# Technical data sheet



**Product:** 5200

Manufacturer: 3M DEUTSCHLAND GMBH

Product group: **KLEBSTOFF** 

Article group: **DICHTMASSE** 

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## MARINE HIGH PERFORMANCE ADH SEALANT 5200

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# Marine High Performance Adhesive Sealant 5200

### Product Data Sheet

September 2022 Supersedes: January 2009

#### **Product Description**

Marine High Performance Adhesive Sealant 5200 is a high performance, one part, moisture curing polyurethane. It forms a highly durable bond and seal, which retains its strength above or below the waterline. In addition, its flexibility allows for the dissipation of stress caused by shock, vibration, swelling or shrinking.

Typical bonding and sealing applications include fiberglass deck to fiberglass hull, wood to fiberglass, portholes, deck fittings, moldings, trunk joints, between struts and planking, stern joints and hull planking.

#### **Key Features**

- Can be used above and below the waterline
- Excellent bond and shear strength
- · Long working time
- Gap filling capability
- · Excellent weathering characteristics

#### **Technical Data**

#### Note:

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

| Properties  | Marine High Performance<br>Adhesive Sealant 5200 |
|---|--|
| Base  | Polyurethane                                     |
| Tack-Free Time @ 23° C and 50%<br>Relative Humidity | 48 hours   |
| Conventional solids content (EN827)                 | 97% (approximately)                              |
| Shore A Hardness<br>(ISO 868-3 seconds)             | Ca 68  |
| Elongation at Break (ISO 8339)                      | 762 %  |
| Service Temperature                                 | -40°C to + 90°C                                  |
| Colours   | White, Mahogany and Black                        |
| Application temperature                             | 5°C to + 35°C                                    |
| Coverage  | 9 m for a 0.6 mm bead<br>37 m for a 0.3 mm bead  |
| Consistency   | Medium paste                                     |
| Flashpoint  | > 65 °C  |

#### **Heat Resistance:**

Long term exposure to temperatures greater than  $80^{\circ}$  C will decrease tensile strength over time. For this reason these products should not be used in applications were the temperatures will continuously exceed  $80^{\circ}$  C.

#### **Direction for use**

#### **Surface Preparation:**

Surfaces to be sealed or bonded should be clean and dry. Surfaces should be free from grease, mold release, oil, water/condensation and other contaminates that may affect the adhesion of the sealant. Abrading with 180 to 220 grit abrasive followed by a solvent wipe will improve the bond strength. Suitable solvents include  $3M^{TM}$  Citrus Based Adhesive Remover,  $3M^{TM}$  Scotch-Weld<sup>TM</sup> Solvent No. 2 or methyl ethyl ketone (MEK).\*

\*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 this product 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.

Use of a primer is an extra step and cost and will depend on substrates and 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. For most applications high strength bonds on metal can be achieved without the use of a primer. Pre-testing for adhesion is suggested to determine if a primer is needed. The 3M<sup>TM</sup> Scotch-Weld<sup>TM</sup> Structural Adhesive Primer EC-1945 B/A works well for most metals.

#### Application:

Puncture seal in nozzle and knock out the thin seal at cartridge bottom before placing in caulking gun. (For flex packs cut off the small crimp at the end and then place in caulking gun barrel with the open end up). Assemble tip and retaining ring on gun, cut tip to desired size. Product should be used within 24 hours after seal is punctured and should be pressed firmly into the joint to ensure adequate contact of the sealant with the substrate. Apply product when temperatures are between 5° C and 35° C. Do not apply on frozen surfaces or wet surfaces. Do not apply over silicones or in the presence of curing silicones. Avoid contact with alcohol and solvents during curing. Sealant can be tooled immediately after applying to give desired appearance.

#### Cleanup:

While sealant is still soft cleaning can be done with the same solvents used for surface preparation. If sealant is already cured, removal is done mechanically with razor knife, piano wire, sanding or 3M<sup>TM</sup> Scotch-Brite<sup>TM</sup> Moulding Adhesive and Stripe Removal Disc. This disc is available from 3M Automotive Aftermarket Division.

# **Application Equipment Suggestions**

#### Cartridge:

For ease of dispensing an all metal, rod driven, friction feed manual applicator gun or an air operated applicator gun is suggested. Please contact your 3M sales representative for these items.

#### **Bulk Dispensing:**

For bulk dispensing a 46:1 ratio dual action piston pump with a ram is suggested. Actual equipment is dependent on the fluid flow desired, the number of guns to be supplied for each pump and distance product has to be pumped. It is best to consult with the equipment supplier to make sure the proper type and size of equipment is specified. Common suppliers of this type of pumping systems are Graco and Binks. It is best to work with a distributor for Graco or Binks located in your area. Our technical service group will be glad to work with you and your chosen supplier to ensure the proper equipment is selected.

#### **Storage**

3M<sup>™</sup> Marine High Performance Adhesive Sealant 5200 must be stored in the original, un-opened containers at 15°C – 25°C for maximum shelf life. Rotate stock on a "first in-first out" basis.

#### Shelf Life

When stored at the recommended conditions in original un-opened containers, 3M<sup>™</sup> Marine High Performance Adhesive Sealant 5200 has a shelf life of 24 months after date of manufacture.

#### Limitations

- > Alcohol should not be used in preparation for bonding, as it will stop the curing process.
- > 3M Marine adhesive sealant 5200 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.

#### **Precautionary Information**

Refer to product label and Material Safety Data Sheet for health and safety information before using the product. For information please contact your local 3M Office.

www.3M.com

#### For Additional Information

To request additional product information or to arrange for sales assistance, go to <a href="https://www.3M.be/bonding">www.3M.be/bonding</a> or <a href="https://www.3M.be/bonding">www.3M.be/bonding</a> or <a href="https://www.3M.be/bonding">www.3M.be/bonding</a>

#### **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.

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Industrial Adhesives & Tapes Division 3M Belgium Hermeslaan 7 1831 Diegem Belgium Industrial Adhesives & Tapes Division 3M Nederland Molengraafsingel 29 2629 JD Delft Nederland