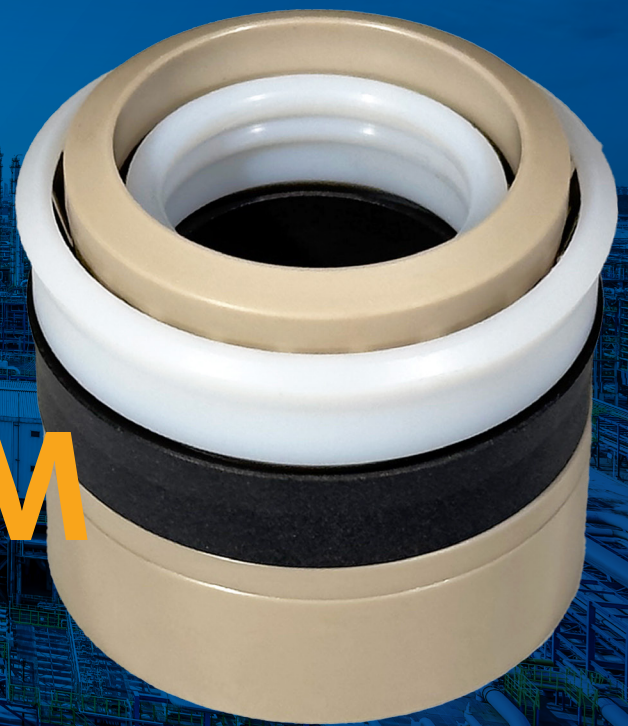


VALVE STEM PACKING

API 6A THERMOPLASTIC STEM PACKING
CERTIFIED TO API 6A ANNEX F (PR2F) – 21ST EDITION



The API 6A Valve Stem Packing is engineered to prevent leaks at the stem of API 6A gate valves. The packing system ensures environmental protection while delivering lifecycle reliability under high-pressure and wide-temperature service conditions.

This solution was validated in an API 6A gate valve assembly and is qualified to meet stringent industry certification requirements.

Engineered for High-Performance

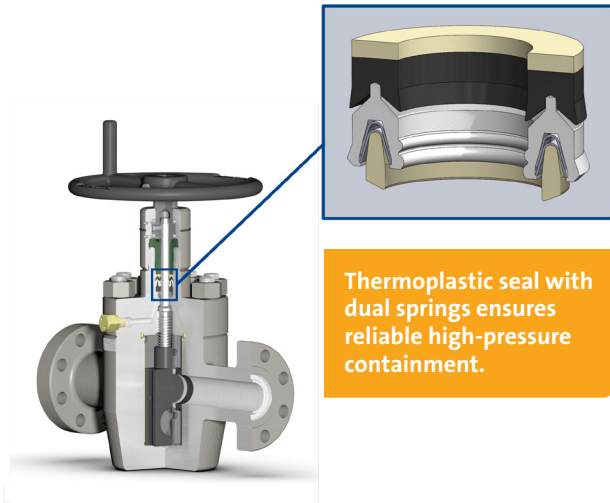
Wellheads, Refineries and Nuclear Facilities all utilize valves to provide flow containment and control. Within these assemblies, the stem packing is responsible for sealing dynamic stem movement while preventing leakage of pressurized working fluids to atmosphere.

Given the safety, environmental, and equipment risks associated with stem leakage, sealing performance is subject to increasing scrutiny. Modern qualification standards demand repeatable performance under pressure cycling, thermal variation, and immersion exposure — conditions that challenge conventional packing technologies.

This thermoplastic valve stem packing has been developed and certified to meet those demands.



**API 6A Thermoplastic
Stem Packing**



Advanced Thermoplastic Architecture

Traditional packing technologies — such as graphite and U-cup configurations — have historically struggled to maintain sealing integrity across full PR2F cycling and temperature exposure. Low-temperature leakage and lifecycle degradation are recurring industry concerns.

The stem packing incorporates:

- PEEK and PTFE thermoplastic materials
- Dual springs improve initial seal energization and provide enhanced long-term reliability under pressure and thermal cycling. Incumbent designs commonly utilize a single spring configuration.
- High outer-diameter contact stress geometry: The outer diameter geometry increases static interface sealing robustness, supporting containment integrity at the packing cavity interface.



Meeting API 6A PR2F Under Severe Cycling Conditions

The Valve Stem Packing is certified to API 6A Annex F (PR2F), 21st Edition, with third-party witnessing.

Qualification was achieved under the following envelope:

- Temperature Class L–X (–50°F through +350°F)
- Pressure up to 15,000 psi
- All API 6A material classes (AA through FF/HH)

Temperature Class L–X
All API 6A Material Classes:
AA through FF/HH



Consolidated Temperature Coverage

The Stem Packing is qualified to cover the full L–X temperature class range, reducing the need for multiple packing variants across temperature classes. This simplifies inventory management and reduces variable stocking requirements.

Application

Designed for valve assemblies utilizing: 1.00" OD stem, 1.75" packing cavity ID. The stem packing functions within the valve assembly and does not operate independently. Performance responsibility is specific to the stem sealing interface; other valve component failures remain outside scope and require coordinated technical review.

Technical Specification

Parameter	Qualification
Temperature Class	L–X (–50°F to +350°F)
Pressure	Up to and including 15,000 psi
Material Classes	API 6A AA through FF/HH
Valve Compatibility	All valves utilizing 1.00" OD stem with 1.75" packing cavity ID

Field Services & Product Support:

At Freudenberg Flow Technologies our Field Services and Product Support teams provide critical, on-site solutions designed to enhance operational performance and ensure the longevity of your systems. With a deep understanding of industry demands, our highly trained specialists deliver precise installation, maintenance, and diagnostic services tailored to your technical requirements.

Our service teams are equipped to address complex challenges with efficiency, minimizing downtime while ensuring compliance with industry standards. Whether it's system upgrades, preventative maintenance, or emergency repairs, we offer end-to-end support that keeps your operations optimized.

24/7/365 Availability — Continuous, Expert Support

We understand the importance of immediate response; our technical support team is available 24/7/365, ensuring you have access to expert guidance and assistance at any time. From remote diagnostics to rapid field deployment, we are committed to delivering timely solutions that reduce unplanned outages and improve productivity.

With Freudenberg Flow Technologies, you gain a trusted partner dedicated to maximizing the performance of your systems, no matter when or where support is needed.



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