TEROSON®

Technical Product Bulletin

TEROSON® PV 1297

(KNOWN AS TEROSTAT® 1297)

April 2013

Product Type

Sealer - Expandable, Weld Through Semi-Structural, Wash-Off Resistant

Substrate Type

Metal to Metal

Application

TEROSON PV 1297 (known as TEROSTAT 1297) is capable of being applied over oily galvanized and oily cold rolled steel. For application in spot weld seams, fender, body stiffeners and seal hinges.

Product Technology

TEROSON PV 1297 (known as TEROSTAT 1297) is an expanding, weld through semi-structural sealer. It has enhanced shear adhesion, gas resistance and is wash-off resistant. This product has low to zero VOC's. TEROSON PV 1297 (known as TEROSTAT 1297) offers good corrosion resistance, high elasticity, and bond without read-through. Application can be manual or automated.

Typical Properties

Property	Typical Results
Color	Black
Odor	None
Consistency	Paste
Solids	97% Minimum
Specific Gravity	1.34
Curing Mechanism	Heat Cure
Viscosity (0.104" Orifice, 20 g, 25°C, 40 psi)	25 – 40 seconds
Sag	0 mm
Pressure Stability (SAE J1864) 22400 kPa for 76 Hours	0 ml
Adhesion	
Initial	100% Cohesive
Environmental Cycle (Heat, Salt Spray, Freezer)	100% Cohesive
Heat Aging (336 Hours at 70°C)	100% Cohesive
Humidity (168 Hours at 38°C, 100% RH)	100% Cohesive
Cold Slam (10 Slams at -30°C)	100% Cohesive with No Cracking
Mandrel Bend	100% Cohesive with No Cracking
VOC	0.02 lb/gal
Shear Strength - 0.020" Bondline	>5000 kPa
Corrosion Resistance (Bake 1 hr at 200°C)	
Initial	100% Cohesive with No Corrosion
Humidity (168 Hours at 38°C, 100% RH)	100% Cohesive with No Corrosion
Smoke	No Smoke
Flash Point	>200°C
Flame Resistance	> 50 Passes
Wash-Off Resistance	No loss of material
Stability	
Elevated Temperature (72 hours at 54°C)	22% Increase
Low Temperature (3 cycles)	4% Increase
Storage Stability (60 Days at 35°C)	10% Increase
Volume Change	50 – 100%
Weldability	>2000 Welds
E-Coat Compatibility	9+
Application Temperature	Ambient

Substrates and Bake Schedules

- The adhesion of TEROSON PV 1297 (known as TEROSTAT 1297) was tested using the following substrates, drawing compounds and bake schedules:
- **Substrates** / **Drawing Compounds**
  - CRS - Cold Rolled Steel — DB 4265BW
  - HDG 70G70U - Hot Dip Galvanized — 61 AUS
  - EZG 60G60E Electrogalvaneal — 61 MAL
  - PL-7105A
- Bake Schedules
  - Low ELPO Bake: 20'@158°C + 25'@157°C + 25'@115°C
  - Low ELPO Bake: 20'@158°C + 25'@115°C + 25'@115°C
  - Nominal ELPO Bake: 30'@163°C+25'@157°C+25'@115°C
  - Nominal ELPO Bake: 30'@163°C+25'@115°C+25'@115°C
  - High ELPO Bake: 90'@177°C + 25'@157°C + 25'@115°C
  - High ELPO Bake: 90'@177°C + 25'@115°C + 25'@115°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:
  - <60 min @ 200°C metal temperature
  - >25 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

- Equipment with piston, gear, or rotary pumps is suitable for the application of TEROSON PV 1297 (known as TEROSTAT 1297) from drums or pails.
- It is recommended that this material be dispensed using a pumping system. This should include a high pressure ratio pump, with recommended ratio of 55:1 or greater. Care should be taken in system design to insure that flow restrictions are minimized. Flow restrictions occur when headers, hoses, and/or nozzles are too small for the application. By reducing

flow restriction, it is possible that lower ratio pumps can be used.

Metal Surface Preparation

- This material has been developed to adhere to a wide variety of material surfaces.
- While no pre-cleaning of the substrate is required, removal of excess lubricants is desired and clean substrate is preferred. Cleaning of the substrate can be through chemical and/or mechanical methods
- 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
- **Keep away from heat and direct sunlight.**
- **Store between 10°C and 30°C (50°F and 86°F)**
- **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 **768708**
- Please call for available packaging

Creation Date	19 June 2002		
Revision Date	23 May 2013	**Revision Number**	4

REVISION HISTORY

07.10.08	New format
05.01.09	Updated shelf life from 90 to 120 days
05.23.13	Updated storage temperatures and conditions. Updated name due to rebranding. Updated shelf life from 120 to 90 days. Updated viscosity value.

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/mm^2 x 145 = psi
MPa x 145 = psi

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