TEROSON

Technical Data Sheet

TEROSON MS 647

November 2017

PRODUCT DESCRIPTION

TEROSON MS 647 provides the following product characteristics:

Technology	Silane-modified polymer
Product Type	Adhesive/Sealant
Components	One-component
Cure	Humidity
Application	Assembly
Appearance	White, Grey, Black
Consistency	Pasty, Thixotropic
Odor	Characteristic

TEROSON MS 647 is a gun-grade, one component adhesive / sealant based on silane modified polymer, which cures by reaction with moisture to a soft 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. TEROSON MS 647 is free of solvents, isocyanates, silicones and PVC, and is odorless. It demonstrates good adhesion to many substrates.The sealant also demonstrates good UV resistance and can therefore be used for interior and exterior applications. TEROSON MS 647 demonstrates the strength necessary for elastic bonding.

Application Areas:
TEROSON MS 647 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, railway carriage, container and general metal construction, photovoltaic panels, plastics, air-conditioning and ventilation industries.

TECHNICAL DATA

Density, white, grey, black, g/cm³:	approx. 1.4
Sag resistance:	no sagging (DIN profile 15 mm)
Skin formation time, min*:	10 to 20
Cure rate, mm/24 hrs:	approx. 3
Shore-A-hardness (ISO 868, Durometer A):	approx. 50
Tensile strength (acc. to ISO 37), MPa:	2.8
Elongation at break (acc. to ISO 37, speed 200 mm/min),%:	approx. 200
Volume change (acc. to DIN 52451), %:	<2
Tensile shear strength (acc. to DIN EN 1465), MPa*:	3
Substrates:	Alu/Alu
Layer thickness, mm:	approx. 2
Cross head speed, mm/min:	approx. 50
UV resistance:	no signif. changes
UV source:	Osram Vitalux 300W, dry UV
Distance to the specimen, cm:	25
Test period, weeks:	6
Reference IEC 61215/61646 clause 10.13:	
Damp heat test durability **:	given
Test period, hours:	1,000
* ISO 291 standard climate:	23°C, 50% relative air humidity
**Damp heat conditions:	85°C, 85% relative air humidity
Application temperature, °C:	5 to 40 (transparent)
In service temperature range, °C:	-40 to 100
Short term (up to 1 h), °C:	120

DIRECTIONS OF USE

Preliminary Statement:
Prior to application it is necessary to read the **Material 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.

Pre-Treatment:
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 best adhesion. When manufacturing plastics, external release agents are often used; these agents must be accurately 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 TEROSON VR 30, TEROSON VR 10 or TEROSON SB 450 from the Henkel portfolio are suitable. When bonding and sealing PMMA, e.g. Plexiglas®, 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.

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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 to 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 TEROSON MS 647 can also be applied from hobbocks or drums with high pressure pumps with follower plates.See separate application directions of Teroson MS products in hobbocks and drums

Cleaning:
For cleaning application equipment contaminated with uncured TEROSON MS 647 we recommend the use of cleaners TEROSON VR 10, 20, 30 or 40.

Storage:

Frost-Sensitive	No
Recommended storage temperature, °C	10 to 25
Shelf-life (in unopened original packaging), months	12

Classification:
Please refer to the corresponding **Safety Data Sheets** for details on:
Hazardous Information
Transport Regulations
Safety Regulations

Disclaimer

Note:
The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.
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