

# Technical data sheet



Product: 2214

Manufacturer: 3M DEUTSCHLAND GMBH

Product group: KLEBSTOFF

Article group: 1-K KLEBSTOFF

Download: 13.03.2025

## SCOTCH-WELD™ 2214 HT/NF

This data sheet was provided to you by Tewipack Uhl GmbH. The company tewipack Uhl GmbH assumes no responsibility for the topicality and the Accuracy of the information contained. The properties of the products can vary due to various influences such as composition and condition of the Substrate, impurities in or on the substrate, temperature and humidity at the Change storage and environmental conditions during use. Using this product in combination with other material, the customer is responsible for to check through our own tests whether the product is suitable for the planned combination and whether this combination delivers the expected results

Tewipack Uhl GmbH  
Industriestraße 15  
D-75382 Althengstett

Telephone:  
+49(0)7051/9297-0  
Fax:  
+49(0)7051/9297-99

E-Mail:  
info@tewipack.de  
Website:  
www.tewipack.de

Managing director:  
Alexander Uhl,  
Michael Uhl  
HRB 330424  
Amtsgericht  
Stuttgart

Bank details:  
Sparkasse  
Sindelfingen  
Pforzheim  
Calw  
BLZ 666 500  
85  
Konto 17 787

Commerzbank  
Sindelfingen  
BLZ 603 400 71  
Konto 8 001 166

Vereinigte  
Volksbank AG  
Böblingen  
BLZ 603 900 00  
Konto 80 089  
003

Postbank  
Stuttgart  
BLZ 600 100  
70  
Konto 146  
294 708



# Scotch-Weld™ Epoxy Adhesive

## 2214 Hi-Temp New Formula

### Product Data Sheet

Date: September 2022  
Supersedes: November 2019

#### Product Description

3M™ Scotch-Weld™ Adhesive 2214 HT/NF is an aluminium filled, deaerated product for use where higher strengths are required.

#### Key Features

- May be applied by spatula, trowel, or flow equipment to meet your individual project requirements.
- Designed for use in applications where high strength bonds are needed

#### Typical Uncured Physical Properties

Base	Modified Epoxy
Colour	uncured: grey cured: grey brown
Density	1.65 g/ml
Specific Gravity acc. to ISO 2811 @ 28 °C ± 2 °C	1.6
PressFlow Viscosity @ 26 °C ± 2 °C	138 s
Viscosity @ 23 °C	>=800,000 mPa·s
Rheometer Viscosity acc. to EN 6043	683 Pa·s

#### Performance Characteristics

Overlap Shear Strength acc. to ISO 4587 @ 23 °C ± 2 °C	22 MPa
Overlap Shear Strength acc. to ISO 4587 @ 121 °C ± 2 °C	19 MPa
Overlap Shear Strength acc. to ISO 4587 @ 171 °C ± 2 °C	14 MPa
Slump Resistance* @ 121 °C ± 2 °C	0.4 mm

(\*) A bead of 1/16" thickness and 25,4 mm width applied on an aluminium substrate which is then placed vertically. The slump resistance is measured by the increase of the bead width

## Application Ideas

- High temperature aluminium bonding
- 

## Handling/ Curing Information

### Directions for Use

CAUTION: Use caution if your bond line is thicker than 1 mm as an exothermic reaction may occur during cure with production of intense heat and smoke. The likelihood of this happening depends on your joint design, the mass of material cured, and the ability for heat to be dissipated by the substrates.

1. Warm products to room temperature before opening containers to restore proper application consistency and to prevent moisture condensation on adhesive surface. Containers may be stored at room temperature for 1-2 days to thaw. Do not warm at temperatures above 27 °C
2. For high strength structural bonds, paint, oxide films, oils, dust, mould release agents and all other surface contaminants must be completely removed. However, the amount of surface preparation directly depends on the substrates, the required bond strength, environmental aging resistance, and requirements determined by the user in light of the user's particular purpose and method of application. For specific surface preparations on common substrates, see the section on surface preparation.
3. Wear protective gloves and face protection to prevent skin and eyes contact and do not use solvents for cleaning hands.
4. For maximum bond strength, apply product evenly to both surfaces to be joined.
5. Keep parts from moving during cure as contact pressure is necessary.
6. Clean-up can be accomplished with solvent such as 3M™ Scotch-Grip™ Solvent No. 3 or Methyl Ethyl Ketone\*

\*Note: Prior to use of these solvents, extinguish or eliminate any ignition sources and read and follow supplier's environmental, health, and safety recommendations listed on the MSDS and product label

## Surface Preparation

The following cleaning methods are suggested for common surfaces:

### Steel:

1. Wipe free of dust with oil-free solvent such as Methyl Ethyl Ketone\*
2. Sandblast or abrade using clean fine grit abrasives.
3. Wipe again with solvent to remove loose particles.

### Aluminium:

1. Vapor Degrease – Perchloroethylene\* condensing vapours for 5-10 minutes.
2. Alkaline Degrease – Oakite 164 solution (70-90 ml/L water) at 87 °C ± 5 °C for 10-20 minutes. Rinse immediately in large quantities of cold running water.
3. Acid (FPL) Etch – Place panels in their following solution for 10 minutes at 66 °C ± 2 °C  
Sodium Dichromate 32-38 ml/L  
Sulfuric Acid, 66°Be 300-320 ml/L  
2024-T3 aluminium (dissolved) 1.6 ml/L minimum tap water as needed to balance
4. Rinse – Rinse panels in clear running tap water.
5. Dry – Air dry 15 minutes; force dry 10 minutes at 66 °C ± 5 °C
6. If primer is to be used, it should be applied within 4 hours after surface preparation.

### Plastics:

1. Solvent wipe with Isopropyl Alcohol\*
2. Abrade using clean fine grit abrasives.
3. Solvent wipe with Isopropyl Alcohol\*

### Rubbers:

1. Solvent wipe with Methyl Ethyl Ketone\*
2. Abrade using clean fine grit abrasives.
3. Solvent wipe with Methyl Ethyl Ketone\*

### Glass:

1. Solvent wipe with acetone or Methyl Ethyl Ketone\*

Note: For glass applications which will be subjected to high moisture/humidity conditions, 3M™ Scotch-Weld™ Primer EC-3901 should be used to prime the glass.

\*Note: Prior to use of these solvents, extinguish or eliminate any ignition sources and read and follow supplier's environmental, health, and safety recommendations listed on the MSDS and product label

---

**Storage & Shelf Life**

The product can be stored up to 12 months @ 4 °C or 18 months @ -20 °C after production.

Store products at 4 °C or below for maximum storage life. Higher temperatures reduce normal storage life. Rotate stock on a “first-in-first-out” basis.

CAUTION: Products are heat sensitive. Storage above 54 °C may cause an exothermic reaction resulting in evolution of excessive heat, noxious fumes and possibly fire.

Dispose of contents/container in accordance with applicable local/regional/national/international regulations

---

**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](http://www.3M.com)

---

**For Additional Information**

To request additional product information or to arrange for sales assistance, go to [www.3M.be/bonding](http://www.3M.be/bonding) or [www.3M.nl/bonding](http://www.3M.nl/bonding).

---

**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.

---

### Important Notice

All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method or application. All questions of liability relating to this product are governed by the terms of the sale subject, where applicable, to the prevailing law

---

Values presented have been determined by standard test methods and are average values not to be used for specification purposes. Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications. This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our recommendations

---

3M and Scotch-Weld are trademarks of the 3M Company.

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