

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 hobbocks 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**

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 mm / 25.4 = inches
 $\mu\text{m} / 25.4 = \text{mil}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N}/\text{mm} \times 5.71 = \text{lb}/\text{in}$
 $\text{N}/\text{mm}^2 \times 145 = \text{psi}$
 $\text{MPa} \times 145 = \text{psi}$

Note

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Revision Record

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