quarts, Gallons

Recommended shelf life is one year in closed, unopened metal containers.

Maximum substrate temperature for applying as a coating is 150°F (66°C)

Void Fill Enclosures: Deacon 427 is an excellent epoxy for void fill enclosure applications. When you need to void fill an enclosure, but the line is too weak to apply injection pressure, Deacon 427 can be poured to fill the enclosure with no injection pressure, filling the void with a strong, hard, corrosion resistant epoxy that cures through a two-part chemical reaction. This can be used as a convenient, easy solution as long as no leak is present when pouring. If a leak is present and it cannot be stopped before pouring the epoxy, Deacon 427 is not recommended.



# BULK FIBER ADDITIVES



## Dry-Pak 8, Dry-Pak 24

### BULK FIBER MIXTURE up to 950°F (510°C)

#### For Added Bridging

Bulk fiber mixture (dry mix) combination of fibers, fillers and dry lubricants.

Temperature Range for service conditions to 950°F (510°C)

Applications: Additive for bulking up Deacon compounds on the job site. When additional bridging is desired or to thicken a liquid sealer. exp. Deacon 400, Deacon 770-L.

Compatible Uses: Alcohols, Benzene, Butane, Carbon Dioxide, Fuel Oils, Hydrocarbons, Hydrogen, Ketones, Steam, Synthetic Gases, and Oils.

Shelf life is unlimited, store in closed containers.

Packaged: 1 gallon pail (3 lbs.), 5 gallon pail (15 lbs.), 60 lb.

Drum and Dry-Pak 24 is a dryer mix than Dry-Pak 8

## Dry-Pak 5

### PTFE POWDER/FIBER MIXTURE

#### up to 500°F (260°C)

#### For added chemical resistance

100% PTFE fibers (various lengths), fillers and temperature range to 500°F (260°C)

Applications: Used to bulk up Deacon compounds. For added bridging capability. exp. Deacon 400, Deacon 409

Characteristics: Excellent chemical resistance. Not recommended for Oxygen Service.

Shelf life is unlimited.

Packaged: One Gallon Pail (3 lbs.)



## Dry-Pak 3

### POWDER / LIGHT FIBER MIXTURE

#### up to 1200°F (649°C)

#### To thicken sealant or coat sealant for handling

Light fiber and powder mixture (Dry Mix)

Applications: Additive for bulking up Deacon compounds on the job site.

When additional bridging is desired or to thicken a liquid sealer. example. 400, 409, 770-L. (can be mixed with 400 when using 4.5 gal. pails and a volume pump.)

Compatible Use: Alcohols, Benzene, Butane, Carbon Dioxide, Fuel Oils, Hydrocarbons, Hydrogen, Ketones, Steam, Synthetic Gases, and Oils.

Shelf life is unlimited, store in closed containers.

Packaged: 1 gallon pail (4 lbs.), 5 gallon pail (20 lbs), 50# drum. Also useful to coat sealant for easier handling, example CJ-429.



## Dry-Pak 6

### HIGH TEMP POWDER/ LIGHT FIBER MIXTURE

#### up to 1500°F (816°C)

#### To thicken sealant

Dry mixture of High Temp Fibers/Fillers.

Applications: Additive to bulk up Deacon sealant compounds and refractories.

When additional bridging is desired or to thicken a compound.

Shelf life is unlimited.

Packaged: 1 gallon pail (3 lbs.), 55 lb. container



## Other Dry-Pak Mixtures

<b>Dry-Pak 4</b>	PTFE Powder Mixture
<b>Dry-Pak 7</b>	Aramid Fiber Mixture
<b>Dry-Pak 10</b>	White PTFE Fiber Mixture
<b>Dry-Pak 11</b>	Food Grade PTFE Fiber/Powder Mixture
<b>Dry-Pak 12</b>	Carbon Fiber Mixture (Silica Free)
<b>Dry-Pak 14</b>	Brown PTFE Fiber Mixture
<b>Dry-Pak 15</b>	Steel Fiber Mixture
<b>Dry-Pak 16</b>	Aramid Pulp Mixture

# MAINTENANCE PRODUCTS

## Withstands Extreme Temperatures and Conditions

Deacon line consists of flange and thread sealants, sealing compounds, injectable packings and specialty products formulated to meet the needs of a diverse range of industries, from iron and steel producers, pulp and paper manufacturers, power generators, pipelines and oil refineries, to wastewater treatment plants and petrochemical producers. These products cover a wide range of pressures, temperatures, process steams and types of equipment.

### 3300

**EXTRUDED GASKET  
COMPOUND HIGH TEMP  
STRING GASKET**  
600°F to 1600°F  
(315° to 871°C)

*Heat Curing*

Deacon 3300 is a thermal reactive sealing compound of high temperature, pressure, and chemical tolerance that was designed to provide superior sealing performance on metal-to-metal surfaces, without chemical adhesion. This extruded putty-like material maintains characteristics of flexibility and pliability in its full range of operation so as to fill voids, cracks, and steam cuts.

Packaged: 1/4", 3/8", 1/2", 3/4" diameter rolls



### 8875-THIN

**HIGH TEMP GASKET AND  
THREAD SEALANT**  
150°F to 1800°F  
(65°C to 982°C)

*Heat Curing Paste*

Deacon 8875-Thin is a thermal reactive paste sealing compound that is used in high temperature and high pressure applications. In the presence of heat, Deacon 8875-Thin will form a mechanical ("mechanical type") seal. Deacon 8875-Thin will not cement the flanges or threads together; thus, it will not interfere with future repairs of metal-to-metal joints. Deacon 8875-Thin is unaffected by thermal cycling.

Packaged: 10.3 fl. oz. caulking tube, pint, quart, gallon, 5 gallon pail



### 770-L

**HIGH TEMP SEALANT  
LIQUID**  
200°F to 950°F  
(93°C to 510°C)

*Heat Curing Liquid*

Deacon 770-L can be used as gasket dressing to improve the sealing capability of many gaskets. Deacon 770-L can also be applied to many types of gaskets (including spiral wound) to reseal them, thereby prolonging their useful life. Deacon 770-L can be used as the only sealant on low-tolerance metal-to-metal joints.

Packaged: pint brush top, quart, gallon



### PFPE GREASE

**PTFE THICKENED  
PERFLUORINATED  
POLYETHER FLUID UP TO  
500°F (260°C)**

*Oxygen/Chlorine Service*

O-ring lubrication and protection; food processing; canning and textile equipment; solvent resistant for valve, gasket and bolt applications with railcars; lubrication of equipment used in high vacuum applications; cryogenic apparatus and pneumatic systems; any many other extreme service applications below 500°F.



### 7228

**GASKET AND THREAD  
SEALANT**  
-25°F to 450°F  
(-31°C to 232°C)

*Gasoline – Oils – Hydrocarbons*

Excellent Resistance to Oils, Water, Steam, Di-Ester Type Fluids, Diesel Fuels, Gasoline, Greases, Ethylene Glycol, Transmission Fluid, and Aliphatic Hydrocarbons. Viscous Paste, Slow Drying, Remains Pliable, Improves Reliability, Extends Gasket Life, Stops Leakage, Will Not Interfere with Future Repairs or Maintenance.

Packaged: 10.3 fl. oz. caulking tube, pint brush top, quart.



### MOLD-PAC™

**DAMMING, MOLDING, AND  
POSITIONING PUTTY**

*Resistant to Extreme Temperatures*

Retains molten Babbitt and low melting point materials. Damming compound (for pouring Babbitt bearings, epoxies, various molten alloys, etc.), Vibration suppression, Positioning delicate parts, Holding solder while soldering wires on generators, Aids in positioning during welding/brazing.

Packaged: 10 lb. container, 50 lb. pail.



# INJECTION GUNS



## Model 2003

*Single acting hydraulic cylinder design.*

1" I.D. x 3" (2.54 cm x 7.62 cm) barrel for 5/8" Dia. & 3/4" Dia. Sticks  
 10,000 PSI max operating pressure  
 1/4 NPT or 1/2-13 NOZZLE

## Model 2005

*Single acting hydraulic cylinder design.*

1 1/2" I.D. x 9" (2.54 cm x 7.62 cm) barrel for J-Sticks.  
 10,000 PSI max operating pressure.  
 HOLDS 1 J-STICK  
 1/4 NPT or 1/2-13 NOZZLE



## Model 1700

*For pumping a variety of sealant material to 10,000 PSI max., with 100 PSI, 10 CFM AIR. Floating piston design.*

Features: Air over hydraulic operated pump. Holds 2 J-Sticks.  
 Capacity: 20" barrel – 32.5 cu inch  
 Weight: 45.5 lbs. Gun alone is 13 lbs.

Operation: To load, open by-pass valve at side of gun, unscrew carrying handle, take off barrel cap, use wooden rod to push piston to bottom of barrel. Replace cap and close by-pass valve. Connect pump to air supply and unit is ready to use.

Note: An in-line air filter and lubricator should be installed as close to the unit as possible. Otherwise pump requires 4 drops of #10 oil in air inlet for each day of use.

Performance:

Resistance (PSI)	0	5,000	10,000
Flow Rate (cu.in/min)	35	10	4
Time to empty gun (min:sec)	0:28	1:36	4:00

## Injection Gun Hardware and Accessories

<b>Gun-Pak I</b>	Description: Pumpable hose-pak, non-setting, bulk material, used to force sealant compound from hose assembly. Note: Contains no cleaning solvents. Packaged: Gallons, J-Sticks
<b>#1699-22</b>	Model 1699 Injection Gun Rebuild Kit
<b>#17D</b>	Model 1700 Injection Gun Rebuild Kit
<b>Foot Pump</b>	Air over hydraulic operated
<b>Hand Pump</b>	Manually operated hydraulic pump
<b>Pressure Gauge</b>	1/4 NPT 15,000 PSI
<b>Injection Hose</b>	18" long (457mm) x 3/8" (9.5mm) dia.

*Many more gun repair parts available – Call for details*

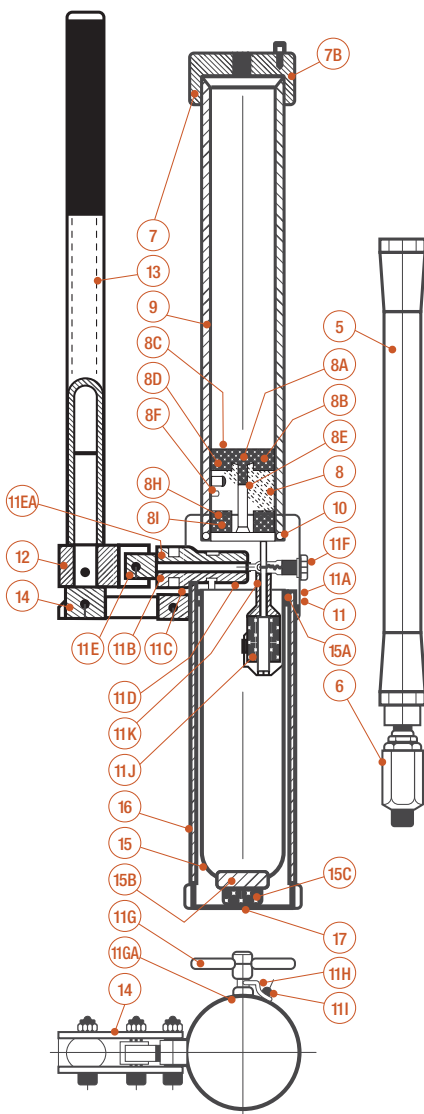


# INJECTION GUNS



## Model 1699 G/R

Floating piston design, 10,000 PSI max operating pressure. 3/8" high pressure hose with swivel ends and 15,000 PSI pressure gauge.



16990	Gun Complete W/ Hose Assembly, Gauge & Tee	16991IFD	Check Valve Screw
1699A	Gun Complete W/ Hose Assembly Only	16991IFE	Screen
1699B	Exchange Gun (No Hose Assembly)	16991IG	By Pass Valve
1699C	Gun Only	<b>16991IGA "O" Ring (By Pass Valve)</b>	
1699D	Gun Only W/ Body Drilled And Tapped For 1/4" Npt: Includes Gauge W/Protector	16991IH	By Pass Stop
1699E	Gun Only W/ Body Drilled And Tapped For 1/4" Npt: Includes Plug	16991II	Cap Screw
1699S	Gun Complete W/ Hose Assembly, "Z" Swivel, Gauge & Tee	16991IJ	Internal Hydraulic Relief
1699SY	Syringe	<b>16991IK "O" Ring (Internal Hydraulic Relief)</b>	
16991C	Hex Plug For Coupler (3/4"-16 Nps-M X 1/8" Npt Fe)	16991IKA	Copper Washer (Internal Hydraulic Relief)
16991D	Washer (G.b.h. Coupler)	169912	Fulcrum Assembly
1699E	Body (G.b.h. Coupler)	169913	Handle
16992	G.b.h. Coupler Repair Kit (Includes: Steel Button, Spring & "O"-Ring)	169914	Link Assembly
16994	Handle Restraint	169914A	Links
16995	Hose Center (1/2"-27 Fe X 1/4" Npt M) or (1/4" Npt-M X 1/4" Npt-M W/ Swivel Ends)	169914B	Stripper Bolt
16996	Swivel (1/4" X 1/2"-27)	169914C	Lock Nut
16997	Grease Barrel Cap	<b>169915 Fluid Bag W/ Bleeder</b>	
<b>16997B "O" Ring (Grease Barrel Cap)</b>		169915A	Seal Ring
16998	Piston Assembly	<b>169915B "O" Ring - Cap Screw (Fluid Bag)</b>	
16998A	1/4" X 28 Cap Screw (Grease Piston)	169915C	Cap Screw (Fluid Bag)
<b>16998B "O" Ring (Cap Screw-Grease Piston)</b>		169916	Fluid Bag Barrel
16998C	Outer Washer Nut	169917	Fluid Bag Barrel Cap
<b>16998D Outer Leather Cup</b>		169918	Hex Nipple (1/4" X 1/4")
16998E	Piston	<b>169919 Fluid - Pint Can (Approx. 1#)</b>	
<b>16998F "O" Ring (Grease Piston)</b>		169919G	Fluid - Gallon Can (Approx 8#)
<b>16998H Inner Leather Cup</b>		169920	Tee
16998I	Inner Washer Nut	169921	"O" Ring Minor Repair Kit
16998J	Spanner Wrench For Grease Piston	169922	Major Repair Kit
16999	Grease Barrel	169923	Carrying Strap
<b>169910 "O" Ring (Body)</b>		169924	Hooks (2, Per Each)
169911	Body Assembly	169925	Harness Snaps (2, Per Each)
169911A	Body	169930	Shut Off Relief Valve (Optional W/ Hose Assembly)
<b>169911B Hydraulic Pump Cylinder</b>		169931	Extended Nipple For Part # 16997 Using Polypacks
169911Bj	J-Wrench (Hydraulic Pump Cylinder)	169932	Hex Plug For Coupler (3/4"-16 Nps-M X 1/4" Npt Fe)
<b>169911C "O" Ring (Upper -Hydraulic Pump Cylinder)</b>		169933	Carrying Case (29.5"L X 7.5"W X 7"H)
<b>169911D "O" Ring (Lower -Hydraulic Pump Cylinder)</b>		169950	0 - 15,000 Psi Gauge
<b>169911E Pump Piston</b>		169951	Gauge Protector
<b>169911EA "O" Ring (Pump Piston)</b>		1699156	Complete Hose Assembly W/Gauge
<b>169911F Check Valve Assembly</b>		1699158	Hose Assembly, Less Gauge And Tee
169911FA	Washer (Copper)	1699920	20" Grease Barrel
169911FB	1/4" Ball	16992A	Nylon Button
169911FC	Spring	16992B	Steel Button
		16992C	"O" Ring For Nylon Or Steel Button
		1699FPG	Floating Piston Guide

NOTE: PARTS NEEDED TO MAKE UP #169922 REPAIR KIT - SHOWN IN BOLD TYPE

# INJECTION HARDWARE AND WIRE

## Standard Valves & Engineered Pressure Rated Valves



STANDARD	
<b>25-B</b>	1/8" N.P.T. Male X 1/4" N.P.T. Female (also available in stainless steel)
<b>40-B</b>	1/16" N.P.T. Male X 1/4" N.P.T. Female (also available in stainless steel)
<b>44-D</b>	1/4" N.P.T. Male X 1/4" N.P.T. Female (also available in stainless steel)
<b>50-B</b>	3/8-16 Bolt Male X 3/4-10 Bolt Female
<b>55-B</b>	3/8-24 Bolt Male X 1/4" N.P.T. Female
ENGINEERED	
<b>25-E</b>	1/8" N.P.T. Male X 1/4" N.P.T. Female
<b>40-E</b>	1/16" N.P.T. Male X 1/4" N.P.T. Female
<b>44-E</b>	1/4" N.P.T. Male X 1/4" N.P.T. Female

## Cap Nuts

4140 Steel 1/2" - 5/8" - 3/4" - 7/8" - 1"



## Other products



### Brass Wire

Descriptions: 260 Alloy

SIZE Approx	Ft./lb.
1/16" (.0625)	84.0
3/32" (.095)	42.0
1/8" (.125)	21.0
5/32" (.158)	13.0
3/16" (.188)	10.0
7/32" (.221)	6.0
1/4" (.242)	5.0
9/32" (.281)	4.5
5/16" (.312)	3.5

### Stainless Wire

2 lb. spools (.023 and .035 Dia.)

### Drill Bits and Taps:

Various sizes available

# BRAIDED PACKING

## TR-380

*PTFE impregnated packing.  
Square interbraid construction.*

Temperature Range: to 500°F (260°C)

## GR-589

*Graphite packing. Square interbraid construction.  
Treated with a blend of lubricants.*

Temperature Range: 450°F (232°C)

## GR-171

*Braided graphite packing. Interbraid construction.  
Pure homogenous graphite bonded to a fiberglass  
carrier for strength and thermal stability.*

Temperature Range: to 850°F (454°C) in oxidizing atmospheres,  
1250°F (676°C) in steam.

## KR-200

*Aramid fiber packing.  
Square interbraid construction.*

Temperature Range: to 500°F (260°C)



*Call for Sizes and Pricing.*

**CALL FOR SIZES AND PRICING.**

**Call: 724-225-8008 • 24-Hour: 800-552-2896**



# CONVERSIONS AND EQUATIONS

## Cubic Inches

Product	Cubic Inches
Plug (5/8" x 3")	.92
J-Stick (1 3/8" x 8")	11.8
7/8" x 6"	3.6
10.3 fl. oz. tube	18.6
Quart (liquid or paste)	57.75
Gallon (liquid or paste)	231
4.5 gal. pail (rubber)	1039
5 gal. pail (liquid or paste)	1155
1 cubic foot	1728

## Cubic Area

In <sup>3</sup>	Cm <sup>3</sup> x 0.06102
Cm <sup>3</sup>	In <sup>3</sup> x 16.3871

## Length

in	cm x 0.3937
cm	in x 2.54

## Temperature

°F	°C x 1.8 + 32
°C	(°F - 32) x .55

## Pressure

PSI	Bars x 14.5038
Bars	PSI x 0.06895

## Accelerator Ratio

J-Stick	1 tablespoon / 16g
Quart	2 oz. / 57g
Gallon	1/2 lb. / .22kg

## Compression Ratio (Gallon)

Product	Ratio <i>Gallons to yield 231 cubic inches compressed</i>	Lbs. <i>Per Gallon</i>	PSI <i>Injection pressure (PSI) through 3/16" dia.</i>
<b>F-250</b>	1.43:1	8.0	183
<b>F-150</b>	1.33:1	8.0	135
<b>F-50</b>		Not in gallons	344
<b>3100-S</b>	1.33:1	9.5	117
<b>800-T</b>	1.16:1	9.0	62
<b>454</b>	1.47:1	9.5	212
<b>454-T</b>		Not in gallons	163
<b>464</b>	1.49:1	9.5	169
<b>CJ-429 (paste)</b>	1.00:1	11.0	minimal
<b>CJ-429 (plug)</b>		Not in gallons	176
<b>CV-600</b>	1.84:1	8.12	133
<b>560</b>	1.15:1	9.5	62
<b>909</b>		Not in gallons	270
<b>990</b>	1.40:1	10.0	170
<b>720-SF</b>		Not in gallons	196
<b>289</b>	1.36:1	10.88	140
<b>389</b>	1.50:1	8.5	269
<b>302</b>		Not in gallons	214
<b>402</b>		Not in gallons	212
<b>402-CF</b>		Not in gallons	166
<b>VP-1000</b>	1.52:1	9.5	135
<b>VP-1200</b>	1.67:1	9.0	234
<b>300</b>	1.79:1	8.0	187
<b>325</b>	1.88:1	8.0	242
<b>350</b>	1.88:1	8.0	244
<b>383</b>	2:1	8.0	275
<b>375</b>	1.33:1	12.0	188
<b>375-OX</b>	1.33:1	12.0	188
<b>333</b>	1.86:1	8.0	222
<b>PUMP 99</b>		Not in gallons	361

Compression ratio APPLIES TO BULK PACKAGING ONLY.

(@ ambient temp and 2200 psi.)

For J-Sticks and Plugs see chart on opposite side of page.

Note: Compression may be slightly higher when compressed at higher pressure and some cook off may occur at high temperatures.

# STEAM SERVICE

## Curing Compounds

Product	Temp Limit	Valve Packing	Sealant	Description	Application	Add Accelerator (Optional)	Packaged
<b>F-250</b> <b>F-150</b> <b>F-50</b>	950°F 510°C	YES	YES	Black, fibrous, semi flexible material	General purpose steam, valves, flanges, enclosures	Below 450°F 232°C	5/8" x 3" Plugs J-Sticks Bulk Gallons
<b>560</b> <b>454</b> <b>454-T</b> <b>990</b>	950°F 510°C	NO	YES	Brown, dense, pliable	Flanges, clamps, enclosures	Below 500°F 260°C	5/8" x 3" Plugs J-Sticks Bulk Gallons
<b>909</b> <b>CV-600</b>	950°F 510°C	NO	YES	Extremely dense (909) Heavily fibered paste (CV-600)	High pressure steam, gaps, bad blows, flanges, enclosures	Below 550°F 288°C	5/8" x 3" Plugs J-Sticks Bulk Gallons
<b>770</b>	950°F 510°C	NO	YES	Paste or liquid, excellent travel	Flanges, enclosures, threads, tight gaps	Below 550°F 288°C	Quarts Gallons
<b>402</b> <b>402-CF</b>	500°F 260°C	NO	YES	Semi-solid extruded rubber (available with carbon fiber)	Flanges, enclosures	N/A	5/8" x 3" Plugs
<b>400</b>	450°F 232°C	NO	YES	One part rubber compound	Flanges, enclosures, clamps	N/A	10.3 fl. oz. tube, 1 gal. pail, 4.5 gal. pail
<b>410</b>	600°F 315°C	NO	YES	One part rubber compound	Flanges, enclosures, clamps	N/A	10.3 fl. oz. tube, 1 gal. pail, 4.5 gal. pail

## Non-Curing Compounds

Product	Temp Limit	Valve Packing	Sealant	Description	Application	Packaged
<b>VP-1000</b>	600°F 316°C	YES	YES	Fibrous, lubricating	Valves and enclosures	5/8" x 3" Plugs J-Sticks Bulk Gallons
<b>340</b>	500°F 260°	YES	YES	PTFE / graphite, fibrous	Valves, flanges, enclosures	5/8" x 3" Plugs
<b>300, 325</b> <b>333, 350</b>	500°F 260°C	YES	YES	PTFE fibers and fillers suspended in blended carriers	Valves, flanges, enclosures	5/8" x 3" Plugs J-Sticks Bulk Gallons
<b>289</b> <b>389</b>	1800°F 982°C	YES	YES	Graphite based, fibrous	Valves, flanges, enclosures	5/8" x 3" Plugs J-Sticks Bulk Gallons
<b>VP-1200</b>	1200°F 649°C	YES	YES	Fibrous, lubricating	Valves, flanges, enclosures	5/8" x 3" Plugs J-Sticks Bulk Gallons

# STEAM SERVICE AND WATER SERVICE

## Super Heated Steam 800°F and above

Product	Temp Limit	Valve Packing	Sealant	Description	Applications	Curing	Packaged
<b>CJ-429</b> <b>CJ-650</b>	To 1800°F To 982°C	NO	YES	Sealant Refractory Hybrid Paste or Putty	Clamps, enclosures, flanges	YES	5/8" x 3" Plugs J-Sticks Bulk Gallons
<b>464</b>	To 1350°F To 732°C	NO	YES	Brown, dense, pliable	Flanges, enclosures	YES	5/8" x 3" Plugs J-Sticks
<b>411</b>	To 1350°F To 732°C	NO	YES	Brown liquid	Tight gaps, threads, excellent travel	YES	Quarts Gallons
<b>289</b> <b>389</b>	To 1800°F To 982°C	YES	YES	Graphite sealant, Thick putty	Flanges, enclosures, threads, tight gaps	NO	5/8" x 3" Plugs J-Sticks Bulk Gallons
<b>VP-1200</b>	To 1200°F To 649°C	YES	YES	Lubricating valve packing/sealant	Flanges, enclosures	NO	5/8" x 3" Plugs J-Sticks Bulk Gallons

## Water Service

Product	Temp Range	Valve Packing	Sealant	Curing	Description	Application	Additional Bridging	Package
<b>400</b> <b>410</b>	-85°F to 450°F -65°C to 232°C  (410, to 600°F/315°C)	NO	YES	YES	One part rubber compound	Flanges, enclosures, clamps	Dry-Pak 1,3,8,16	10.3 fl. oz. tube, 1 gal. pail, 4.5 gal. pail
<b>402</b> <b>402-CF</b>	-50°F to 500°F -46°C to 260°C	NO	YES	YES	Semi-solid extruded rubber. Available with carbon fiber	Flanges, enclosures, clamps	N/A	5/8" x 3" Plugs J-Sticks
<b>VP-1000</b>	-25°F to 600°F -32°F to 316°C	YES	YES	NO	Fibrous, lubricating	Valves, enclosures	N/A	5/8" x 3" Plugs J-Sticks Bulk Gallons
<b>409</b>	-60°F to 500°F -51°C to 260°C	NO	YES	YES	2 part rubber compound	Flanges, enclosures, clamps	Dry-Pak 1,4,5,8,16	Pint kits Quart kits Gallon kits
<b>300</b> <b>325</b> <b>340</b> <b>350</b>	-180°F to 500°F -117°C to 232°C	YES	YES	NO	PTFE fibers and fillers suspended in blended carriers	Flanges, enclosures, clamps, valves	Dry-Pak 5,14	5/8" x 3" Plugs J-Sticks Bulk Gallons



# BOILER FEED WATER AND CONDENSATE

Because of the elevated temperatures and pressures, BOILER FEED WATER can be one of the toughest applications. 560, 990 and CV-600 are the recommended compounds. We also recommend that Deacon accelerator be added to these compounds when sealing BOILER FEED WATER. The accelerated cure time is essential to containing and sealing the leak, because of the aggressive nature of this application.

When the application is CONDENSATE, 560, 990 and CV-600 are also excellent choices. Remember when the process is BOILER FEED WATER or CONDENSATE; always add 103-P Accelerator.

At temperatures of up to 500°F (260°C), 402/402-CF Rubber Compound can also be used on CONDENSATE and Boiler Feed Water applications.

Product	Valve Packing	Sealant	Temp Limit
<b>990 CV-600</b>	NO	YES	950°F/510°C
<b>560</b>	NO	YES	950°F/510°C
<b>340</b>	YES	YES	500°F/260°C
<b>402 402-CF</b>	NO	YES	500°F/260°C

## Boiler Feed/Condensate Compounds (Silica Free)

### 720-SF

*Fibrous sealant mixture with a thermally reactive base*  
**250°F to 950°F (121°C to 510°C)**

### 411 Liquid

*Thick liquid sealant with thermally reactive base*  
**600°F to 1350°F (315°C to 732°C)**

### Dry-Pak 12

*Mixture of dry fibers for added bridging capability*  
**up to 1350°F (732°C)**

### SF-ACC

*Accelerate the cure rate of Deacon 720-SF and Deacon 411 Liquid*

## Line Kill/Valve Kill

When you want to kill or plug, a line or valve, the compound choice will depend on the process and the temperature of the application. For STEAM, BOILER FEED WATER, or CONDENSATE, 560, 990, CV-600, 402-CF and 400 Grade Rubber are the recommended compounds. (For other applications, chemicals, etc. refer to the Deacon Application Reference Guide). 103-P Accelerator should be added to 990, 560 and CV-600 to accelerate the cure time. The quicker cure time is a valuable asset when killing or plugging a line or valve. 560, 990, CV-600 and 400 Grade Rubber can all be bulked up for additional bridging with Dry-Pak Fiber Mixtures.

Product	Valve Packing	Sealant	Temp Limit
<b>990 CV-600 560</b>	NO	YES	950°F/510°C
<b>400</b>	NO	YES	450°F/232°C
<b>410</b>	NO	YES	600°F/316°C
<b>402 402-CF</b>	NO	YES	500°F/260°C

# EXTREME HEAT

## Extreme Hot Air, Gases, Super Heated Steam

For these applications Deacon gives you the flexibility of choosing a sealant compound at temperatures where previously, refractory products may have been your only option.

### CJ-429 or CJ-650

Sealant/Refractory Hybrid to 1800°F (982°C).

Excellent resistance to thermal shock, not brittle like ceramics or mortars.



### 289 or 389

Graphite based to 1800°F (982°C).

Sealant/packing will remain flexible at elevated temperatures



## Injectable Refractories/Hot Air Repair



### 3000

*Pumpable refractory, hard setting, excellent insulator, good bridging.*

250°F (121°C) to 1500°F (816°C) (K-Factor results available)

### 7000

*Pumpable insulating compound.*

Best insulator; sets firm, not brittle. Allows for movement. 250°F (121°C) to 2000°F (1093°C) (K-Factor results available)

### Procedural Warning:

During the curing process these compounds will release moisture in the form of steam. The containment enclosure that this compound is injected into must contain a sufficient number of vent ports so as to allow the steam to escape and to avoid a buildup of pressure within the enclosure. The design calculations of your hardware should take into account both the proper number and size of vent ports as well as the injection pressure of the compound. Compound should be injected at a rate that will allow you to monitor the internal pressure of the hardware to avoid over pressurization of either the leak sealing hardware or the original equipment.

We do not recommend pre-packing the hardware or beginning the injection process without the presence of a heat source. This is a thermal curing compound. A heat source (min. of 250°F/121°C) must be present during the injection process. The injection process must insure that the compound is exposed to heat upon introduction to the hardware to avoid pockets of uncured material and the potential internal pressure buildup. Failure to heed this warning could lead to catastrophic failure of the original equipment or the leak sealing hardware.

# HOT OIL, DOWTHERM AND GASOLINE

3100-S, 302 and 404 are the recommended compounds for sealing HOT OIL and GASOLINE.

3100-S and 302 can also be used on DOWTHERM.

## Deacon 404

**2 PART RUBBER SEALANT**

**-88°F to 230°F (-66°C to 110°C)**

Not for use on Dowtherm

## Deacon 302

**NON-CURING**

**0°F to 400°F (-18°C to 204°C)**

## Deacon 3100-S or 454

**HEAT CURING**

**250°F to 950°F (121°C to 510°C).**

Add accelerator below 500°F (260°C)





# SPECIALTY APPLICATIONS

## Oxygen/Chlorine Service

375-OX Sealant Compound was tested and passed the requirements of the liquid oxygen impact sensitivity tests. The tests were run at an energy level of 72 ft-lbs according to specification ASTM D2512. These certifications are available for shipment with your order. 375 is our recommendation for chlorine service. This is a non-curing PTFE based sealant compound with good bridging capabilities. Deacon 375-OX tested at NASA White Sands Test Facility.



## Clean Line Sealants/ Nuclear

Deacon manufactures a line of Commercial Grade sealants and packings that are supplied with a batch analysis report for low melting point metals, halogenated compounds and sulfur and its compounds. High Temperature Thermosetting Compound, Liquid Rubber Compound, Extruded Rubber, Dry-Pak Mixture, Non-Curing Valve Packing, Graphite Packing, and Accelerator. Contact us for tech sheets and SDS information.



## V.O.C. Service

289 and 389 are V.O.C. service compounds. These are graphite based compounds for use when working on applications where V.O.C.'s emitting from the leak are detected by an organic vapor analyzer (O.V.A. Meter). 389 has a solid content of 100% graphite. Both compounds are non-curing and have good bridging capabilities.



## Importance of Using Accelerator

Deacon thermosetting resin based compounds will state on the tech sheet that curing can be accelerated by the use of 103-P accelerator. Understanding the importance of using accelerator is critical to getting the maximum performance from these thermosetting compounds.

In applications under 600°F (315°C) and or applications of a large volume of compound, Deacon accelerator can reduce the cure time by as much as 75%. 103-P Accelerator is not a catalyst. Heat must still be present to achieve a cure, but when using accelerator in the presence of heat, the cure will take place much quicker than without accelerator

This accelerated cure rate can be critical, especially in applications on boiler feed water (extremely moist and high volume) or thick cross sections of compound (where the compound will cure closest to the heat, but then insulate itself from the heat) and in applications of high pressure (quicker cure will allow compound to bridge gaps). It is not recommended to use accelerator over 600°F. This can cause the compound to cure too quickly and cause a powdering effect of the compound.

Application Instructions: Follow usage recommendations on tech sheets and labels for recommended amount of accelerator to be used. 103-P accelerator is a powder. For best results, flatten out compound and pour recommended amount evenly down the center. Fold the compound around the accelerator and knead the accelerator into the compound as thoroughly as possible. Upon injection, accelerator will become more thoroughly mixed into compound. It is also possible to add accelerator to 770 Liquid and dip the Plugs and J-Sticks into the 770- L before injecting. Refer to SDS before using. Wear proper protection.

***This information is only intended as a guide. Cure times will vary based on actual conditions.***

# SAFETY

## Safety Report #32691

DEACON Has issued the following report, in response to our customers' requests for additional information, on safe working practices using Deacon on-line injectable sealants and packings.

Deacon compounds are formulated with two goals in mind. One is to work aggressively, simply, and consistently to seal leaking flanges, valves, enclosures, etc., with a minimal amount of injection pressure thus creating a flexible type seal, that reduces and in some cases, eliminates the need for re-pumps.

Secondly, to formulate a compound that can be used safely and without excessive risk to the technician in the field and the environment.

Due to the nature of the on-line leak sealing business, you as a technician are commonly interacting with various types of situations involving extreme temperatures, pressures, and a wide range of commercial chemicals. We are quite sure that each contractor has their own safety programs already in place to handle the many situations that arise every day.

With questions pertaining to Deacon Compounds at elevated temperatures (150°F/66°C) and above, here are our recommendations as the manufacturer:

- All sealant compounds when heated go through a process of releasing gases or vapors known as (out gassing or gassing off). This enables the compound to in some cases cure and change its consistency from a paste or semi-solid to a tough, durable, flexible gasket like solid.
- Application such as large open end buildings (steel mill type), or piping systems outside where vapors cannot gather and there is sufficient air movement, respirators may not be needed.
- Applications where vapors may collect such as small boiler rooms, tunnels, manways, and enclosed areas, vapors may be controlled through various mechanical means. These may include fans and exhaust systems, opening doors, windows, and respirators are recommended.
- Applications and or situations where mechanical means of controlling vapors and gases is not an option then respirators or self contained breathing apparatus is recommended.
- When removing an enclosure, flange ring, or separating flanges, and the cured compound is to be sanded or mechanically ground, we recommend that the surface area be kept wet with water as to form a sludge rather than create a dusty situation. Always avoid breathing any forms of dusts or vapors.
- In choosing the right respirator, canisters approved for solvent and organic vapors are recommended.
- In our opinion Deacon Compounds are safe, and easy to work with by professionally trained personnel when using common sense and following the proper safety procedures.
- Wear full face shield and skin protection if determined necessary.
- Consult Deacon SDS and technical information before use.

The situations covered here pertain to the use of Deacon Compounds. Each situation must be evaluated as to the chemical being sealed, the plant atmosphere, and safety regulations at each work site.

Final safety decisions on respirators, protective clothing, safety procedures, etc., should be an on-site determination by plant safety personnel, the technician, and his supervisors.

Please call us at (724) 225-8008 with any safety questions regarding Deacon Compounds Safety Department

## Injection and Compression Outgassing Pressure Build Up

Deacon injectable packings and sealants are manufactured in a variety of consistencies. They range from liquids and pastes, to putty-like compounds. Formulated for various types of leaks, these materials are designed to be injected with minimal injection pressure.

These products consist of fibers, fillers, resins, and solvents. The solvents aid in storage, shelf- life, and adjusting the final consistency of the end product. The carriers (resins) and solvents are determined by the service temperature, application, and media to be sealed. Because of the thick viscosity of the ingredients, during the mixing operation some air is trapped inside the compound. When injected under gun pressure some compression of the material will occur.

When injected under temperature and pressure, the compounds go through a chemical and physical change known as COOK-OFF. This process allows for the material to release the solvents and gas off which begins the curing process. Also, be aware that gases or liquids venting can be flammable. Each application should be evaluated to determine if precautions need to be taken to avoid a flash or fire. (see Flash Points and Flammability on pg. 24)

After cook-off occurs, some shrinkage, pocketing, and honeycombing may occur. In this situation re-injection of additional material will be needed to compress the cured compound and refill any remaining voids.

This re-injection process insures that a dense, strong, long lasting seal is achieved.

Manufacturer recommendations for injection pressures should be strictly adhered to with reasonable safeguards in place. When the compounds are cooking off and curing, vapors and gases are given off. This could cause some pressure to develop in a closed application.

Most gassing-off occurs during the initial injection when the injection valves are open and the gases are readily vented providing that adequate temperature is present. Steps should be taken to assure that the injection pressure in conjunction with any pressure that may occur from curing (gassing-off), does not exceed the pressure limitations of the piping system.

The information and recommendations of DEACON concerning these products, is based upon laboratory tests, customer feedback and experience, and to the best of our knowledge and belief are true and accurate. Since conditions of actual use are beyond our control, the recommendations or suggestions are made without warranty, expressed or implied.

# SAFETY

## Flash Points & Flammability

In regards to safety in the workplace, we would like to caution Technicians as to the following:

It is quite common that you will be working on applications where the temperature of the job exceeds the flash point of the compound recommended. This is true not just of Deacon Compounds, but with many common place industrial sealants and lubricants. Be sure to familiarize yourself with any technical information that is available as well as the SDS before injecting any compound. Always be aware of the possibility of a flash, and the hazards that can result.

Every effort should be taken to eliminate the possibility of a flash or a fire. Following are some helpful recommendations that should be considered.

- Always have the appropriate fire extinguishing device(s) readily available and make certain that all personnel are trained to use the device correctly.
- When applicable a purge or shield can be used to reduce the risk of a flash. The type of purge or shield (Steam, Nitrogen, etc.) will depend upon the application and process being sealed. Check with your Safety Department or Plant Personnel to determine what is best for your specific requirement.
- Remove excess compound that may accumulate through extrusion or cook-off, from any hot surfaces, and maintain a clean working environment throughout your procedure.
- Remove or cover any insulation to avoid buildup of compound that may create an oxygen rich environment with a flash or an auto ignition type hazard.
- Always have the appropriate respirator available (see safety report #32691) to reduce personal exposure to off gases.

Safety should always be addressed through your companies recommended procedures, and in conjunction with plant personnel recommendations.

**Flash point:** The temperature at which a liquid or volatile solid gives off vapor sufficient to form an ignitable mixture with the air near the liquid or solid surface.

**Auto-Ignition point:** The minimum temperature required to initiate or cause self- sustained combustion in any substance in the absence of a spark or flame.

## Warning Concerning Ambient Injections

Applications Injected and then brought up to operating temperature, can be a problem

Due to circumstances that make it impossible or unsafe to perform a leak sealing injection at operating temperature, you may be asked to pre-pak or pre-inject an application that will then be brought up to operating temperature.

This is not the recommended way to perform a leak sealing injection.

In these situations several start-up factors need to be addressed and precautions taken:

- Will the compound expand when heated?
- Will it cure properly?
- Will there be compound extrusion?
- Will sealant gassing-off factors result in excess internal pressure?
- Is there a concern of carrier or solvent extrusion causing a flash?
- Is there any possible way to safely heat the unit while injecting to avoid an ambient injection situation?

Discussing these factors and other possible concerns with the plant personnel is of the utmost importance before performing any injection of this type. A strategy must be mapped out in advance that addresses these concerns and assures a safe and successful leak sealing operation.



# CHEMICAL COMPATIBILITY APPLICATION CHART

Acetaldehyde	I, K, M
Acetic Acid	
Acetic Acid to 100%	K
Acetic Acid to 100% Ambient	H
Acetic Acid to 100% to 200°F (93°C)	I
Acetic Acid to 10%	Q
Acetic Anhydride	I, K
Acetic Ether	see Ethyl Acetate
Acetic Oxide	see Acetic Anhydride
Acetone	C, D, E, I, K
Acetonitrile	B, D, I, J, K, M
Acetoxyethane	see Ethyl Acetate
Acetylene	C, D, E, I, J, K
Acetylene Trichloride	see Trichloroethylene
Acraldehyde	see Acrolein
Acrolein	C, D, E, I, K, M, R
Acrylic Acid	I, K
Acrylonitrile	C, D, E, K, M
Adipic Acid	C, D, E, I, J, K, M, R
Alcohol	see Ethyl Alcohol
Allyl Chloride	C, D, E, I, J, K, M
Allyl Chloride to 120°F (49°C)	H
Aluminum Bromide	I, K, Q, R
Aluminum Chloride	I, K
Amino Benzene	see Aniline
Aminocyclohexane	see Cyclohexylamine
Aminomethane	see Methylamine
m-Aminonitrobenzene	see m-nitroaniline
2-Amino Pentane	see Diethylamine
Ammonia (Gas)	I, K, Q, P
Ammonia (Gas) to 200°F (93°C)	G, H
Ammonia (Liquid)	I, K
Ammonia (Liquid) to 200°F (93°C)	G, H
Ammonium Acetate	see Acetic Acid
Ammonium Bichromate	O
Ammonium Chloride	I, K, Q
Ammonium Dichromate	see Ammonium Bichromate
Ammonium Hydroxide	I, K, R
Ammonium Muriate	see Ammonium Chloride
Ammonium Nitrate	O
Ammonium Phosphate, Dibasic	C, D, E, G, H, I, J, K
Ammonium Polysulfide	I, K, R
Ammonium Sulfate	C, D, E, I, J, K
Ammonium Sulfide	see Ammonium Polysulfide

## DEACON SEALANT

- (A) 3100-S, 800-T
- (B) F250, F150, F50
- (C) 454-T, 560, 990, CV-600
- (D) 770L,  
770P
- (E) 454, 464, 411, 440
- (F) CJ-429, CJ-650
- (G) 400, 410
- (H) 409
- (I) 402, 402-CF
- \* (J) 302
- \* (K) 300, 325, 333,  
348, 350, 383
- \* (M) 289, 389,  
489
- \* (N) 375-OX
- \* (O) 375
- \* (P) 340
- (Q) 404
- (R) 460
- \* Non-Curing Compound

Listed compound recommendations are based on chemical compatibility. Compounds are not listed in order of preference. Application conditions (temperature, pressure, etc.) and sealant performance requirements should be considered when making your compound selection.

# CHEMICAL COMPATIBILITY APPLICATION CHART

Amprolene	see Ethylene Oxide
Amyl Alcohol	I, K, M, P, Q, R
Amyl Hydride	see n-Pentane
Aniline	C, D, E, I, J, K, M, R
Anilino Benzene	see Diphenylamine
Anthium Dioxide	see Chlorine Dioxide
Aqua Ammonia	see Ammonium Hydroxide
Argon	A, B, C, D, E, G, H, I, J, K, M, P
Aromatic Solvent	A, C, D, E, J, K, M
Arsenic	A, C, D, E, H, I, J, K, M
Asphalt	B, C, D, E, J, K, M, Q
Benzaldehyde	A, B, C, D, E, I, J, K, M
Benzeneamine	see Aniline
Benzene	A, B, C, D, E, J, K, M
Benzene Carbaldehyde	see Benzaldehyde
O-Benzene Dicarboxylic Acid	see Phthalic Acid
Benzene Chloride	see Chlorobenzene
Benzene Isopropyl	see Cumene
Benzinoform	see Carbon Tetrachloride
Benzohydroquinone	see Hydroquinone
Benzoic Aldehyde	see Benzaldehyde
Benzoline	see Petroleum Spirits
Berthollet Salt	see Potassium Chlorate
Biethylene	see 1,3-Butadiene
Bimethyl	see Ethane
Black Liquor	A, C, D, E, I, J, K, M
Boric Acid Boric Acid to 120°F (49°C)	C, D, E, I, J, K, M, R H
Boron Trifluoride	E, J, K, M
1,3-Butadiene	Call for Recommendation
Butanal	see n-Butylaldehyde
Butane	A, C, D, E, J, K, M, Q, R
Butanoic Acid	see n-Butyric Acid
1-Butene	C, D, E, J, K, M
n-Butyl Acetate	C, D, E, I, K, M
Butyl Alcohol	C, D, E, I, K, M, R
N-Butylcarbinol	see Amyl Alcohol
Butylene	see 1-Butene
Butyl Ethanoate	see n-Butyl Acetate
Butyl Ethylene	see Hexene
1,4-Butyndiol	K
n-Butylaldehyde	C, D, E, I, J, K, M
n-Butyric Acid	I, K

## DEACON SEALANT

- (A) 3100-S, 800-T
- (B) F250, F150, F50
- (C) 454-T, 560, 990, CV-600
- (D) 770L,  
770P
- (E) 454, 464, 411, 440
- (F) CJ-429, CJ-650
- (G) 400, 410
- (H) 409
- (I) 402, 402-CF
- \* (J) 302
- \* (K) 300, 325, 333,  
348, 350, 383
- \* (M) 289, 389,  
489
- \* (N) 375-OX
- \* (O) 375
- \* (P) 340
- (Q) 404
- (R) 460
- \* Non-Curing Compound

Listed compound recommendations are based on chemical compatibility. Compounds are not listed in order of preference. Application conditions (temperature, pressure, etc.) and sealant performance requirements should be considered when making your compound selection.

# CHEMICAL COMPATIBILITY APPLICATION CHART

Butyric Aldehyde	see n-Butyraldehyde
Calcium Chlorate	O
Calcium Chloride	C, D, E, H, I, K, Q, R
Calcium Stearate Calcium Stearate to 120°F (49°C)	C, D, E, K G H, R
Carbamates	A, C, D, E, I, J, K, R
Carbinol	see Methyl Alcohol
Carbitol	see Diethylene Glycol
Carbolic Acid	see Phenol
Carbon Dioxide	A, B, C, D, E, G, H, I, K, M, P, Q
Carbon Disulfide	C, D, E, K, M
Carbon Monoxide	A, C, D, E, G, I, K, M, P
Carbon Oil	see Benzene
Carbon Oxychloride	see Phosgene
Carbon Sulfide	see Carbon Disulfide
Carbon Tetrachloride	C, D, E, K
Carbonic Acid Gas	see Carbon Dioxide
Carbonic Anhydride	see Carbon Dioxide
Carbonic Oxide	see Carbon Dioxide
Catalyst	A, C, D, E, F, M
Caustic Potash	see Potassium Hydroxide
Caustic Soda	see Sodium Hydroxide
Chlorethene	see Vinyl Chloride
Chlorethyl	see Ethyl Chloride
Chlorinated Biphenyl	see Polychlorinated Biphenyls
Chlorinated Hydrocarbons, Aliphatic	E, J, K, M
Chlorine	O
Chlorine (Gas)	O
Chlorine Dioxide	O
Chlorine Peroxide	see Chlorine Dioxide
Chloroallylene	see Allyl Chloride
Chlorobenzene	C, D, E, J, K, M
Chlorobiphenyl	see Polychlorinated Biphenyls
Chloroethane	see Ethyl Chloride
Chloroethene	see Methyl Chloroform
Chloroethylene	see Vinyl Chloride
Chloroformyl Chloride	see Phosgene
Chlorohydric Acid	see Hydrochloric Acid
Chloromethane	see Methyl Chloride
Chloryl Radical	see Chlorine Dioxide
Citric Acid	B, C, D, E, I, J, K, R
Coal Gas	see Hydrocarbon Gases
Coal Oil	see Petroleum Crude

## DEACON SEALANT

- (A) 3100-S, 800-T
- (B) F250, FI50, F50
- (C) 454-T, 560, 990, CV-600
- (D) 770L,  
770P
- (E) 454, 464, 411, 440
- (F) CJ-429, CJ-650
- (G) 400, 410
- (H) 409
- (I) 402, 402-CF
- \* (J) 302
- \* (K) 300, 325, 333,  
348, 350, 383
- \* (M) 289, 389,  
489
- \* (N) 375-OX
- \* (O) 375
- \* (P) 340
- (Q) 404
- (R) 460
- \* Non-Curing Compound

Listed compound recommendations are based on chemical compatibility. Compounds are not listed in order of preference. Application conditions (temperature, pressure, etc.) and sealant performance requirements should be considered when making your compound selection.



# CHEMICAL COMPATIBILITY APPLICATION CHART

Coal Naphtha	see Benzene
Coal Tar Naphtha	see Naphtha
Coal Tar Pitch	A, B, C, D, E, J, K, M
Coke Oven Gas	E, F, J, M
Colamine	see Ethanolamine
Cresol	A, C, D, E, K, M, R
Cresylic Acid	see Cresol
Crude Oil	A, C, D, E, J, K, M, P, Q
Cumene	B, C, D, E, J, K, M, R
Cumyl Hydroperoxide	see Isopropylbenzene Hydroperoxide
Cyanide	C, D, E, J, K
Cyanoethylene	see Acrylonitrile
Cyanomethane	see Acetonitrile
Cyclohexane	C, D, E, J, K, M, P, Q, R
Cyclohexanol	C, D, E, K, M, R
Cyclohexatriene	see Benzene
Cyclohexyl Alcohol	see Cyclohexanol
Cyclohexylamine	C, D, E, I, J, K, M
DEA (Diethanolamine)	see Diethanolamine
DEG (Diethylene Glycol)	see Diethylene Glycol
Denatured Alcohol	C, D, E, I, K, Q, P, R
Denatured Spirits	see Denatured Alcohol
Deuterium Oxide	see Heavy Water
DCB (Dichloro Benzene)	see o-Dichloro Benzene
Diamine	see Hydrazine
Diammonium Hydrogen Phosphate	see Ammonium Phosphate, Dibasic
Diammonium Sulfate	see Ammonium Sulfate
m-Dichlorobenzene	C, D, E, K, M
o-Dichlorobenzene	C, D, E, J, K, M
1,1-Dichloroethane	B, C, D, E, J, K, M
Dichloroethylene	see Ethylene Dichloride
Dichloromethane	see Methylene Chloride
Dichlorotetrafluoroethane	B, C, D, E, K, M, Q
Diesel Fuel	A, C, D, E, J, K, M, Q, P, R
Diethanolamine	C, D, E, I, K, M
Diethyl	see Butane
Diethylamine	I, J, K, M
Diethylene Glycol	A, C, D, E, I, J, K, M, P, Q, R
Diethyleneimide Oxide	see Morpholine
Diethyl Oxide	see Ethyl Ether
Diglycol	see Diethylene Glycol
Dihydrogen Dioxide	see Hydrogen Peroxide
Dihydroxybenzene	see Hydroquinone

## DEACON SEALANT

- (A) 3100-S, 800-T
- (B) F250, F150, F50
- (C) 454-T, 560, 990, CV-600
- (D) 770L, 770P
- (E) 454, 464, 411, 440
- (F) CJ-429, CJ-650
- (G) 400, 410
- (H) 409
- (I) 402, 402-CF
- \* (J) 302
- \* (K) 300, 325, 333, 348, 350, 383
- \* (M) 289, 389, 489
- \* (N) 375-OX
- \* (O) 375
- \* (P) 340
- (Q) 404
- (R) 460
- \* Non-Curing Compound

Listed compound recommendations are based on chemical compatibility. Compounds are not listed in order of preference. Application conditions (temperature, pressure, etc.) and sealant performance requirements should be considered when making your compound selection.

# CHEMICAL COMPATIBILITY APPLICATION CHART

Diisopropyl Ether	see Isopropyl Ether
Diisopropyl Oxide	see Isopropyl Ether
Dimethyl	see Ethane
Dimethylamine	B, C, D, E, I, J, K, M
Dimethylbenzene	see Xylene
Dimethylenediamine	see 1,2 Ethanediamine
Dimethylene Oxide	see Ethylene Oxide
Dimethylformaldehyde	see Acetone
Dimethylformamide	E, I, J, K, R
Dimethyl Ketone	see Acetone
Dimethyl Methane	see Propane
Dimethylphthalate	B, C, D, E, I, J, K, M
Dimethyl Sulfate	K
Dimethyl Sulfoxide	B, C, D, E, J, K, M, R
Diolamine	see Diethanolamine
Diothene	see Polyethylene
Diphenylamine	B, C, D, E, J, K, M
Diphenylbenzene	see Terphenyls
Diphyl	see Phenyl Ether Biphenyl Mixture
Disodium Monosilicate	see Sodium Silicate
Disodium Sulfate	see Sodium Sulfate
Dithiocarbonic Anhydride	see Carbon Disulfide
Dithionic Acid	see Sulfuric Acid (fuming)
DMA (Dimethylamine)	see Dimethylamine
DMF (Dimethylformamide)	see Dimethylformamide
DMFA (Dimethylformamide)	see Dimethylformamide
DMP (Dimethylphthalate)	see Dimethylphthalate
DMS (Dimethyl Sulfate)	see Dimethyl Sulfate
DMSO (Dimethyl Sulfoxide)	see Dimethyl Sulfoxide
Dowtherm	see Phenyl Ether Biphenyl Mixture
Dowtherm A	see Phenyl Ether Biphenyl Mixture
Dowtherm E	see o-Dichlorobenzene
DPA (Diphenylamine)	see Diphenylamine
EDC (Ethylene Dichloride)	see Ethylene Dichloride
Epoxy Ethane	see Ethylene Oxide
Epoxy Propane	see Propylene Oxide
Erythrene	see 1,3-Butadiene
Ethanamine	see Ethylamine
Ethane	A, C, D, E, J, K, M
1,2 Ethanediamine	C, D, E, I, J, K, M
Ethanedichloride	see Ethylene Dichloride
Ethanethiol	see Ethyl Mercaptan
Ethanol	see Ethyl Alcohol

## DEACON SEALANT

- (A) 3100-S, 800-T
- (B) F250, FI50, F50
- (C) 454-T, 560, 990, CV-600
- (D) 770L, 770P
- (E) 454, 464, 411, 440
- (F) CJ-429, CJ-650
- (G) 400, 410
- (H) 409
- (I) 402, 402-CF
- \* (J) 302
- \* (K) 300, 325, 333, 348, 350, 383
- \* (M) 289, 389, 489
- \* (N) 375-OX
- \* (O) 375
- \* (P) 340
- (Q) 404
- (R) 460
- \* Non-Curing Compound

Listed compound recommendations are based on chemical compatibility. Compounds are not listed in order of preference. Application conditions (temperature, pressure, etc.) and sealant performance requirements should be considered when making your compound selection.

# CHEMICAL COMPATIBILITY APPLICATION CHART

Ethanolamine	I, K
Ethanoic Acid	see Acetic Acid
Ethanoic Anhydrate	see Acetic Anhydride
Ethene	see Ethylene
Ethene Oxide	see Ethylene Oxide
Ethene Polymer	see Propylene
Ethenyl Acetate	see Vinyl Acetate
Ethenyl-Benzene Homopolymer	see Styrene Polymer
Ether	see Ethyl Ether
Ether Muriatic	see Ethyl Chloride
Ethyl Acetate	B, C, D, E, H, I, K, M
Ethyl Alcohol Ethyl Alcohol to 100°F (38°C)	I, K, M, P, Q, R H
Ethyl Aldehyde	see Acetaldehyde
Ethyl Benzene	A, C, D, E, J, K, M, R
Ethyl Chloride	C, D, E, I, J, K, M, R
Ethyl Ether	K, M
Ethyl Hydroxide	see Ethyl Alcohol
Ethyl Hydride	see Ethane
Ethyl Mercaptan	C, D, E, I, K, M
Ethyl Silicate	B, C, D, E, I, J, K, M, R
Ethylacetic Acid	see n-Butyric Acid
Ethylamine	C, D, E, I, J, K, M
Ethyldimethylmethane	B, C, D, E, J, K, M
Ethylene	C, D, E, K, M, R
Ethylene Aldehyde	see Acrolein
Ethylene Bromide	see 1,2 Ethylene Dibromide
Ethylene Chloride	see Ethylene Dichloride
Ethylene Diamine	see 1,2 Ethanediimine
1,2-Ethylene Dibromide	C, D, E, J, K, M
Ethylene Dichloride	C, D, E, K, M
Ethylene Glycol Ethylene Glycol to 212°F (100°C)	C, D, E, I, J, K, M, R H
Ethylene Oxide	O
Ethylidene Chloride	see 1,1 Dichloroethane
Ethylolamine	see Ethanolamine
Ethyne	see Acetylene
Fermenticide Liquid	see Sulfur Dioxide
Fermin	see Dimethyl Phthalate
Flue Gas	C, D, E, F, G, K, M
Fluorine	Call for Recommendation
Fluosilicic Acid	see Silicofluoric Acid

## DEACON SEALANT

- (A) 3100-S, 800-T
- (B) F250, F150, F50
- (C) 454-T, 560, 990, CV-600
- (D) 770L,  
770P
- (E) 454, 464, 411, 440
- (F) CJ-429, CJ-650
- (G) 400, 410
- (H) 409
- (I) 402, 402-CF
- \* (J) 302
- \* (K) 300, 325, 333,  
348, 350, 383
- \* (M) 289, 389,  
489
- \* (N) 375-OX
- \* (O) 375
- \* (P) 340
- (Q) 404
- (R) 460
- \* Non-Curing Compound

Listed compound recommendations are based on chemical compatibility. Compounds are not listed in order of preference. Application conditions (temperature, pressure, etc.) and sealant performance requirements should be considered when making your compound selection.



# CHEMICAL COMPATIBILITY APPLICATION CHART

Formaldehyde Formaldehyde to 180°F (82°C) Formaldehyde to Ambient	A, C, D, E, J, K, M, P I H, Q
Formic Acid	I, K
Formic Aldehyde	see Formaldehyde
Formylic Acid	see Formic Acid
Freon	Call with specific type
Fuel Oil	see Diesel Fuel
Fural	see Furfural
Furfural Furfural to 160°F (71°C)	B, C, D, E, J, K, M I
Gas Oil	A, C, D, E, J, K, M, Q, R
Gasoline	A, C, D, E, J, K, M, Q, R
Glycinol	see Ethanolamine
Glycol	see Ethylene Glycol
Glycol Bromide	see 1,2 Ethylene Dibromide
Glycol Dichloride	see Ethylene Dichloride
Glycol Ether	see Diethylene Glycol
Grain Alcohol	see Ethyl Alcohol
Green Liquor	C, D, E, K, M, P
HCN (Hydrocyanic Acid)	see Hydrocyanic Acid
Heavy Water	G, I, J, K, R
Helium	A, C, D, E, G, H, I, J, K, M, P, Q, R
Hexahydroaniline	see Cyclohexylamine
Hexahydrobenzenamine	see Cyclohexylamine
Hexahydrobenzene	see Cyclohexane
Hexahydrophenol	see Cyclohexanol
Hexamethylene	see Cyclohexane
Hexamethylenediamine	see 1,6 Hexanediamine
Hexanaphthene	see Cyclohexane
Hexane	see n-Hexane
n-Hexane	A, C, D, E, J, K, Q, R
1,6 Hexanediamine	K
1,6 Hexanedioic Acid	see Adipic Acid
1-Hexene 1-Hexene to 100°F (38°C)	A, C, D, E, J, K, M, R Q
Hexene	see 1-Hexene
Hexone	A, C, D, E, I, K, M
Hydraulic Oil (Phosphate Ester)	A, C, D, E, I, J, K, M
Hydraulic Oil (Petroleum)	A, C, D, E, J, K, M, Q, P, R
Hydraulic Fluid (Pydrauls)	A, C, D, E, I, J, K, M, P
Hydrazine	O
Hydrazine-Benzene	see Phenylhydrazine
Hydrobromic Acid	I, K

## DEACON SEALANT

- (A) 3100-S, 800-T
- (B) F250, FI50, F50
- (C) 454-T, 560, 990, CV-600
- (D) 770L,  
770P
- (E) 454, 464, 411, 440
- (F) CJ-429, CJ-650
- (G) 400, 410
- (H) 409
- (I) 402, 402-CF
- \* (J) 302
- \* (K) 300, 325, 333,  
348, 350, 383
- \* (M) 289, 389,  
489
- \* (N) 375-OX
- \* (O) 375
- \* (P) 340
- (Q) 404
- (R) 460
- \* Non-Curing Compound

Listed compound recommendations are based on chemical compatibility. Compounds are not listed in order of preference. Application conditions (temperature, pressure, etc.) and sealant performance requirements should be considered when making your compound selection.

# CHEMICAL COMPATIBILITY APPLICATION CHART

Hydrocarbon Gases	A, C, D, E, J, K, M, P, R
Hydrochloric Acid	
Hydrochloric Acid to 100%	K
Hydrochloric Acid to 37% to 130°F (54°C)	I
Hydrochloride	see Hydrochloric Acid
Hydrocyanic Acid	C, D, E, I, K
Hydrofluoric Acid	
Hydrofluoric Acid to 100%	K
Hydrofluoric Acid to 65% to 70°F (21°C)	I
Hydrofluoric Acid to 30% to 176°F (80°C)	I
Hydrofluoric Acid to 23%	Q
Hydrogen	A, B, C, D, E, F, I, J, K, M
Hydrogen Bromide	see Hydrobromic Acid
Hydrogen Chloride	I, K
Hydrogen Cyanide	see Hydrocyanic Acid
Hydrogen Dioxide	see Hydrogen Peroxide
Hydrogen Fluoride	see Hydrofluoric Acid
Hydrogen Nitrate	see Nitric Acid
Hydrogen Peroxide	O
Hydrogen Sulfide	C, D, E, I, K, M, Q
Hydrophenol	see Cyclohexanol
Hydroquinone	B, C, D, E, I, J, K, M
Iodomethane	see Methyl Iodide
I, 3-Isobenzofurandione	see Phthalic Anhydride
Isobutanal	see Isobutyraldehyde
Isobutane	see 2-Methyl Propane
Isobutene	C, D, E, J, K, M, Q
Isobutyl Methyl Ketone	see Hexone
Isobutyraldehyde	B, C, D, E, I, J, K, M
Isobutyric Aldehyde	see Isobutyraldehyde
Isocyanide	see Cyanide
Isopentane	see Ethyldimethylmethane
Isoprene	O
Isopropanol	see Isopropyl Alcohol
Isopropyl Acetate	B, C, D, E, I, K, M
Isopropyl Acetone	see Hexone
Isopropyl Alcohol	
Isopropyl Alcohol to 100°F (38°C)	Q
Isopropylamine	B, C, D, E, K, M, R
Isopropyl Benzene	see Cumene
Isopropyl Benzene Hydroperoxide	O
Isopropyl Ether	B, C, D, E, K, M, Q
Kerosene	A, C, D, E, J, K, M, P, Q, R
Ketone Propane	see Acetone
LP Gas (Liquefied Petroleum Gas)	see Isobutene

## DEACON SEALANT

- (A) 3100-S, 800-T
- (B) F250, F150, F50
- (C) 454-T, 560, 990, CV-600
- (D) 770L, 770P
- (E) 454, 464, 411, 440
- (F) CJ-429, CJ-650
- (G) 400, 410
- (H) 409
- (I) 402, 402-CF
- \* (J) 302
- \* (K) 300, 325, 333, 348, 350, 383
- \* (M) 289, 389, 489
- \* (N) 375-OX
- \* (O) 375
- \* (P) 340
- (Q) 404
- (R) 460
- \* Non-Curing Compound

Listed compound recommendations are based on chemical compatibility. Compounds are not listed in order of preference. Application conditions (temperature, pressure, etc.) and sealant performance requirements should be considered when making your compound selection.

# CHEMICAL COMPATIBILITY APPLICATION CHART

Linseed Oil	C, D, E, H, I, J, K, M, P, Q, R
Lubricating Oils	A, C, D, E, J, K, M, P, Q
Maleic Anhydride	K
Maleic Anhydride over 500°F (260°C)	C, D, E
Marsh Gas	see Methane
Matting Acid	see Sulfuric Acid
MCB (Monochlorobenzene)	see Chlorobenzene
MDEA (Methyldiethanolamine)	see Methyldiethanolamine
MEA (Monoethanolamine)	see Ethanolamine
MEK (Methyl Ethyl Ketone)	see Methyl Ethyl Ketone
Methane	A, C, D, E, J, K, M, P, Q
Methane-Carboxylic Acid	see Acetic Acid
Methane Dichloride	see Methylene Chloride
Methane Tetrachloride	see Carbon Tetrachloride
Methanoic Acid	see Formic Acid
Methanol	see Methyl Alcohol
Methyl Acetate	C, D, E, I, J, K, M
Methyl Acetone	see Methyl Ethyl Ketone
Methyl Alcohol	C, D, E, I, K, M, P, R
Methylamine Methylamine to 100°F (38°C)	C, D, E, I, J, K, M, Q
Methyl Aldehyde	see Formaldehyde
Methyl Benzene	see Toluene
2-Methyl Butane	see Ethyldimethylmethane
Methyl Carbinol	see Ethyl Alcohol
Methyl Chloride	C, D, E, I, J, K
Methyl Chloroform	C, D, E, J, K, M
Methyl Cyanide	see Acetonitrile
Methyldiethanolamine	E, K
Methylene Chloride	K
Methylene Glycol	see Formaldehyde
Methyl Ethanoate	see Methyl Acetate
Methylethene	see Propene
I-Methylethylamine	see Isopropylamine
Methyl Ethyl Ketone	C, E, I, K, M, Q
Methyl Ethyl Methane	see Butane
Methyl Ethylene Oxide	see Propylene Oxide
Methyl Hydride	see Methane
Methyl Iodide	C, D, E, H, I, J, K, M
Methyl Isobutyl Ketone	see Hexone
Methyl Ketone	see Acetone
Methyl Methacrylate	B, C, D, E, J, K, M, Q
Methyl Methane	see Ethane

## DEACON SEALANT

- (A) 3100-S, 800-T
- (B) F250, FI50, F50
- (C) 454-T, 560, 990, CV-600
- (D) 770L,  
770P
- (E) 454, 464, 411, 440
- (F) CJ-429, CJ-650
- (G) 400, 410
- (H) 409
- (I) 402, 402-CF
- \* (J) 302
- \* (K) 300, 325, 333,  
348, 350, 383
- \* (M) 289, 389,  
489
- \* (N) 375-OX
- \* (O) 375
- \* (P) 340
- (Q) 404
- (R) 460
- \* Non-Curing Compound

Listed compound recommendations are based on chemical compatibility. Compounds are not listed in order of preference. Application conditions (temperature, pressure, etc.) and sealant performance requirements should be considered when making your compound selection.

# CHEMICAL COMPATIBILITY APPLICATION CHART

Methylpropane	see Butyl Alcohol
2-Methylpropane	A, C, D, E, J, K, M
2-Methylpropene	see Isobutene
2-Methylpropanol	see Isobutyraldehyde
Methyl Sulfate	see Dimethyl Sulfate
Methylsulfinylmethane	see Dimethyl Sulfoxide
Methylsulfoxide	see Dimethyl Sulfoxide
Methyl Toluene	see Xylene
Methyl Trichloromethane	see Methyl Chloroform
Metalic Arsenic	see Arsenic
MIBK (Methyl Isobutyl Ketone)	see Hexone
Microthene	see Propylene
Mineral Oil Mineral Oil to 200°F (93°C)	A, C, D, E, J, K, M, Q, P, R H
Mineral Spirits	A, C, D, E, J, K, M, Q, R
Monochlorobenzene	see Chlorobenzene
Monochloroethane	see Ethyl Chloride
Monochloromethane	see Methyl Chloride
Monoethanolamine	see Ethanolamine
Monoethylamine	see Ethylamine
Monoethylene Glycol	see Ethylene Glycol
Monoisopropylamine	see Isopropylamine
Monomethylamine	see Methylamine
Morpholine	A, B, C, D, E, J, K, M
Muriatic Acid	see Hydrochloric Acid
Naphtha	A, C, D, E, J, K, M, Q
Naphthalene	A, C, D, E, J, K, M, Q, R
Naphthene	see Naphthalene
Natural Gas	see Methane
Nitric Acid	O
Nitric Oxide	O
M-Nitroaniline	E, I, K
Nitrocarbol	see Nitromethane
Nitrogen	A, C, D, E, H, I, J, K, M, Q, P, R
Nitrogen Monoxide	see Nitric Oxide
Nitromethane	O
NOX Gases - over 500°F(260°C)	E, M
Octane	A, C, D, E, J, K, M, Q
Oil, Petroleum Oil, Petroleum under 212°F (100°C) Oil, Petroleum under 400°F (204°C) Oil, Petroleum over 400°F (204°C)	J, K, M, P, Q, R J, K, M, P, R A, C, D, E, M
Oleum	see Sulfuric Acid (fuming)

## DEACON SEALANT

- (A) 3100-S, 800-T
- (B) F250, F150, F50
- (C) 454-T, 560, 990, CV-600
- (D) 770L,  
770P
- (E) 454, 464, 411, 440
- (F) CJ-429, CJ-650
- (G) 400, 410
- (H) 409
- (I) 402, 402-CF
- \* (J) 302
- \* (K) 300, 325, 333,  
348, 350, 383
- \* (M) 289, 389,  
489
- \* (N) 375-OX
- \* (O) 375
- \* (P) 340
- (Q) 404
- (R) 460
- \* Non-Curing Compound

Listed compound recommendations are based on chemical compatibility. Compounds are not listed in order of preference. Application conditions (temperature, pressure, etc.) and sealant performance requirements should be considered when making your compound selection.



# CHEMICAL COMPATIBILITY APPLICATION CHART

Orthoboric Acid	see Boric Acid
Orthodichlorobenzene	see o-Dichlorobenzene
Othrophosphoric Acid	see Phosphoric Acid
Oxane	see Ethylene Oxide
Oxomethane	see Formaldehyde
Oxygen	N
Paint Thinner	see Mineral Spirits
Paraffin Oil	see Mineral Oil
PCB (Polychlorinated Biphenyl)	see Polychlorinated Biphenyls
Pearl Ash	see Potassium Chlorate
n-Pentane	A, C, D, E, J, K, M
Pentyl Alcohol	see Amyl Alcohol
Periodin	see Potassium Perchlorate
Peroxides, Inorganic	O
Peroxides, Organic	O
Petrol	see Gasoline
Petroleum Crude	A, C, D, E, J, K, M, P
Petroleum Ether	see Petroleum Spirits
Petroleum Pitch	see Asphalt
Petroleum Spirits	A, C, D, E, J, K, M, P, Q
Phenic Acid	see Phenol
Phenol	A, C, D, E, K, M, R
Phenylamine	see Aniline
N-Phenylbenzeneamine	see Diphenylamine
Phenyl Chloride	see Chlorobenzene
Phenylethane	see Ethylbenzene
Phenyl Ether-Biphenyl Mixture	A, C, D, E, J, K, M
Phenylhydrazine	A, B, C, D, E, J, K, M
Phenyl Hydride	see Benzene
Phenylic Acid	see Phenol
Phenylmethane	see Toluene
2-Phenylpropane	see Cumene
Phosgene	B, C, D, E, I, K, M
Phosphoric Acid	
Phosphoric Acid to 100%	K
Phosphoric Acid to 100% to 250°F (121°C)	I
Phosphoric Acid to 50%	Q
Phthalic Acid	I, K, R
Phthalic Acid Methyl Ester	see Dimethyl Phthalate
Phthalic Anhydride	I, K, R
Polychlorinated Biphenyls	K
Polyethylene	C, D, E, G, H, I, J, K, M
Potash	see Potassium Carbonate
Potassium Carbonate	C, D, E, I, J, K, R

## DEACON SEALANT

- (A) 3100-S, 800-T
- (B) F250, F150, F50
- (C) 454-T, 560, 990, CV-600
- (D) 770L, 770P
- (E) 454, 464, 411, 440
- (F) CJ-429, CJ-650
- (G) 400, 410
- (H) 409
- (I) 402, 402-CF
- \* (J) 302
- \* (K) 300, 325, 333, 348, 350, 383
- \* (M) 289, 389, 489
- \* (N) 375-OX
- \* (O) 375
- \* (P) 340
- (Q) 404
- (R) 460
- \* Non-Curing Compound

Listed compound recommendations are based on chemical compatibility. Compounds are not listed in order of preference. Application conditions (temperature, pressure, etc.) and sealant performance requirements should be considered when making your compound selection.

# CHEMICAL COMPATIBILITY APPLICATION CHART

Potassium Chlorate	O
Potassium Chloride	C, D, E, H, I, J, K, Q
Potassium Hydrate	see Potassium Hydroxide
Potassium Hydroxide Potassium Hydroxide to 120°F (49° C)	K I, H
Potassium Hyperchloride	see Potassium Perchlorate
Potassium Nitrate	O
Potassium Nitrite	O
Potassium Oxymuriate	see Potassium Chlorate
Potassium Perchlorate	O
Potassium Sulfate Potassium Sulfate to 120°F (49°C)	I, K, R H, Q
Potassium Sulfide Potassium Sulfide to 120°F (49°C)	I, K, R H
Procarbazine	B, C, D, E, J, K, M
1,2 Propanediol	see Propylene Glycol
Propane	C, D, E, G, H, I, J, K, M, Q
Propanone	see Acetone
2-Propanol	see Isopropyl Alcohol
Propene	C, D, E, J, K, M, P, Q
1-Propene	see Propene
Propenenitrile	see Acrylonitrile
2-Propenyl Chloride	see Allyl Chloride
2-Propylamine	see Isopropylamine
2-Propyl Acetate	see Isopropylacetate
Propylcarbinol	see Butyl Alcohol
Propylene	see Propene
Propylene Glycol	I, K, M, Q, R
Propylene Oxide	I, K, M
Propylformic Acid	see n-Butyric Acid
Propyl Hydride	see Propane
Propyl Methanol	see Butyl Alcohol
Prussic Acid	see Hydrocyanic Acid
Pyrobenzole	see Benzene
Pyrosulphuric Acid	see Sulfuric Acid (fuming)
Road Tar	see Asphalt
Salt Water	C, D, E, G, H, I, K, M, P, R
Sand Acid	see Silicofluoric Acid
Sewage	G, I, J, K, M, P
Silicofluoric Acid Silicofluoric Acid to Ambient	I, K Q
Soda Lye	see Sodium Hydroxide
Sodium Hydroxide Sodium Hydroxide to 50%	C, D, E, I, K Q

## DEACON SEALANT

- (A) 3100-S, 800-T
- (B) F250, F150, F50
- (C) 454-T, 560, 990, CV-600
- (D) 770L,  
770P
- (E) 454, 464, 411, 440
- (F) CJ-429, CJ-650
- (G) 400, 410
- (H) 409
- (I) 402, 402-CF
- \* (J) 302
- \* (K) 300, 325, 333,  
348, 350, 383
- \* (M) 289, 389,  
489
- \* (N) 375-OX
- \* (O) 375
- \* (P) 340
- (Q) 404
- (R) 460
- \* Non-Curing Compound

Listed compound recommendations are based on chemical compatibility. Compounds are not listed in order of preference. Application conditions (temperature, pressure, etc.) and sealant performance requirements should be considered when making your compound selection.

# CHEMICAL COMPATIBILITY APPLICATION CHART

Sodium Nitrate	O
Sodium Peroxide	O
Sodium Silicate	C, D, E, G, I, J, K, M, Q
Sodium Sulfate	E, I, K, Q, R
Sour Water	see Hydrogen Sulfide
Stoddard Solvent	see Mineral Spirits
Styrene Polymer	C, D, E, J, K, M
Sulfinol	J, K, M
Sulfur Sulfur over 500°F (260°C)	K, M, R C, D, E, M
Sulfur Dioxide Sulfur Dioxide to 150°F (66°C)	C, D, E, K, M I
Sulfur Hydride	see Hydrogen Sulfide
Sulfur Oxide	see Sulfur Dioxide
Sulfur Trioxide Sulfur Trioxide over 500°F (260°C) Sulfur Trioxide over 950°F (510°C)	I, K F E
Sulfuric Acid Sulfuric Acid to 100% Sulfuric Acid to 90% to 70°F (21°C) Sulfuric Acid to 70% to 175°F (80°C) Sulfuric Acid to 20%	K I I Q
Sulfuric Acid (Fuming)	K
Sulfuric Anhydride	see Sulfur Trioxide
Sulfuric Oxide	see Sulfur Trioxide
Sulfurous Anhydride	see Sulfur Dioxide
Sulphocarbonic Anhydride	see Carbon Disulfide
Superflake Anhydrous	see Calcium Chloride
TEL (Tetraethyl Lead)	see Tetraethyl Lead
Terphenyls	A, C, D, E, K, M
Tetrachlorocarbon	see Carbon Tetrachloride
Tetraethoxysilane	see Ethyl Silicate
Tetraethyl Lead	E, J, K, M
Tetraethyl Silicate	see Ethyl Silicate
Tetrafinol	see Carbon Tetrachloride
Tetrafluordichloroethane	see Dichlorotetrafluoroethane
Tetrahydro-1,4-Isloxazine	see Morpholine
Tetramethyl Lead	E, J, K, M
Thioethyl Alcohol	see Ethyl Mercaptan
Titanium Chloride	K
Titanium Dioxide	C, D, E, J, K, M, R
Titanium Tetrachloride	K
TML (Tetramethyl Lead)	see Tetramethyl Lead
Toluene	A, B, C, D, E, J, K, M

## DEACON SEALANT

- (A) 3100-S, 800-T
- (B) F250, FI50, F50
- (C) 454-T, 560, 990, CV-600
- (D) 770L,  
770P
- (E) 454, 464, 411, 440
- (F) CJ-429, CJ-650
- (G) 400, 410
- (H) 409
- (I) 402, 402-CF
- \* (J) 302
- \* (K) 300, 325, 333,  
348, 350, 383
- \* (M) 289, 389,  
489
- \* (N) 375-OX
- \* (O) 375
- \* (P) 340
- (Q) 404
- (R) 460
- \* Non-Curing Compound

Listed compound recommendations are based on chemical compatibility. Compounds are not listed in order of preference. Application conditions (temperature, pressure, etc.) and sealant performance requirements should be considered when making your compound selection.

# CHEMICAL COMPATIBILITY APPLICATION CHART

Toluol	see Toluene
Toxic Anhydride	see Maleic Anhydride
Transformer Oil	J, K, P, M, Q, R
Tribromoaluminum	see Aluminum Bromide
Trichloroaluminum	see Aluminum Chloride
1,1,1, Trichloroethane	see Methyl Chloroform
Trichloroethene	see Trichloroethylene
Trichloroethylene	K
Trichlorotrifluoroethane	see Freon
Triethane	see Methylchloroform
Triethylamine	A, C, D, E, I, J, K, M
Triethylolamine	see Trihydroxytriethylamine
Trihydroxytriethylamine	A, C, D, E, J, K, M
Triphenyl	see Terphenyls
Tripotassium Trichloride	see Potassium Chloride
Turpentine	B, C, D, E, J, K, M, P, R
Ucarsol	J, K
VCM (Vinyl Chloride Monomer)	see Vinyl Chloride
Vegetable Oil	A, C, D, E, J, M, P, R
Vegetable Oil to 120°F (49°C)	H
Vegetable Oil to 200°F (94°C)	I
Vinegar Acid	see Acetic Acid
Vinyl Acetate	C, D, E, I, K, M, P, Q
Vinyl A Monomer	see Vinyl Acetate
Vinylbenzene Polymer	see Styrene Polymer
Vinyl Chloride	C, D, E, J, K, M
Vinyl Cyclohexene Dioxide	C, D, E, J, K, M
Vinyl Ethylene	see 1,3-Butadiene
Vinyl Cyanide	see Acrylonitrile
Water (Cold)	G, H, K, M, P
Water Glass	see Sodium Silicate
White Caustic	see Sodium Hydroxide
White Liquor	C, D, E, K, M
White Mineral Oil	see Mineral Oil
Wood Alcohol	see Methyl Alcohol
Xylene	B, C, D, E, K, M, R
Xylol	see Xylene
Zinc Acetate	A, C, D, E, I, J, K, M
Zinc Sulfate	C, D, E, I, J, K, M, R
Zinc Chloride	C, D, H, I, K, M, R

## DEACON SEALANT

- (A) 3100-S, 800-T
- (B) F250, F150, F50
- (C) 454-T, 560, 990, CV-600
- (D) 770L, 770P
- (E) 454, 464, 411, 440
- (F) CJ-429, CJ-650
- (G) 400, 410
- (H) 409
- (I) 402, 402-CF
- \* (J) 302
- \* (K) 300, 325, 333, 348, 350, 383
- \* (M) 289, 389, 489
- \* (N) 375-OX
- \* (O) 375
- \* (P) 340
- (Q) 404
- (R) 460
- \* Non-Curing Compound

Listed compound recommendations are based on chemical compatibility. Compounds are not listed in order of preference. Application conditions (temperature, pressure, etc.) and sealant performance requirements should be considered when making your compound selection.



# TROUBLESHOOTING

## Sealant Curing too slowly

Should you have added accelerator? Did the plant give you the correct operating temperature?

Can you add plant steam or other heat source to provide extra heat? Are you using the correct Sealant for this temperature? If you need to add accelerator to sealant already injected, add the accelerator to a Deacon liquid or paste and inject. It will flow around the perimeter and carry accelerator to the previously injected compound.

## Sealant extrudes from clamp or enclosure when sealant is injected

**Heat Curing Compound:** Sometimes you just have to give it a little time to cure. If you are injecting at point A and it extrudes from point B, give a little time to cure, then return and pump against cured sealant. (accelerator will cut cure time by 75%) Is adding more heat an option? Should you be using a thicker compound?

**Non-Curing Compound:** Pump a thicker compound close to the extrusion point. Consider options like peening the gap or other gap closing method. Pump a curing compound like two part rubber at the extrusion point for bridging. Make sure compound extruding looks normal and is not breaking down.

## Sealant is setting up too fast and clogging injector or not traveling

Can you be using a thinner compound for the application. Is there a higher temperature rated compound you can use that will cure slower? Can you put steam at the injection port to cool the injector.

## Cannot reach desired gun pressure even though void is full

Consider if you are mainlining sealant. Consider if studs are stretching from injection pressure. Is the internal gasket or crack condition worsening? Is your void calculation wrong and the void is not full? Is your gun gauge working properly?

## I need to inject a metal to metal joint or into threads

Use a Deacon paste, liquid, two part rubber or one part rubber. You can pump a liquid or paste with a thicker compound to fill a void and get sealant into tight gaps and threads.

## The pipe is too thin and I can't apply normal injection pressure.

Consider if you can pour the void with 427 Epoxy or 404 Liquid or 409.

Is pouring a heat curing liquid resin like 440-T or 770-L an option? Can the piping withstand the pressure required to inject a paste like 770-P, 400 Rubber, 404 Rubber or CJ-650?

## The void is huge and I want to use a volume pump to pump from 5 gallon pails

Deacon 400, 410, 770-P, CJ-650, 7000 refractory and 348 PTFE are all designed to pump with a volume pump from 5 gallon pails.

## My customer is concerned about a sealant flash or auto ignition during injection.

Refer to the section in the Deacon Service Manual under Flash Point and Flammability. Call Deacon to discuss these concerns. Review every job before proceeding to determine if you need to take any precautions to prevent a flash.



## TIPS FOR SUCCESS

Be sure to get an accurate temperature from your customer. Many times operators give leak sealers the wrong temperature. Shoot the temperature reading yourself if it doesn't seem right.

Leave injection ports open to allow sealants to gas off if gassing is occurring. This relieves pressure and allows the sealant to release the gases to allow the curing process to take place. Caution, gases being released may be flammable as well as gases from the process leak may be flammable or dangerous.

Be aware of excessive heat in the back of pickup trucks in the hot months. These temperatures can cause heat curing compounds to cure. Maximum shelf life requires refrigeration for some sealants and using a cooler in the back of a pickup truck may be a good idea for heat curing compounds.

Don't leave curing compound in the injection hose of your injection gun after the job. See Gun Pak 1 in Deacon Service Manual, page 12.

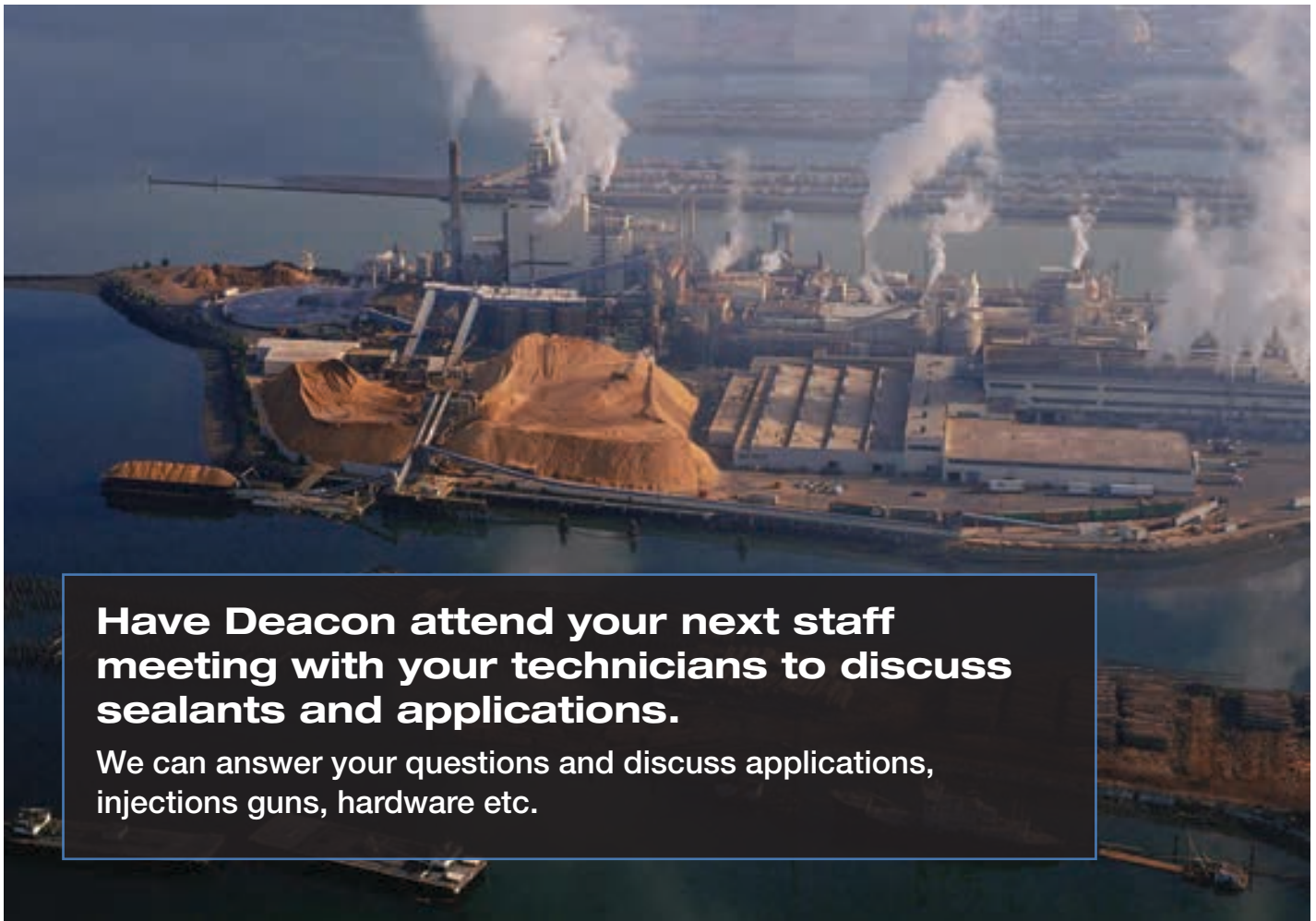
If you have gallons getting hard before you get a chance to use them, consider stocking J-Sticks. They have a better shelf life and you only open one at a time instead of opening a whole gallon. Note: you can pre-pack enclosures with cured sealant to avoid having to dispose of it (check with your company engineering for approval).

Use accelerator to speed up the cure time of heat curing compounds under 550 F. This is a tool that can give you so much more control over how long it is going to take to seal a leak. STOCK ACCELERATOR, IT HAS NO SHELF LIFE

Do not risk hydraulic fluid contamination when using 375 or 375-OX. Use an injection gun that is set up for chlorine and oxygen work, that contains a compatible fluid for chlorine and oxygen, not hydraulic fluid.

When pouring a void fill enclosure, make sure you have a port for air to come out as the product is poured in. Air coming out the same port you are pouring into does not work unless the port is large enough to allow air to escape without interrupting flow of liquid pouring in.

Follow all safety protocol. Try to avoid contact with skin and respiratory. Your safety and the safety of those around you is your top priority. Know you are properly protected for the product you are using (refer to SDS) and for the product you are exposed to from the process in the line. Don't proceed until you have the knowledge to protect yourself properly. Refer to all safety information in the Deacon Service manual.



**Have Deacon attend your next staff meeting with your technicians to discuss sealants and applications.**

We can answer your questions and discuss applications, injections guns, hardware etc.





# DEACON<sup>®</sup>

**INJECTABLE SEALANTS  
AND VALVE PACKINGS  
SINCE 1988**

[deaconindustries.com](http://deaconindustries.com)

# DEACON®

Phone: 137 0139 7131

Email: [pzhao@jetlube.com](mailto:pzhao@jetlube.com)

[deaconindustries.com](http://deaconindustries.com)

Version 020

**JET-LUBE®**

