



Technical Data Sheet

3M™ Scotch-Weld™ Threadlocker Anaerobic Adhesive TL42

Product Description

3M™ Scotch-Weld™ Threadlocker Anaerobic Adhesives are one-component anaerobic adhesives that cure and seal threaded assemblies that meet a wide range of applications to prevent vibration loosening and/or leakage. All products provide excellent vibration, corrosion, and shock resistance. Engineered to provide different strengths, temperatures, nut/bolt sizes, and other requirements, some threadlockers allow removal and meet various selections depending on the specific application.

Product Features

- 3M™ Scotch-Weld™ Threadlocker TL42 is a general purpose. Removable with hand tools, medium strength threadlocker ideal for machine tool access bolts, and hydraulic system bolts. It can also be used on gear box / driveshaft bolts, bearing cover cap screws, countersunk screws, and conveyor roller bolts.
- Prevent corrosion
- Fluorescence
- Liquid (before cure)
- Shock and vibration resistance
- Fast setting
- 24 hour cure at room temperature

Technical Information Note

The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Typical Uncured Physical Properties

| Property | Values | Additional Information |
|----------|--------|------------------------|
| Color | Blue | View |

Notes: Colors may vary from nearly white to yellow/amber. Adhesive performance is not affected by color variation.

| | | |
|-----------|----------------|--|
| Chemistry | Dimethacrylate | |
|-----------|----------------|--|

| | | |
|-----------|--------------|----------------------|
| Viscosity | 800-1,600 cP | View |
|-----------|--------------|----------------------|

Notes: Brookfield Viscometer spindle #3 at 20 rpm

| | | |
|--------------|-----------------------------------|----------------------|
| Fixture Time | 20min (avg time) (10-30min range) | View |
|--------------|-----------------------------------|----------------------|

Notes: Reference ISO 10964. To convert to (N.m) divide (in.lb) by 8.851.

Typical Physical Properties

| Property | Values | Additional Information |
|----------|--------|------------------------|
|----------|--------|------------------------|

Color

Blue

View 

Test Name: Cured

Typical Mixed Physical Properties

| Property | Values | Additional Information |
|------------|--------|------------------------|
| Cure Speed | | |

Typical Cured Characteristics

| Property | Values | Additional Information |
|-------------------|--------------|------------------------|
| Temperature Range | -54 - 149 °C | |

Typical Performance Characteristics

| Property | Values | Additional Information |
|----------------------------------|--------|------------------------|
| Long Term Temperature Resistance | 149 °C | |


| | | |
|--|--------|--|
| Minimum Long Term Temperature Resistance | -54 °C | |
|--|--------|--|

| | | |
|----------------------------------|--------|--|
| Long Term Temperature Resistance | 300 °F | |
|----------------------------------|--------|--|

| | | |
|--|--------|--|
| Minimum Long Term Temperature Resistance | -65 °F | |
|--|--------|--|

| | | |
|------------------|--|--|
| Breakaway Torque | 140in-lb - typical value (70-200in-lb range) | View  |
|------------------|--|--|

Notes: Reference ISO 10964. To convert to (N.m) divide (in.lb) by 8.851.

| | | |
|-------------------|--|--|
| Prevailing Torque | 100in-lb - typical value (20-200in-lb range) | View  |
|-------------------|--|--|

Notes: Reference ISO 10964. To convert to (N.m) divide (in.lb) by 8.851.

Hot Strength % Retention

| | | |
|----------|--------|--|
| Strength | Medium | |
|----------|--------|--|

Storage and Shelf Life

Store product in cool, dry area out of direct sunlight

3MTM Scotch-Weld™ Threadlocker Anaerobic Adhesives have a shelf life of 18 months when stored at 60° to 80°F (16° to 27°C)) in the original unopened container.

Bottom Matter

3M

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Trademarks

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Handling/Application Information

Directions for Use

3MTM Scotch-Weld™ Threadlocker Anaerobic Adhesives are not recommended for use on most plastics due to potential cracking of plastic parts. Also, they are not recommended for use in piping systems that contain pure oxygen or an oxygen-rich environment, chlorine, or strong oxidizing substances.

For Assembly:

1. Ensure parts are clean, dry and free from oil, grease and dirt. For best results, clean and dry parts with solvent or 3MTM Scotch-Weld™ Activator. (Activator can also be used on inactive surfaces or to accelerate the cure on active surfaces.)
2. If not sure of surface type, always use activator. Refer to Material surface Activity and Cure Speed section for more information.
3. Shake the adhesive bottle well before use.
4. Avoid touching the metal surfaces with the bottle tip since the metal ions may react with the adhesive upon contact and eventually may clog the bottle tip.
5. Apply adhesive onto the threaded part where the contact area will be in the final assembly. For larger parts, use more adhesive and rotate the threaded part to spread adhesive evenly around contact area.
6. For through holes, apply several drops of adhesive onto the bolt at the nut engagement area. For blind holes, apply several drops of the adhesive down the internal threads to the bottom of the hole.
7. Assemble the nut / fastener and tighten as required.
8. Allow assemblies to set for sufficient time so that handling strength or full cure will occur before further processing or testing

For Disassembly:

1. Loosen or remove with regular hand tools.
2. If hand tools do not work due to the assembled parts being well tightened, apply localized heat (approx.. 400°F / 254°C) to the nut or bolt and disassemble while parts are still hot. Use extreme caution when working with heat sources (e.g. heat gun, flames, etc.)

References

| Property | Values |
|-----------------------|---|
| 3m.com Product Page | https://www.3m.com/3M/en_US/p/d/b40071790/ |
| Safety Data Sheet SDS | https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=TL42 |

ISO Statement

This product was manufactured under a quality system registered to ISO 9001 standards.

Precautionary Information

Refer to Product Label and Material Safety Data Sheet for health and safety information before using this product. For additional health and safety information, call 1-800-364-3577 or (651) 737-6501.

Information

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