

## SPECIALITY PRODUCTS

### Sealants for threaded metal fasteners and rigid flanges for the HVAC/R market

NuLock's anaerobic-based formulations are for metal fastener thread locking and sealing; including sealing of metal flange connections. NuLock is especially useful for flare fittings used in the HVAC/R market to improve their sealability and thread locking of these mechanical fasteners that are susceptible to leakage due to vibration. An anaerobic-based sealant remains liquid until isolated from oxygen with metal contact in fitting threads. To cure, the product requires lack of oxygen in close contact metal with surfaces. The process results in a chemical resistive cross-link polymer with great adhesion to metals that provides both a thread sealant and locking – depending on application. NuLock is highly resistant to heat and vibrations, with excellent chemical resistance. Simple hand tools are required when fasteners need to be disassembled.



#### **NuLock, General Purpose Thread Sealant**

NuLock formulation 4289-01 is a general-purpose thread sealant and locking formulation for metal fasteners in a variety of applications. Ideal for sealing and locking metal pipe thread fittings, flare fittings and compression fittings. Other applications of NuLock include general purpose locking of threads of metal fasteners such as bolt/nut assemblies, screws and threaded metal studs. For metal fasteners up to 3/4 inch in diameter. Product prevents rusting of threads. Medium strength formulation requires simple hand tools for fastener removal after product cure. NuLock is NOT for use on plastic parts or for oxygen-rich systems or as a sealant for strong oxidizing materials.

NuLock formulation 4289-01 can be used for thread sealing/locking of threaded metal fasteners for refrigerant systems due to its excellent chemical resistance. However, NuLock formulation 4289-02/05 is preferred due to its maximum chemical resistance and higher strength properties for threaded assemblies in refrigerant systems. Temperature range is -65°F to 300°F. Handling time is 10 minutes, functional cure 1-3 hours and full cure is 24 hours.

Part Number: **4289-01 (50 ml bottle)**



#### **NuLock, Refrigerant Thread Sealant**

NuLock formulation 4289-02/-05 is a refrigerant thread sealant and locking formulation particularly suited for metal fasteners in refrigerant systems. Use this formulation in other applications where maximum strength and chemical resistance is desired. Ideal for sealing and locking of flare fittings used in refrigeration and ductless air conditioning systems. Use NuLock on metal pipe threaded fittings, compression fittings or other fasteners such as bolt/nut assemblies, screws and threaded metal studs. For metal fasteners up to two inches in diameter. Product prevents rusting of threads.

A higher strength formulation, use standard hand tools for fastener removal after product cure. NuLock is NOT for use on plastic parts or for oxygen-rich systems or as a sealant for strong oxidizing materials. Temperature range is -65°F to 300°F. Handling time is 10+ minutes, functional cure 2-4hours and full cure is 24 hours.

Part Number: **4289-02 (50 ml bottle)**  
**4289-05 (10 ml bottle)**



## **NuLock, Thread Sealant with PTFE**

NuLock formulation 4289-03 is a thread sealant with PTFE specifically for the assembly of systems that use metal threaded pipe and fittings. The product provides an alternative to pipe dope and PTFE tape when assembling metal threaded assemblies. NuLock Thread Sealant with PTFE provides the advantage of not having a solvent system where they shrink as they cure due to solvent evaporation. These thread sealants may require re-torque to prevent leakage. PTFE tapes lubricate when fastening pipe threaded fittings, but they also lubricate in the opposite direction, resulting in a possibility of fastener creep where leakage could occur. NuLock with PTFE lubricates using assembly, and seals and locks the connection in place. Product prevents rusting of threads.

The product has a managed strength cure; simply use standard hand tools if the connection requires disassembly. NuLock is NOT for use on plastic parts or for oxygen-rich systems or as a sealant for strong oxidizing materials. Temperature range is -65°F to 400°F. Product has excellent chemical resistance. Handling time is 10+ minutes, functional cure 2-4 hours and full cure is 24 hours.

Part Number: **4289-03 (50 ml tube)**



## **NuLock, Flange Sealant**

NuLock formulation 4289-04 is a flange sealant designed to aid in sealing in small gap fill areas of 0.01 inch (0.25mm) or smaller on rigid metal faces and flanges. The product provides an elastic seal aid if concern exists about minor leakage at the flange. Examples include a poor mating contact across the gasket or an imperfection in the metal seal surface. In other applications, a gasket taking a set results loss in bolt load on the gasket surface, which could result in leakage from the system. Using NuLock in this application can aid seal durability of this flange connection. In other specialized applications, NuLock provides a form-in-place gasket option between small gap (0.01 inch) metal-flanged parts.

The product has a low strength cure; the flange is easily removal as necessary. NuLock is NOT for use on plastic parts or for oxygen-rich systems or as a sealant for strong oxidizing materials. Temperature range is -65°F to 300°F. Product has excellent chemical resistance. Handling time is 10+ minutes, functional cure 3-6 hours and full cure is 24 hours.

Part Number: **4289-04 (50 ml tube)**



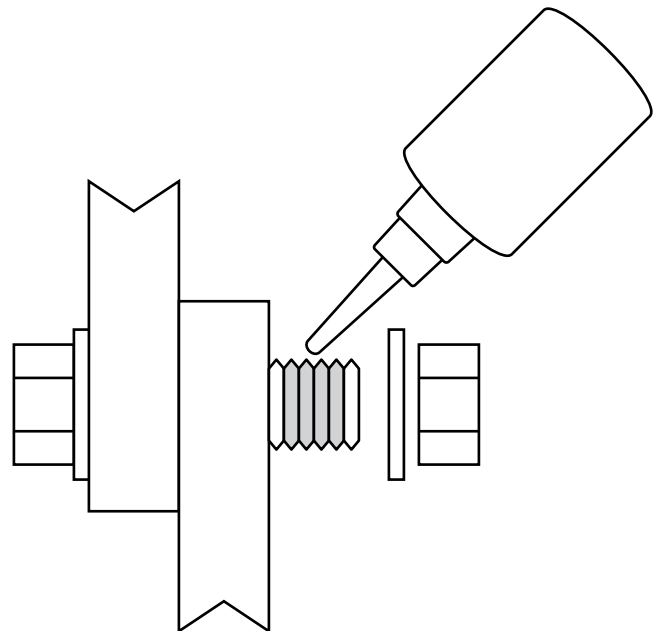
## **Bolt/Nut Assemblies**

Surfaces should be dry, clean, and free of contamination. Never use NuLock on plastic threaded fasteners.

Apply a generous 360-degree bead of NuLock in the leading threads of the metal male fitting, less the leading thread. Apply NuLock in sufficient quantity to fill threads to avoid a product gap when connecting mating connectors. For bigger fittings, adjust the amount of NuLock required. Assemble and tighten the connection as required with hand tools. Allow ample time for handling and functional cure before field service.

Product Options:

NuLock part numbers: 4289-01, 4289-02 and 4289-05



## **Flare Fittings**

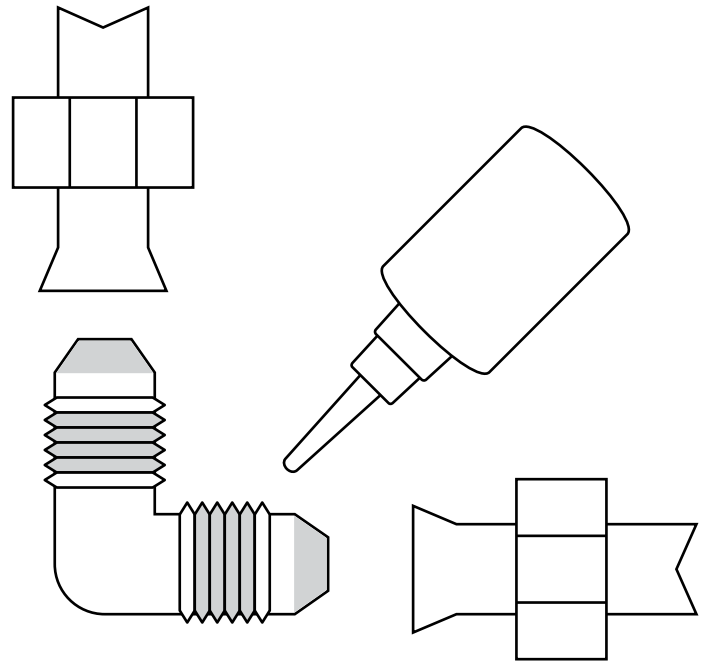
Surfaces should be dry, clean, and free of contamination. Never use NuLock on plastic threaded fasteners.

Apply a generous 360-degree bead of NuLock in the leading threads of the metal male fitting, less the leading thread. Apply NuLock in sufficient quantity to fill threads to avoid a gap in product for thread locking duty.

For improved seal durability, or to remedy any imperfection on the mating area, add a very small NuLock bead on the machined flare surface. Assemble and tighten the connection as required with hand tools. Allow ample time for handling and functional cure before field service.

Product Options:

NuLock part numbers: 4289-01, 4289-02 and 4289-05



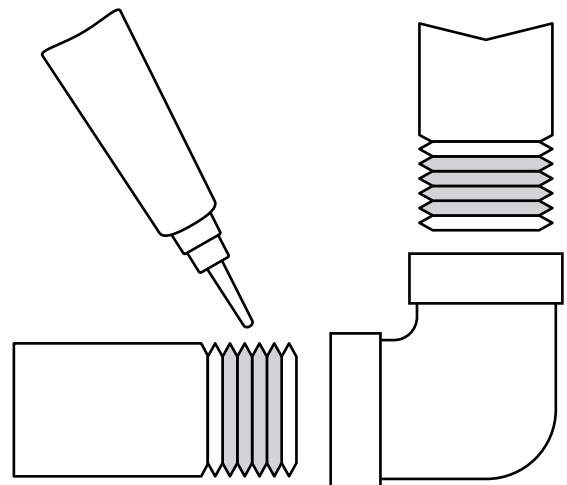
## **Pipe Fittings**

Surfaces should be dry, clean, and free of contamination. Never use NuLock on plastic threaded fasteners.

Apply a generous 360-degree bead of NuLock in the leading threads of the metal male pipe fitting, less the leading thread. Apply NuLock in sufficient quantity to fill threads to avoid a product gap when connecting mating connectors. For bigger fittings, adjust the amount of NuLock required, including applying a bead of NuLock on the female pipe threads as well for best sealing/locking results. Assemble and tighten the connection as required with hand tools. Allow ample time for handling and functional cure before field service.

Product Options:

NuLock part numbers: 4289-01, 4289-02, 4289-03 and 4289-05



## **Compression Fittings**

Surfaces should be dry, clean, and free of contamination. Never use NuLock on plastic threaded fasteners.

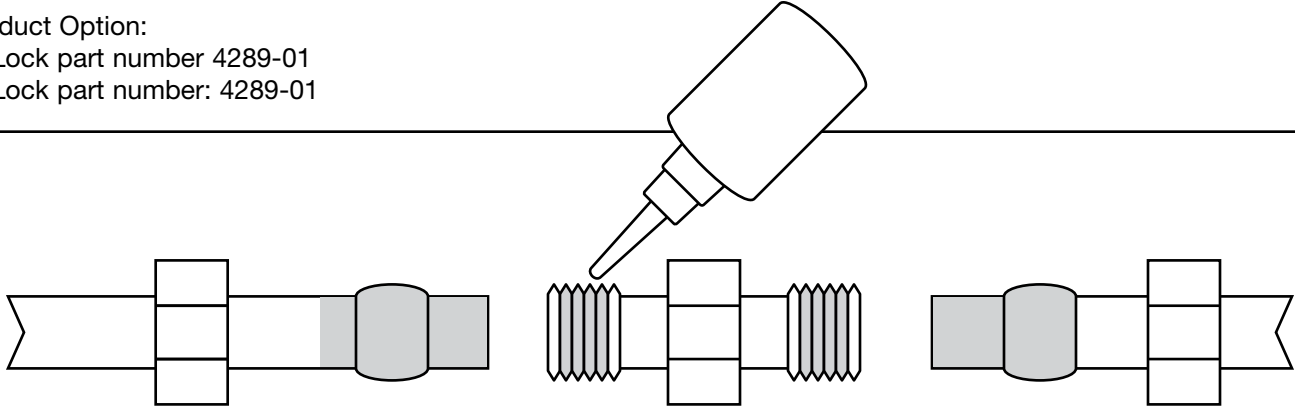
Apply a generous 360-degree bead of NuLock in the leading threads of the metal male fitting, less the leading thread. Apply NuLock in sufficient quantity to fill threads to avoid a gap in product for thread locking duty.

For improved seal durability, or to remedy any imperfection on the brass compression sleeve, apply NuLock to the metal sleeve and tube area to aid in its seal. Assemble and tighten the connection as required with hand tools. Allow ample time for handling and functional cure before field service.

Product Option:

NuLock part number 4289-01

NuLock part number: 4289-01



## **Flange Sealant**

Surfaces should be dry, clean, and free of contamination. NuLock is for close fitting metal flange parts with gap fill requirement up to 0.01 inch (0.25 mm). Product has excellent chemical resistance and temperature range. Product provides form-in-place gasket option for select applications. Never use NuLock on plastic mating surfaces.

Apply a bead of NuLock Flange sealant on the flange mating area – can be used on flat or raised flange surfaces. Assemble and tighten flange assembly as soon as possible after assembly to avoid any shimming in the seal area. Low pressure may be used to confirm a complete seal immediate after assembly before product cures. Allow ample time for handling and functional cure before field service. Product formulated for low strength so flange can be removed easily for future needs.

Product Option:

NuLock part number: 4289-04

