

## **Product Description**

ND Thermoseal<sup>®</sup> 400 is a pre-applied process in which a hybrid microencapsulated high-pressure sealant with medium strength threadlocking capabilities is applied to fasteners, making them self-locking and self-sealing. Thermoseal was formulated for those higher temperature, higher pressure applications where other thread locking materials would fail. In addition to these benefits, Thermoseal may also provide a lower coefficient of friction than other thread lockers to help with ease of installation.

Thermoseal 400 is dual-encapsulated to provide a dry film of adhesive that is non-reactive until engagement with the mating fastener. Upon engagement, the reactive microspheres rupture and react to form a strong chemical bond and an effective seal.

## **Typical Applications**

ND Thermoseal 400 is an exceptional sealant withstanding pressure up to 40MPa. In addition, it prevents loosening due to vibration, shock, and thermal effects. Thermoseal is often used as a replacement for PTFE tape due to its better reproducibility and speed of installation. It can be used in a wide range of industries. Examples are included (but not limited) in the list below:

- Ring gear bolts
- Head Bolts
- Chassis Hardware
- Intake Manifold Bolts
- Military and Defense
- Large Appliances
- Off Road Equipment
- Farm Equipment
- Construction Fasteners
- Aerospace
- Agricultural Equipment
- Many more

## **Advantages**

- Ready for install without the mess and waste of bottled thread adhesives
- Precise application to the specified region of threaded fastener for better repeatability
- Faster installation compared to some other sealing materials
- Controlled coefficient of friction resulting in highly repeatable/predictable joint tension
- Bonds to all commonly used fastener finishes
- Long shelf-life when properly stored
- Seals against high pressures
- Can be applied to internal and external threaded fasteners
- Chemically resistant to most commonly used solvents and fluids

## **Typical Material Properties**

Appearance	Turquoise
Prevailing On Torque	<1.0 Nm
Breakaway Torque	>20 Nm
Prevailing Off	4-10 Nm
Temperature Range	-40°C to 220°C (-40°F to 428°F)
Fixture Time	<30 minutes
Cure Time	24 hours
Acceptable Use Pressure	Up to 40MPa

## **Storage**

Fasteners coated with Thermoseal 400 are to be stored in a cool and dry location with temperatures between -10°C to +35°C and a maximum relative humidity of 65%.

## **Note**

Data are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is recommended that the product be tested in the application for which it is to be used.