Technical Data Sheet

LOCTITE ESB 5100

January 2023

PRODUCT DESCRIPTION

LOCTITE ESB 5100 provides the following product characteristics:

Technology	Hotmelt
Chemical Type	Butyle
Cure	Non-reactive
Appearance	black glossy
Components	One component - requires no mixing
Application	Gasketing
Specific Benefits	Excellent tightness, fast and easy processing

LOCTITE ESB 5100 has been designed specifically for gasketing applications e.g. aluminum cases for battery and power conversion systems. It is a high quality non reactive sealant with very high tackiness. By its high elastic behavior it provides a reliable sealing performance even in thin films. In case of substrate movements LOCTITE ESB 5100 shows a self healing effect. LOCTITE ESB 5100 provides tightness against water and gas. LOCTITE ESB 5100 allows to re-open the sealed joints, e.g. for service, repair or recycling.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 25°C, g/cm³	1.3 +/- 0.05
Consistency	plasto-elastic
Solids content, %	100
Penetration (cone 150g, 6s, 20°C)	70 to 80 1/10 mm
In service temperature range, °C	-40 to 80

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Safety Data Sheet (SDS).

Pre-Treatment:

The substrates must be clean, dry, free of oil, grease and other anti-adhesive contaminants (e.g. release agents). For cleaning TEROSON VR10 is suitable.

Application

- Application as hot applied butyl film as well as pre-applied tape in several dimensions.
- To apply LOCTITE ESB 5100 from drums, extruder spiral-, piston-, gear- or rotary-pumps can be used.
- Pump, follower plate, hose, and applicator must be heated.
- The processing temperatures are between 80 to 160 °C, with the optimum range depending on the desired output and other specific requirements.
- Equipment with separate heating circuits and independent control turned out to be favorable, with the lowest temperature at the follower plate and the highest temperature at the application nozzle.
- On request, we will provide you with the needed information on suitable application equipment.

Directions for use

1. To apply LOCTITE ESB 5100 as pre-applied tape, please unroll product and cut it to the desired length.
2. Then apply the tape to the surface requiring sealing and press it on.
3. To avoid stretching of the tape, remove the release paper only after application process.
4. After peeling off the release paper, parts can be assembled and pressed together.
5. If needed, manual fixation of the part can be used.

Storage

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Frost-Sensitive	No
Recommended storage temperature, °C	5 to 35
Shelf-life, months (in unopened original packaging)	24

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.

Loctite Material Specification[LMS]

LMS dated January 15, 2004. Test reports for each batch are available for the indicated properties. LMS test reports include selected QC test parameters considered appropriate to specifications for customer use. Additionally, comprehensive controls are in place to assure product quality and consistency. Special customer specification requirements may be coordinated through Henkel Quality.

Conversions

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
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
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

ADDITIONAL INFORMATION

Disclaimer

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. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

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Reference 1.1

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