HYDROGEN READY FLANGE SEALING SOLUTIONS

FOR THE SAFE AND RELIABLE PREVENTION OF HYDROGEN GAS LEAKS

Rely on LOCTITE® Hydrogen Ready Flange Sealing Solutions to ensure a safe and reliable seal against hydrogen gas leaks on rigid metal flanges, while avoiding the compression-set risks, high costs and inventory complexities of pre-formed gaskets. Tested up to 41 bar of pressurized hydrogen, LOCTITE Hydrogen Ready Flange Sealing solutions have been engineered to withstand the challenges of hydrogen environments and provide reliable, leak-free sealing performance.

LOCTITE Hydrogen Ready Flange Sealants are self-forming anaerobic-curing liquid gaskets that provide a perfect seal between close-fitting, rigid metal flanges. The easy to apply, single-component sealants fill all gaps and surface imperfections between the mating flanges, adding structural stiffness and eliminating micromovement and slipping. They do not shrink, crack or relax over time.

KEY FEATURES & BENEFIT

SAFETY & RELIABILITY
Specially formulated to enhance safety by eliminating hydrogen gas leaks and ensure reliable long-term equipment performance

COMPATIBILITY
LOCTITE Flange Sealants are suitable for use on all metals and are not adversely affected by hydrogen

SYSTEM EFFICIENCY
Prevents leaks, micromovement and slipping, enhancing overall system efficiency while reducing maintenance requirements and operational downtime

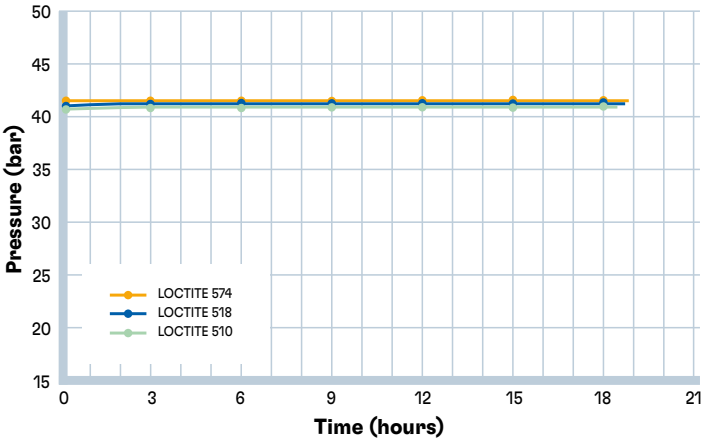
HYDROGEN READY
FLANGE SEALING SOLUTIONS

H_2ERE TO PERFORM UNDER PRESSURE

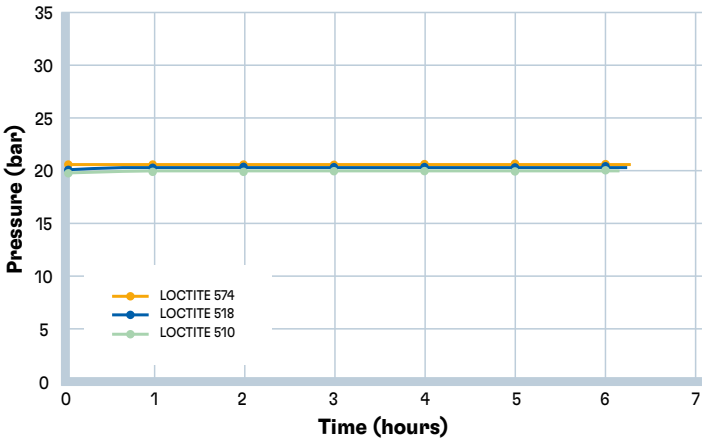
Based on tests conducted by a third party laboratory, the following LOCTITE Hydrogen Ready Flange Sealants have been proven to provide reliable, leak free performance against hydrogen.
Evaluated on 304 stainless steel raised flanges, the sealed assemblies were pressurized with 100 % hydrogen gas and then monitored for pressure drops while at two different pressure and temperature conditions, tested sequentially. No notable pressure drops were detected.

Hydrogen pressure tests conducted sequentially at 41 bar at ambient temperature for 18 hours, followed by 20 bar at 80° C for 6 hours.

Flange Sealants at 41 bar at ambient temp. for 18 hrs



Flange Sealants at 20 bar at 80° C for 6 hrs



Flange Sealing Solutions	Description
LOCTITE 510	Pink high viscosity anaerobic curing flange sealant for close fitting, rigid metal flanges. Ideal for steel, stainless steel & cast iron surfaces. Fills gaps up to 0.25 mm. Provides instant low-pressure seal. Resists temperatures up to 204° C.
LOCTITE 518	Red gel, semi-flexible anaerobic curing flange sealant for close fitting, rigid metal flanges. Ideal for steel, stainless steel & aluminum surfaces. Fills gaps up to 0.25 mm. Provides instant low-pressure seal. Resists temperatures up to 150° C.
LOCTITE 574	Orange high viscosity anaerobic curing flange sealant for close fitting, rigid metal flanges. Ideal for steel, stainless steel & cast iron surfaces. Fills gaps up to 0.25 mm. Provides instant low-pressure seal. Resists temperatures up to 150° C.

APPLICATION AREAS

Our flange sealing solutions are suitable for use on devices and components throughout the hydrogen value chain, including:

- Valves
- Compressors
- Electrolyzers
- Storage systems
- Pumps
- Fueling stations
- Pipeline connections
- Meters
- Engines

WHY CHOOSE LOCTITE FOR YOUR HYDROGEN SYSTEMS?

- Proven reliability through testing.
- Comprehensive support and expertise backed up with line surveys along with technical training for R&D, production and maintenance teams.
- Commitment to advancing hydrogen technology with innovative solutions.
- Assembly Automation solutions from simple handheld devices to fully automated systems which can be easily integrated into your manufacturing process.

EXPLORE ADDITIONAL LOCTITE SOLUTIONS FOR YOUR HYDROGEN DEVICES

LOCTITE sealing, locking, coating and bonding solutions are available for a wide range of needs throughout the hydrogen ecosystem, including threadlockers, flange sealants, retaining compounds, structural adhesives and specialty coatings.

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