

Terostat-MS 939

One-component Adhesive/Sealant,
Elastic, High Viscosity

Basis: MS[®]-Polymer

Issue: 19.02.2004

Product Description

Terostat-MS 939 is a gun-grade, one component adhesive/sealant based on silane modified polymer, which cures by reaction with moisture to an elastic product. The skin formation and curing times are dependent on humidity and temperature, and the curing time also depends on joint depth. By increasing the temperature and moisture these times can be reduced; low temperature as well as low moisture retard the process.

Terostat-MS 939 is particularly sag-resistant leading to a high position tack after matching of the parts to be bonded.

Terostat-MS 939 is free of solvents, isocyanates, silicones and PVC and is odourless. It demonstrates good adhesion without primer to many substrates and is compatible with suitable paint systems. The adhesive/sealant also demonstrates good UV resistance and can therefore be used for interior and exterior applications.

Terostat-MS 939 demonstrates the strength necessary for elastic bonding. This property of the product also remains at the temperatures in repair ovens (max. 100°C). Terostat-MS 939 shows no shrinkage, and therefore dimpling, tension stress and an unattractive appearance are not observed under these conditions.

Terostat-MS 939 allows accelerated curing as 2-component material. See separate data sheets Terostat-MS Power & Speed Technologie or Terostat-MS 2K-Technologie.

Application Areas

Terostat-MS 939 is used for the following applications:

- elastic bonding of metals and plastics, e.g. side panelling, and bonding of the roof skin in the vehicle and caravan manufacture
- elastic, interior and/or exterior seam and joint sealing in the following areas:
vehicle body, caravan, railway carriage, container and general metal and apparatus construction; the electrical, plastics, air-conditioning and ventilation industries.

Technical Data

Colours:	white, off-white, grey, black
Odour:	odourless
Consistency:	pasty, thixotropic
Density:	approx. 1.5 g/cm ³
Curing mechanism:	humidity curing
Sag resistance:	no sagging (DIN-profile 15 mm)
Skin formation time *:	approx. 10 mins
Cure rate *:	approx. 3 mm/24 h
Shore-A-hardness (DIN 53505) *:	approx. 55
Tensile strength *:	approx. 3.0 MPa
(according to DIN 53504)	
Elongation to break *:	approx. 250 %
(according to DIN 53504)	
Stress at 100 % elongation *:	approx. 1.6 MPa
(according to DIN 53504)	
Volume change (DIN 52451):	<2 %
Paint compatibility:	in principle compatible



Technologies
Industrial Adhesives

UV resistance:	no significant changes of the surface
Test method:	dry UV
UV source:	Osram Vitalux 300 W
Distance to the specimen:	25 cm
Test period:	6 weeks
Application temperature:	5°C to 40°C
In service temperature range:	-40°C to 100°C
Short exposure (up to 1 h):	120°C
* DIN 50014 standard climate:	23°C, 50 % relative air humidity

Application

Preliminary statement

Prior to application it is necessary to read the **Safety Data Sheet** for information about precautionary measures and safety recommendations. Also, for chemical products exempt from compulsory labeling, the relevant precautions should always be observed.

Pretreatment

The substrates must be clean, dry, oil and grease free. Depending on the surface it can be necessary to roughen the surface or to use a primer/adhesion promoter to provide optimum adhesion.

When manufacturing of plastics, external release agents are often used; these agents must be absolutely removed prior to starting bonding or sealing. Due to the different compositions of paints, especially powder paints, and the large number of different substrates, application trials before use are necessary. For cleaning, Cleaner+Diluent A, FL or Terostat-450 from the Teroson programme are suitable.

When bonding and sealing PMMA, e.g. Plexiglass®, and polycarbonate, e.g. Makrolon® or Lexan®, under tension, stress corrosion cracking may occur. Application trials before use are necessary.

There is no adhesion to polyethylene, polypropylene and PTFE (e.g. Teflon®). Substrates not mentioned above should be subject to trials.

Application

Application from 310 ml cartridges is made with the Teroson Hand or Air Pressure Pistols, and from plastic wallets (310 and 570 ml) with the corresponding FK-Hand or FK-Air Pressure Pistols. In the case of compressed air application a pressure of 2–5 bar is required.

Low material temperatures of the sealant will lead to an increase of viscosity, resulting in a lower extrusion rate. This can be avoided by bringing the sealant up to room temperature prior to application. If substrates are too cold temperature may fall below dew point causing condensation. This can be avoided by bringing the substrates up to room temperature in time.

Terostat-MS 939 can also be applied from hobbocks or drums with high pressure pumps with follower plates. See separate applications directions of Terostat-MS products in hobbocks and drums.

Cleaning

For cleaning application equipment contaminated with uncured Terostat-MS 939 we recommend the use of Cleaner+Diluent A or FL.

Test Certificates

- UL testing (Underwriters Laboratories) "Polymeric Adhesive Systems, Electrical Equipment – Component".

Storage

Frost-sensitive	no
Recommended storage temp.	10°C to 25°C
Shelf-life	12 months in original packaging



Technologies
Industrial Adhesives

Packaging

Cartridges 310 ml
Hobbock / Drum on request

Hazard Indications/**Safety Recommendations/****Transport Regulations**

see Safety Data Sheet

Important

The above data, particularly the recommendations for application and use of our products is based on our knowledge and experience. Due to different materials and conditions of application which are beyond our knowledge and control we strongly recommend carrying out sufficient tests in order to ensure that our products are suitable for the intended process and applications. Except for willful acts any liability based on such recommendations or any oral advice is hereby expressly excluded.

This Technical Data Sheet supersedes all previous editions.

Henkel KGaA . 40191 Duesseldorf
Distribution: Henkel Teroson GmbH . 69123 Heidelberg . Germany
Phone +49-6221-704-0 . Fax +49-6221-705-242
industrial-adhesives@henkel.com . www.industrial-adhesives.com



Technologies
Industrial Adhesives