

# Technical Data Sheet

## 3M™ Marine Adhesive Sealant 5200 Fast Cure:

### Product Description

A fast curing, one-part polyurethane that chemically reacts with moisture to deliver strong, flexible bonds to wood, gelcoat and fiberglass. It forms watertight, weather-resistant seals on joints and boat hardware above and below the waterline. In addition, its flexibility allows for dissipation of stress caused by shock, vibration, swelling or shrinking.

### Product Features

- Tough/flexible polyurethane polymer
- One component, moisture curing
- Fast cure formula
- Bonds dissimilar materials
- Non-shrinking
- Adheres to a wide variety of substrates
- Non-sagging
- Permanently elastic

### 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 Physical Properties

Property	Values	Additional Information
Solids Content by Weight	97 %	

Color	White	
-------	-------	--

### Typical Uncured Physical Properties


Property	Values	Additional Information
Density	11 lb/gal	

Consistency	Caulkable, non-sag paste	
-------------	--------------------------	--




### Typical Mixed Physical Properties

Property	Values	Additional Information
Tack Free Time	1 hr	
Rate of Cure	1 to 8 in per 24 hr	
Rate of Cure	3 mm per 24 hr	

### Typical Cured Characteristics

Property	Values	Additional Information
Shore A Hardness	60	View 
Test Method: ASTM C661		


### Typical Performance Characteristics

Property	Values	Additional Information
Tensile Strength	6.9 MPa	View 
Test Method: ASTM D412		
Tensile Strength	1000 lb/in <sup>2</sup>	View 
Test Method: ASTM D412		
Elongation at Break	>800 %	View 
Test Method: ASTM D412		
Long Term Temperature Resistance	90 °C	
Minimum Long Term Temperature Resistance	-40 °C	
Long Term Temperature Resistance	190 °F	
Minimum Long Term Temperature Resistance	-40 °F	

Overlap Shear Strength 25 kg/cm<sup>2</sup> View 

Temp C: 23C  
Temp F: 72F  
Substrate: Teak

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 350 lb/in<sup>2</sup> View 


Temp C: 23C  
Temp F: 72F  
Substrate: Teak

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 35 kg/cm<sup>2</sup> View 

Temp C: 23C  
Temp F: 72F  
Substrate: Pine

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 500 lb/in<sup>2</sup> View 


Temp C: 23C  
Temp F: 72F  
Substrate: Pine

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 35 kg/cm<sup>2</sup> View 

Temp C: 23C  
Temp F: 72F  
Substrate: Oak

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 500 lb/in<sup>2</sup> View 


Temp C: 23C  
Temp F: 72F  
Substrate: Oak

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 35 kg/cm<sup>2</sup> View 

Temp C: 23C  
Temp F: 72F  
Substrate: Maple


Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 500 lb/in<sup>2</sup> View 

Temp C: 23C  
Temp F: 72F


Substrate: Maple

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 42 kg/cm<sup>2</sup> View 


Temp C: 23C  
Temp F: 72F  
Substrate: Fir

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 600 lb/in<sup>2</sup> View 


Temp C: 23C  
Temp F: 72F  
Substrate: Fir

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 28 kg/cm<sup>2</sup> View 


Temp C: 23C  
Temp F: 72F  
Substrate: Mahogany

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 400 lb/in<sup>2</sup> View 


Temp C: 23C  
Temp F: 72F  
Substrate: Mahogany

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 14 kg/cm<sup>2</sup> View 


Temp C: 23C  
Temp F: 72F  
Substrate: Stainless Steel

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 200 lb/in<sup>2</sup> View 


Temp C: 23C  
Temp F: 72F  
Substrate: Stainless Steel

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 14 kg/cm<sup>2</sup> View 

Temp C: 23C  
Temp F: 72F  
Substrate: Aluminum

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 200 lb/in<sup>2</sup> [View](#) 


Temp C: 23C  
Temp F: 72F  
Substrate: Aluminum

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 12 kg/cm<sup>2</sup> [View](#) 


Temp C: 23C  
Temp F: 72F  
Substrate: Brass

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 175 lb/in<sup>2</sup> [View](#) 

Temp C: 23C  
Temp F: 72F  
Substrate: Brass

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 12 kg/cm<sup>2</sup> [View](#) 


Temp C: 23C  
Temp F: 72F  
Substrate: Bronze

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 175 lb/in<sup>2</sup> [View](#) 

Temp C: 23C  
Temp F: 72F  
Substrate: Bronze

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 12 kg/cm<sup>2</sup> [View](#) 

Temp C: 23C  
Temp F: 72F  
Substrate: Copper

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 175 lb/in<sup>2</sup> [View](#) 

Temp C: 23C  
Temp F: 72F  
Substrate: Copper


Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 10 kg/cm<sup>2</sup> [View](#) 

Temp C: 23C  
Temp F: 72F


Substrate: Lead

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 150 lb/in<sup>2</sup> View 


Temp C: 23C  
Temp F: 72F  
Substrate: Lead

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 18 kg/cm<sup>2</sup> View 


Temp C: 23C  
Temp F: 72F  
Substrate: Zinc (Galvanized)

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 250 lb/in<sup>2</sup> View 


Temp C: 23C  
Temp F: 72F  
Substrate: Zinc (Galvanized)

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 10 kg/cm<sup>2</sup> View 

Temp C: 23C  
Temp F: 72F  
Substrate: Acrylic (PMMA)

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 150 lb/in<sup>2</sup> View 

Temp C: 23C  
Temp F: 72F  
Substrate: Acrylic (PMMA)

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 9 kg/cm<sup>2</sup> View 

Temp C: 23C  
Temp F: 72F  
Substrate: Nylon

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 125 lb/in<sup>2</sup> View 

Temp C: 23C  
Temp F: 72F  
Substrate: Nylon


Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.



Overlap Shear Strength 18 kg/cm<sup>2</sup> [View](#) 

Temp C: 23C  
Temp F: 72F  
Substrate: ABS

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 250 lb/in<sup>2</sup> [View](#) 


Temp C: 23C  
Temp F: 72F  
Substrate: ABS

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 21 kg/cm<sup>2</sup> [View](#) 

Substrate: Cold Rolled Steel

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 300 lb/in<sup>2</sup> [View](#) 


Substrate: Cold Rolled Steel

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 28 kg/cm<sup>2</sup> [View](#) 

Substrate: Polycarbonate (PC)

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 400 lb/in<sup>2</sup> [View](#) 


Substrate: Polycarbonate (PC)

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 21 kg/cm<sup>2</sup> [View](#) 

Substrate: Fiber-Reinforced Plastic

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

Overlap Shear Strength 300 lb/in<sup>2</sup> [View](#) 

Substrate: Fiber-Reinforced Plastic

Notes: 1in overlap specimens 0.093in thick. Cohesive – Adhesive/Sealant fails before adhesive/sealant releases from substrate. Desired failure mode. Adhesive Failure – Adhesive/Sealant releases from substrate.

## Storage and Shelf Life

Polyurethane sealants and adhesive sealants must be stored in a controlled environment to maximize shelf life. Store the products in the original unopened containers below 77°F (25C).

When stored at the recommended conditions in the original, unopened container this product has a shelf life of 24 months from date of

manufacture.

## Automotive Disclaimer

---

Automotive Applications: This product is an industrial product and has not been designed or tested for use in certain automotive applications, including, but not limited to, automotive electric powertrain battery or high voltage applications. This product does not fully adhere to typical automotive design or quality system requirements, such as IATF 16949 or VDA 6.3. This product may not be manufactured in an IATF certified facility and may not meet a Ppk of 1.33 for all properties. The product may not undergo an automotive production part approval process (PPAP). Customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's automotive application and for conducting incoming inspections before use of the product. Failure to do so may result in injury, death, and/or harm to property. No written or verbal statement, report, data or recommendation by 3M related to automotive use of the product shall have any force or effect unless in an agreement signed by the Technical Director of 3M's Automotive Division. Customer assumes all responsibility and risk if customer chooses to use this product in an automotive electric powertrain battery or high voltage application, and 3M will not be liable for any loss or damage arising from or related to the 3M product or customer's use of the product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity or recall costs), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability. In no event shall 3M be liable for any damages in excess of the purchase price paid for the product.

NOTWITHSTANDING ANY OTHER STATEMENT TO THE CONTRARY, 3M MAKES NO REPRESENTATIONS, WARRANTIES OR CONDITIONS WHATSOEVER, EXPRESS OR IMPLIED, REGARDING THE PRODUCT IF USED IN AN AUTOMOTIVE ELECTRIC POWERTRAIN BATTERY OR HIGH VOLTAGE APPLICATION, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY ON PERFORMANCE, LONGEVITY, SUITABILITY, COMPATIBILITY, OR INTEROPERABILITY, OR ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE.

## Bottom Matter

---

3M  
Industrial Adhesives and Tapes Division  
3M Center, Building 225-3S-06  
St. Paul, MN 55144-1000  
800-362-3550

## Trademarks

---

3M and Scotch-Brite are trademarks of 3M Company.

## Handling/Application Information

---

### Directions for Use

#### Surface Preparation:

There are waxes, coatings, sealers, greases, oils and other contaminants used in the marine industry, making it very important to clean all surfaces to be bonded before applying 3MTM Adhesive Sealant 5200 Fast Cure. Recommended procedures include cleaning with 3MTM General Purpose Adhesive Cleaner\* 08984. Abrading the surface with 180- to 200-grit abrasive before cleaning will enhance the bond strength.

Cut the plastic nozzle tip to the desired bead size. Puncture the seal in nozzle end of the cartridge and screw the plastic nozzle in place. Remove the bottom end seal of cartridge and place the cartridge in a caulk gun dispenser. Apply 5200 Fast Cure to the seam or part to be bonded. Position parts and tool material to desired appearance. Tooling of adhesive can be accomplished by using a tongue depressor. If a finger is used, rubber gloves are recommended. Remove excess with General Purpose Adhesive Cleaner 08984 or suitable solvent.

\*When using solvents, use in a well ventilated area. Extinguish all sources of ignition in the work area and observe product directions for use and precautionary measures. Refer to product label and MSDS for further precautions. Always pre-test solvent to ensure it is compatible with substrates.

Local and federal air quality regulations may regulate or prohibit the use of these products or surface preparation and cleanup materials. Consult local and federal air quality regulations before using these products.

Note: Alcohol will interfere with the curing process and extra care must be taken when using alcohol as a cleaning solvent to prevent any contact with the sealant.

#### Primer:

Use of a primer is an extra step and cost and will depend on the final end use. Using primer can improve the corrosion resistance of certain metals as well as improve the durability of the bond when exposed to high humidity conditions. Pre-testing for adhesion is suggested to determine if a primer is needed. Contact your 3M Technical Service representative for primer recommendation and application advice.



#### Applications:

3MTM Adhesive Sealant 5200 Fast Cure is for permanent assembly of wood and fiberglass parts bonded together. If a non-permanent bond is desired, use 3MTM Marine Adhesive Sealant 4200.

#### Typical bonding applications include:

- Fiberglass deck to fiberglass hull
- Wood to fiberglass
- Portholes
- Deck fittings
- Moldings
- Trunk joints
- Between struts and planking
- Stern joints

#### Typical sealing applications include:

- Some plastics (test before assembly)
- Glass
- Metals (priming may be required)

#### Limitations :

- Alcohol should not be used in preparation for bonding as it will interfere with the curing process, causing the adhesive to fail.
- Due to the decreased value in bond strength at elevated temperatures use of this product is not recommended above 190°F (88°C).
- Do not apply at temperatures below 40°F (4°C) or on frost covered surfaces. Do not apply at surface temperatures above 100°F (38°C).
- Sealant should be used within 24 hours after inner seal is punctured, as product will start to cure in the cartridge and nozzle.
- At 90° F (32° C) and 90% relative humidity, bonds should be made within 15 minutes.
- Some one part solvent-based Marine paints may not cure on top of cured 5200 Fast Cure. It is strongly recommended to test all desired paints for suitability.
- 5200 Fast Cure has an elongation much greater than most paints. Most paints will not elongate to this extent before cracking or losing adhesion to the sealant. If the sealant is used in an application where it will elongate or flex to a high degree, it is best not to paint.
- 5200 Fast Cure is not recommended for use as a teak deck seam sealer. Extended exposure to chemicals (teak cleaners, oxalic acid, gasoline, strong solvents and other harsh chemicals) may cause permanent softening of the sealant.
- 5200 Fast Cure is not recommended for the installation of glass, polycarbonate, or acrylic windows that are not also mechanically fastened. Inconsistent adhesion of these unprimed substrates, specific design of the window and movement due to thermal expansion and flexing may cause application failure. Contact a Technical Service Engineer for help with these applications.
- When using 3MTM Marine Adhesive Sealant 5200 Fast Cure with metals it may be necessary to prime the surface to achieve adequate adhesion and durability of the bond. 3M Metal Primer P592 may be used for priming of most metals.

#### Cleanup:

For cleaning 3MTM Marine Adhesive Sealant 5200 Fast Cure before it is cured, use a dry cloth to remove the majority of sealant, followed by a cloth damp with 3MTM General Purpose Adhesive Cleaner 08984. Cured material can be removed mechanically with a knife, razor blade, piano wire, or sanding device.

#### References

Property	Values
3m.com Product Page	<a href="https://www.3m.com/3M/en_US/p/d/b40066996/">https://www.3m.com/3M/en_US/p/d/b40066996/</a>
Safety Data Sheet SDS	<a href="https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&amp;msdsLocale=en_US&amp;co=ptn&amp;q=5200FC">https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&amp;msdsLocale=en_US&amp;co=ptn&amp;q=5200FC</a>

## Family Group

---

Link Tags:

• 5200FC

---

Products	Rate of Cure	Shore A Hardness	Long Term Temperature Resistance	Minimum Long Term Temperature Resistance
5200FC	3 mm per 24 hr	60	190 °F	-40 °C

## ISO Statement

---

This Industrial Adhesives and Tapes Division product was manufactured under a 3M 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

---

**Technical Information:** The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

**Product Selection and Use:** Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

**Warranty, Limited Remedy, and Disclaimer:** Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

**Limitation of Liability:** Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

**Disclaimer:** 3M industrial and occupational products are intended, labeled, and packaged for sale to trained industrial and occupational customers for workplace use. Unless specifically stated otherwise on the applicable product packaging or literature, these products are not intended, labeled, or packaged for sale to or use by consumers (e.g., for home, personal, primary or secondary school, recreational/sporting, or other uses not described in the applicable product packaging or literature), and must be selected and used in compliance with applicable health and safety regulations and standards (e.g., U.S. OSHA, ANSI), as well as all product literature, user instructions, warnings, and limitations, and the user must take any action required under any recall, field action or other product use notice. Misuse of 3M industrial and occupational products may result in injury, sickness, or death. For help with product selection and use, consult your on-site safety professional, industrial hygienist, or other subject matter expert. For additional product information, visit [www.3M.com](http://www.3M.com).