



Terostat® 3210Z

June 2009

Product Type

Solvent Free, Reactive, Pumpable Adhesive / Sealant

Substrate Type

Oily Steel

Application

Terostat 3210Z was specially developed as a spot-weld sealer adhesive for the body shop in the automotive business. The material will cure when passing through an E-coat oven.

Terostat 3210Z is recommended for use when ovens or induction equipment cannot be used for pregelling or procuring to reach wash-off resistance, and where a high degree of elasticity is required over a wide temperature range.

Product Technology

Terostat 3210Z is a solvent free, reactive adhesive/sealant based on rubber which is highly viscous at room temperature. Terostat 3210Z chemically cross-links at temperatures above 140°C. The cured material is highly flexible and little dependant of changes in temperature.

Terostat 3210Z adheres well to oily steel sheets. The material exhibits excellent sag resistance and is wash-off resistant without pregelling or procuring against aqueous cleaning and pretreating agents used on the production line of the automotive industry.

Typical Properties

Property	Typical Results
As Delivered	
Color	Black
Odor	Characteristic
Density	1.57 g/cm ³
Solids	>98%
Pressflow Viscosity 0.104" nozzle, 60 psi @ 25°C	50 – 90 sec/20g
Sag Resistance 10 minutes @ 23°C 30 minutes @ 180°C	No sagging No sagging
Application Temperature	Approximately 25°C
In Service	
Shear Strength 1 mm on Steel sheets, CRS, electro and galvanized	>0.10 MPa
Tensile Strength	>200N
Elongation at Break	>140%
Expansion Rate 30 minutes @ 150°C	±5%
In Service Temperature Range	-40°C to 80°C
Temperature Resistance Short exposure (up to one hour)	205°C

Operating Summary

- It is recommended that testing is completed on substrates to be used to validate this material prior to use.
- To obtain optimum strength the following cure conditions have proven successful:
 - >20 min @ 130°C metal temperature
 - <30 min @ 160°C metal temperature
- Deviations from cure cycle may result in deviations from the shear strength which may interfere with material performance.

General Information

- Shutdown - For extended shutdown periods, greater than 8 hours, it is recommended that pressure be removed from the system to reduce possibility of caking in lines.
- Material Purge - Regular purge and cleaning of the application system is recommended, please contact your sales representative for material requirements and instructions.
- As with all materials, it is recommended that to ensure consistent material, this product is used in a First In - First Out stock rotation system.

Equipment

- Terostat 3210Z is applied from hobbicks and drums with high pressure pumps with a compression ratio minimum 48:1. The material is applied to oily, not pre-warmed steel sheet.

The application pistol can be used either manually, on a fixed basis, or attached to an automatic application system (robot, CNC). The applicator nozzle may be designed according to individual requirements.

Metal Surface Preparation

- This material has been developed to adhere to oily steel substrates.
- This material will not adhere to untreated metal.
- For best performance, substrate should be free of contamination before material is applied.

Product Removal

- Fresh, uncured material can be removed with the aid of Isopropyl Alcohol. Large amounts of material can be removed using towels or rags and then cleaned with Isopropyl Alcohol.
- Cured material can only be removed mechanically

Health and Safety

- For safe handling information on this product, consult the Material Safety Data Sheet (MSDS).**
- Prior to application it is necessary to read the Safety Data Sheet for information about precautionary measures and safety recommendations.
- For chemicals exempt from compulsory labeling, the relevant precautions should always be observed.



Product Control Test Method

- No specific test methods are recommended to be used by customer.
- Additional information on product testing is available upon request.

Storage Requirements

- Store product in the unopened container in a dry location
- **Optimal Storage: 10°C – 32°C. Storage below 10°C or above 32°C can adversely affect product properties.**
- **Material is frost sensitive.**
- **Shelf life of product is 120 days.**
- Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

Waste Disposal

- Refer to MSDS for further information

Order Information

- Bulk IDH Number **1246461**
- Please call for available packaging

Creation Date 07 January 2009

Revision Date 22 June 2009

Revision Number 1

Conversions

(°C x 1.8) + 32 = °F
 mm / 25.4 = inches
 µm / 25.4 = mil
 N x 0.225 = lb
 N/mm x 5.71 = lb/in
 N/mm² x 145 = psi
 MPa x 145 = psi

Note

The data contained herein 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 the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage

Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

Revision Record

Date	Description of Revision	Approved By
07 Jan 09	New	Koenig
22 June 09	Update storage temps to match MSDS	Patel