
NORDSTROM VALVES®

SEALANT AND

SEALANT EQUIPMENT



Nordstrom Valves

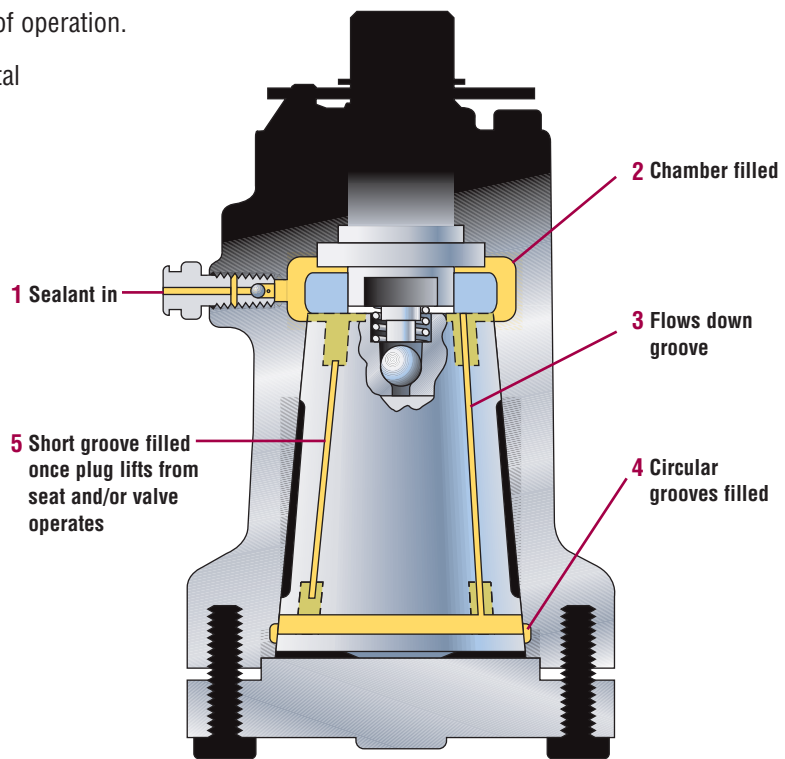
What is Valve Sealant?

- Forms a flexible renewable seal around the valve port.
- An integral part of every lubricated plug valve.
- Resists chemical attack and dissolving characteristics of line medium.
- Combines base oils, thickeners, and additives.



Why Use Valve Sealants?

- Lubricates the valve closure device for ease of operation.
- Extends valve life by preventing metal-to-metal abrasion of sealing components.
- Provides a renewable seat without disassembling the valve.
- Provides a hydraulic means of lifting the plug from its tapered seat, if needed.
- Helps prevent corrosion of valve internals.



When the valve lifts from the seat, sealant spreads along the plug/body contact surfaces. This sealant spreads when the plug operates.

Why Use Nordstrom Valves Sealants?

- Manufactured by the world’s largest manufacturer of plug valves.
- Time-tested and proven by actual use in millions of valves.
- Nordstrom Valves Sealants have been tested to ensure maximum valve performance.
 - Valve operating torque
 - Solvent resistance
 - Water resistance
 - Shear force reaction
 - High and low temperature resistance
 - Degradation test
 - Sealability
- Laboratory tested to be environmentally safe and non-hazardous.
- Controlled manufacturing processes.
- Each batch of product traceable for a minimum period of five years.
- A wide variety of advanced valve sealant formulations available for different services.
- In-house technical expertise to ensure sealant quality and provide technical assistance when needed.



Sealant Application

Due to varying service conditions, the following recommendations are to be used only as a guide in selecting the proper sealant.

Gas Distribution and Gas Gathering

| Product | Operating Temperature °F (°C) | | | |
|---------|-------------------------------|-----------|-----------|-----------|
| | Stick | | Bulk | |
| | Min. | Max. | Min. | Max. |
| 950 | -20 (-29) | 350 (177) | -25 (-32) | 350 (77) |
| 960 | not available | | -50 (-46) | 300 (149) |
| 1033 | -10 (-23) | 500 (260) | -20 (-29) | 500 (260) |
| 555 | -10 (-23) | 500 (260) | -20 (-29) | 500 (260) |

Oil and Gas Production

| Product | Operating Temperature °F (°C) | | | |
|---------|-------------------------------|-----------|-----------|-----------|
| | Stick | | Bulk | |
| | Min. | Max. | Min. | Max. |
| 555 | -10 (-23) | 500 (260) | -20 (-29) | 500 (260) |
| 950 | -20 (-29) | 350 (177) | -25 (-32) | 350 (77) |
| 1033 | -10 (-23) | 500 (260) | -20 (-29) | 500 (260) |

Oil and Gas Transmission

| Product | Operating Temperature °F (°C) | | | |
|---------|-------------------------------|-----------|-----------|-----------|
| | Stick | | Bulk | |
| | Min. | Max. | Min. | Max. |
| 950 | -20 (-29) | 350 (177) | -25 (-32) | 350 (77) |
| 1033 | -10 (-23) | 500 (260) | -20 (-29) | 500 (260) |
| 555 | -10 (-23) | 500 (260) | -20 (-29) | 500 (260) |

Chemical Processing

| Product | Operating Temperature °F (°C) | | | |
|---------|-------------------------------|-----------|----------|-----------|
| | Stick | | Bulk | |
| | Min. | Max. | Min. | Max. |
| 755 | 30 (-1) | 300 (149) | 20 (-7) | 300 (149) |
| 1045 | not available | | 30 (-34) | 700 (371) |

Sealant Composition

| Sealant | Base Oil | Thickener | Additive |
|---------|---------------|---|---|
| 167 | Hydrocarbon | Silica, Organic Thickeners | Antioxidants |
| 234 | Silicone | Silica | None |
| 421 | Hydrocarbon | Soap thickener, Inorganic Non-soap Thickeners | None |
| 555 | Vegetable Oil | Inorganic Non-soap Thickeners Organic Thickeners | Antioxidants, Friction Modifier |
| 654 | Hydrocarbon | Soap, Organic Thickeners | None |
| 755 | Polyglycols | Gel Thickeners | Corrosion Inhibitor |
| 950 | Synthetic | Inorganic Non-soap Thickeners | Antioxidants, Copper Corrosion Inhibitor |
| 960 | Synthetic | Inorganic Non-soap Thickeners | Antioxidants, Friction Modifier |
| 1033 | Synthetic | Silica | Antioxidants, Corrosion Inhibitor |
| 1045 | Synthetic | Organic Thickeners | Antioxidants |

Gate Valve Sealant

| Product | Operating Temperature °F (°C) | | | |
|---------|-------------------------------|------|-----------|-----------|
| | Stick | | Bulk | |
| | Min. | Max. | Min. | Max. |
| X-183 | not available | | -75 (-59) | 200 (93) |
| X-184 | not available | | -40 (-40) | 500 (260) |
| X-195 | not available | | -75 (59) | 200 (93) |
| X-196RS | not available | | -20 (-29) | 300 (149) |

Water/Wastewater

| Product | Operating Temperature °F (°C) | | | |
|---------|-------------------------------|-----------|-----------|-----------|
| | Stick | | Bulk | |
| | Min. | Max. | Min. | Max. |
| 167 | 50 (10) | 650 (343) | 20 (-7) | 650 (343) |
| 234* | not available | | -40 (-40) | 400 (204) |
| 142* | 10 (-12) | 350 (177) | 0 (-18) | 300 (149) |

* For use in portable water service.

HVAC

| Product | Operating Temperature °F (°C) | | | |
|------------------|-------------------------------|-----------|-----------|-----------|
| | Stick | | Bulk | |
| | Min. | Max. | Min. | Max. |
| 167 ¹ | 50 (10) | 650 (343) | 20 (-7) | 650 (343) |
| 234 ² | not available | | -40 (-40) | 400 (204) |
| 421 ² | 10 (-12) | 350 (177) | 0 (-18) | 300 (149) |

¹ chilled water system

² hot water system

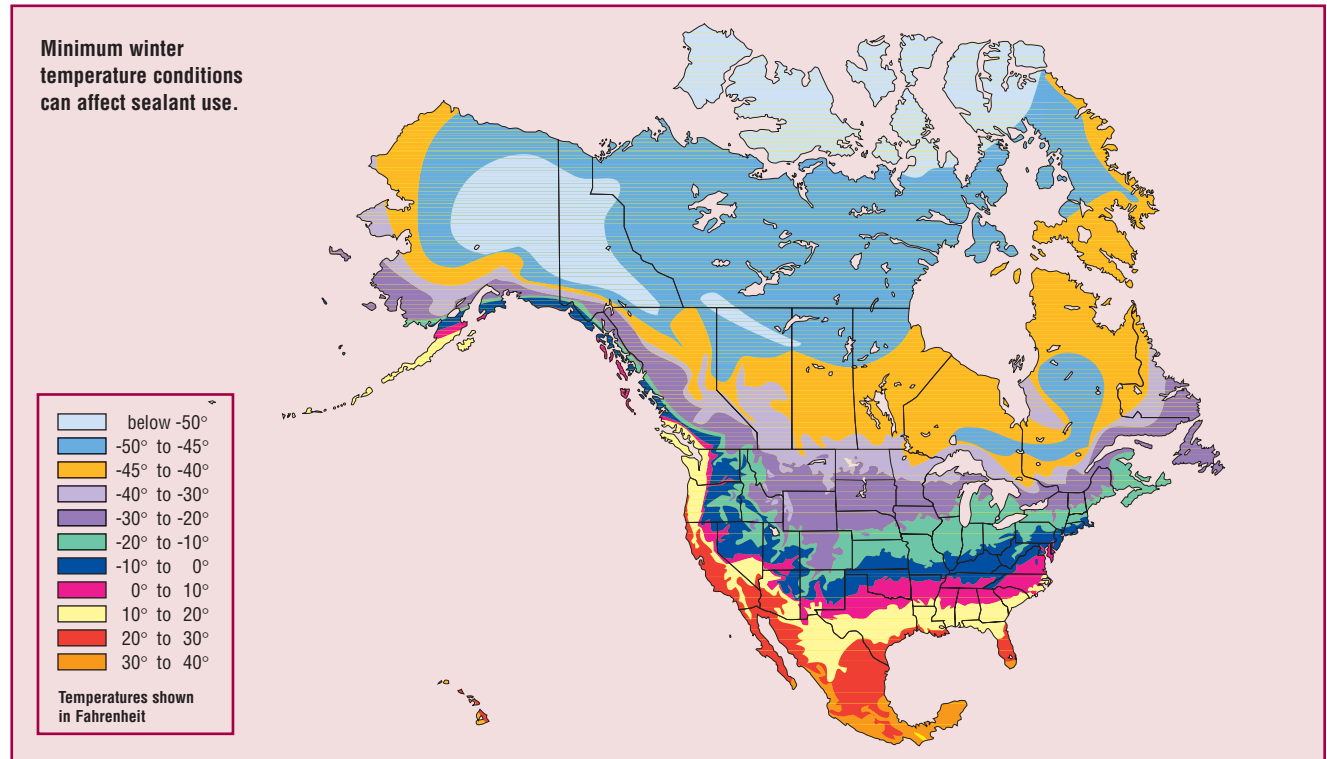
Mining/Slurry

| Product | Operating Temperature °F (°C) | | | |
|---------|-------------------------------|-----------|---------|-----------|
| | Stick | | Bulk | |
| | Min. | Max. | Min. | Max. |
| 654 | 50 (10) | 500 (260) | 0 (-18) | 500 (260) |

VXX Valve Cleaner

An economical alternative to removing a valve from the line or disassembling and cleaning, periodic injection into valves, VXX Valve Cleaner will dissolve hardened debris within the valve sealant system.

Temperature Gradients



Sealant Grades and Packaging

Bulk Grade Sealant

Nordstrom Valves bulk grade sealants are injected into valves using all models of Nordstrom Valves sealant injection equipment and are available in various packaging forms, depending upon the method chosen for valve injection.

- The five-quart can is for use in the Hypregun-Plus 5Q.
- The five-gallon pail is for use in the Hypregun-Plus 5G.
- Gun Pak, a sealed soft plastic pouch, is for use in the 400-D Hand Gun.
- Cartridges (15 ounce) are available.
- 16 gallon and 55 gallon drums are also available container sizes for bulk grade sealants.

Super Soft bulk grade sealant (SS) is available in 950, 555 and 167. SS sealant has improved “pumpability” characteristics and must be ordered as “SS”.

Stick Grade Sealant

Nordstrom Valves stick-grade sealants are high-viscosity sealants for manual injection with a Combination Button-head Fitting or for use with the 400-A or 400-D Hand Guns. The sealant is a consistency that maintains its extruded shape. The following chart lists available stick sizes and the method of injection.

| Stick Size | Diameter | | Length | |
|------------|----------|------|--------|-------|
| | mm | in. | mm | in. |
| A | 6.4 | .25 | 22.4 | .88 |
| B | 9.7 | .38 | 35.1 | 1.38 |
| C | 14.0 | .55 | 50.8 | 2.00 |
| D | 16.8 | .66 | 62.0 | 2.44 |
| G | 21.8 | .86 | 85.9 | 3.38 |
| J | 37.3 | 1.47 | 222.3 | 8.75 |
| K | 38.9 | 1.53 | 254.0 | 10.00 |

Sealant stick sizes A through G are for manual injection of sealant.

Sealant stick size J is used in the 400-D or 400-A Hand Gun. Sealant stick size K is used in the 400-A Hand Gun.

Why Use Nordstrom Valves Injection Equipment?

How is Sealant Injected into Valves?

- Manually – A, B, C, D, and G Sticks
- Hypregun-Plus 5Q – five-quart can
- Hypregun-Plus 5G – five-gallon pail
- 400-D Hydraulic Hand Gun – J-Stick or Gun Pak
- 400-A Hand Gun – J-Stick or K-Stick
- 400-B Bucket Pump – 30-pound bulk capacity

For more detailed information on sealant injection equipment, refer to specific product brochures.

Hypregun-Plus 5Q and Hypregun-Plus 5G

- Compact and efficient design.
- Air-operated sealant injection with 15,000 psi gauge.
- Versatile design for servicing small or large valves.
- Motors operate at 100:1 pressure on 100 to 125 psi (7-8.6 bar) air.
- Ideal for refineries, compressor stations, pipelines and manifold.
- Both the five-quart and five-gallon (4.7 and 18.9 liter) Hypreguns work for all size valves.



Injection Equipment

Giant Button-head Coupler

- Comes standard on all Nordstrom Valves sealant injection equipment.
- Allows easy connection to a valve's button-head sealant fitting.
- Automatically locks to the sealant fitting when the gun is pressurized.
- Coupler cannot be attached or removed from the fitting with the gun under pressure.
- Sealant will not pass through coupler unless connected to the valve sealant fitting.



400-D Hydraulic Hand Gun

- Versatile hand-held operation.
- Ideal for use with size 6 and smaller valves.
- Perfect for tight quarters or remote locations.
- Rated at 10,000 to 11,000 psi (690-759 bar).
- Includes 15,000 psi gauge.
- Large fluid capacity allows long intervals before recharging.
- Dependable performance under all conditions.
- Uses J-Stick or Gun Pack bulk grade sealant.



400-A Hand Gun

- Polished hardened steel piston in high-pressure barrel.
- Powerful spring-loaded primer piston allows 30 or more strokes without repriming.
- Check valve and bleeder relief valve.
- Positive action makes the 400-A easy to handle and use.
- Includes shoulder strap.
- Uses convenient J-Stick and K-Stick sealants.
- Includes 15,000 psi gauge.



400-B Bucket Pump

- Powerful, lightweight and portable.
- Hand-operated 15,000 psi sealant injection.
- Includes 15,000 psi gauge.
- 30-pound bulk capacity.
- Designed for heavy bulk lubricants.
- Easy to use.



How to Order

Inquiries and orders for Nordstrom Valves sealants and sealant injection equipment should always include complete descriptions so that the proper sealant is supplied. The following information is required at the time of order placement. If you are uncertain which sealant formula is required for your application, please provide the valve service conditions instead of a formula number.

Stick Grade Sealant Information Requirements

- Quantity
- Container type (Box)
- Formula number
- Product size
- Sticks per box

Example: qty. 3, Boxes, 1033, size J, 6 sticks per box

Stick Grade Sealant Packaging

| Product Size | Sticks per Box | Boxes per Case* |
|--------------|----------------|-----------------|
| A | 24 | n/a |
| B | 24 | 150 |
| C | 24 | 120 |
| D | 24 | 50 |
| G | 24 | 24 |
| J | 6 | 10 |
| K | 12 | n/a |

* Stick grade sealants are sold by the box; however, for storage convenience, stick sealant boxes can be packaged and shipped in cases.

Authorized Distributors

For detailed information on these and other Flowserve products, call your customer service representative for the name and number of the nearest authorized Nordstrom Valves distributor.



1511 Jefferson Street
Sulphur Springs, Texas 75482
USA

1-800-225-6989

Email: nmkt@flowserve.com
or visit www.flowserve.com

United States:
Telephone: 903-885-4691 or 4693
FAX: 903-439-3411

Latin America:
Telephone: 903-439-3407
FAX: 903-439-3411

Other Countries:
Telephone: 903-885-4692
FAX: 903-439-3404

Bulk Grade Sealant Information Requirements

- Required quantity
- Formula number
- Container size

Example: qty. 2, 1033, 5 quart can

Bulk Grade Sealant Packaging

| Container Size | Units per Container | Containers per Case |
|-----------------------------|----------------------|---------------------|
| 5.3 oz. Tube ⁽¹⁾ | 2 tubes per box | n/a |
| Cartridge ⁽²⁾ | 4 cartridges per box | n/a |
| Gun Pak | 6 Gun Paks per box | 10 |
| 5 Quart Can | n/a | 1, 2 or 4 |
| 5 Gallon Pail | n/a | 1 |
| 16 Gallon Drum | n/a | n/a |
| 55 Gallon Drum | n/a | n/a |

⁽¹⁾ Plastic tubes are standard packaging only for 234 sealant.

⁽²⁾ Cartridge dimensions are 2.07" diameter by 9.25" in length (15 ounce).

Valve Cleaner

VXX Valve Cleaner is packaged the same as bulk grade sealant.

Example: qty. 4, VXX Valve Cleaner, 5 quart can

Sealant Injection Equipment

Provide equipment description. Refer to pages 6 and 7 for information on sealant injection equipment.

Flowserve Corporation has established industry leadership in the design and manufacture of its products. When properly selected, this Flowserve product is designed to perform its intended function safely during its useful life. However, the purchaser or user of Flowserve products should be aware that Flowserve products might be used in numerous applications under a wide variety of industrial service conditions. Although Flowserve can (and often does) provide general guidelines, it cannot provide specific data and warnings for all possible applications. The purchaser/user must therefore assume the ultimate responsibility for the proper sizing and selection, installation, operation, and maintenance of Flowserve products. The purchaser/user should read and understand the Installation Operation Maintenance (IOM) instructions included with the product, and train its employees and contractors in the safe use of Flowserve products in connection with the specific application.

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