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A	<p><b>Eigenschaften</b></p> <ul style="list-style-type: none"> <li>• Einsatztemperatur -40° C bis +150°C</li> <li>• Für Halbleiter ohne Hochfrequenzbeanspruchung</li> <li>• Für geringe bis mittlere Leistungs-dichte</li> <li>• RohS Konform</li> </ul> <p><b>Anwendungsbereich</b></p> <p>Bei den aufgeführten Artikeln handelt es sich um eine hellfarbige Wärmeleitpaste, die Betriebssicherheit gewährleistet sowie schnelle und sichere Wärmeleitung bei der Verbindung von Wärmeleiter zu Kühlkörper im Fügospalt. Die silikonfreie Wärmeleitpaste sollte immer dann zum Einsatz kommen, wenn die Kontaktsysteme absolut frei von Silikonprodukten gehalten werden sollen.</p> <p><b>Einatzbeispiele</b></p> <p>Durch Bestreichen mit silikonfreier Wärmeleitpaste wird ein optimales Anpassen an die Oberflächenrauigkeit der Halbleiter und Kühlkörper gewährleistet. Luftspalte mit schlechter Wärmeleitung werden dadurch vermieden. Siltkonfreie Wärmeleitpaste wird für alle Arten von Bauelementen wie z.B. Transistoren, Dioden, Thyristoren sowie andere integrierte Bauteile seit Jahren mit Erfolg eingesetzt.</p> <p><b>Typische Kenndaten</b></p> <table border="1"> <thead> <tr> <th>Dickungsmittel</th> <th colspan="2">Bentonit / Metalloxide</th> </tr> </thead> <tbody> <tr> <td>Ruhpenetration</td> <td><math>t_{0mm}</math></td> <td>250-290</td> </tr> <tr> <td>Wärmeleitfähigkeit bei 25°C</td> <td>W/mK</td> <td>ca.0,5</td> </tr> <tr> <td>Ölabschaidung (40°C/168h)</td> <td>%</td> <td>≤2</td> </tr> <tr> <td>Fließdruck bei 20°C</td> <td>mbar</td> <td>≤200</td> </tr> <tr> <td><b>Grundöl</b></td> <td colspan="2"><b>Synthetischer Ester</b></td> </tr> <tr> <td>Kin. Viskosität bei 40°C</td> <td>mm<sup>2</sup>/s</td> <td>ca.90</td> </tr> <tr> <td>Kin. Viskosität bei 100°C</td> <td>mm<sup>2</sup>/s</td> <td>ca.13</td> </tr> </tbody> </table>						Dickungsmittel	Bentonit / Metalloxide		Ruhpenetration	$t_{0mm}$	250-290	Wärmeleitfähigkeit bei 25°C	W/mK	ca.0,5	Ölabschaidung (40°C/168h)	%	≤2	Fließdruck bei 20°C	mbar	≤200	<b>Grundöl</b>	<b>Synthetischer Ester</b>		Kin. Viskosität bei 40°C	mm <sup>2</sup> /s	ca.90	Kin. Viskosität bei 100°C	mm <sup>2</sup> /s	ca.13
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B	<p><b>Silikonfreie Wärmeleitpaste</b></p> <p><b>Technische Produktinformation</b></p> <p><b>Lagerfähigkeit der Wärmeleitpaste</b></p> <p>Bei dieser Wärmeleitpaste kann man erfahrungsgemäß von einer Lagerfähigkeit von bis zu drei Jahren ausgehen.</p> <p>Folgende Bedingungen sollten allerdings eingehalten werden:</p> <ul style="list-style-type: none"> <li>• trockene, saubere Lagerung</li> <li>• Lagertemperatur zwischen 0 Grad und 40 Grad Celsius</li> <li>• Luftfeuchtigkeit nicht über 65% (relativ)</li> <li>• kein Zutritt von chemischen Reagenzien</li> </ul> <p>Nach einer längeren Lagerzeit (&gt; 6 Monate, ggf. auch schon etwas eher) kann es zu einem Abscheiden des Trägeröles kommen, das in ähnlicher Form auch bei Farben und Lacken zu beobachten ist.</p> <p><b>Dieses Öl darf in keinem Fall abgeschüttet werden.</b></p> <p>Es ist sicherzustellen, dass das abgeschiedene Öl wieder gründlich untergemischt wird. Bei Dosengebinden kann dies durch sorgfältiges Verrühren geschehen. Bei Tubengebinden kann dies durch sorgfältiges Durchkneten der entriegelten Tube erreicht werden.</p> <p><b>Werden diese Punkte beachtet, behält die Paste ihre bestimmungsgemäßen Eigenschaften.</b></p> <p><b>Abfülldatum</b></p> <p>Das Abfülldatum ist den ersten vier Ziffern der Chargennummer zu entnehmen und setzt sich wie folgt zusammen:  Jahreskürzel/Kalenderwoche  Lot-No.: 202312345678900000 entspricht dem Jahr 2020 KW23  Ein entsprechender Aufdruck ist auf dem Tubenende oder dem Label zu finden.</p>																													

C	<p><b>Customer-No.</b></p> <p>ASSMANN WSW-No. V6512, V6514-D, V6515, V6515H, V6515H1</p> <p>Drawing-No. ASS_0539_HS rev06</p> <p>Replace Sheet 1/2</p>					
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<p><b>Wir empfehlen, insbesondere vor Serientfertigungen, die Beständigkeit der mit dem Schmelstoff in Kontakt kommenden Werkstoffe zu prüfen.</b></p> <p><b>*Angaben beziehen sich auf Ruhpenetration</b></p> <p><b>**Physikalisch Technische Bundesanstalt Braunschweig und Berlin (Heizdrückenverfahren)</b></p>						
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# ROHS compliant

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## Thermal compound silicone-free technical product information

- Properties**
- Service temperature -40°C +150°C
  - For semiconductors without high frequency requirements.
  - For low to moderate performances
  - RoHS compliant

**Description**  
The mentioned articles are light colored heat sink paste, which guarantees operational reliability as well as a quick and safe heat transfer between semi-conductor and heat sink. This paste should be applied in those cases where the contact systems have to be absolutely free of silicone products.

**Application**  
By using with spreading the paste between the semi conductor element and the heat sink, the thermal resistance is considerably reduced. There will be an optimal adjustment between the surface roughness of the semi conductor and heat sink. Air gaps with poor heat transfer are thus avoided. The non silicon paste is successfully used for all types of construction elements, such as transistors, diodes, thyristors, as well as other integrated components.

Thickener	Bentonite / metal oxides	
Unworked penetration	$\frac{1}{10}$ mm	250-290
Thermal conductivity at 25°C	W/mK	approx. 0.5
Oil separation (40°C/168h)	%	≤2
Flow pressure at 20°C	mbar	≤200
<b>Base oil</b>		
Kin. viscosity at 40°C	mm <sup>2</sup> /s	approx. 90
Kin. viscosity at 100°C	mm <sup>2</sup> /s	approx. 13

**Date of filling**  
The date of filling you will find under the first four digits of the batch number and is composed as follows:  
Year/calender week  
Lot-No.: 2023123456789000000 corresponds to the year 2020 CW23  
A corresponding imprint can be taken from the end of the tube or the label.

**Under no circumstances this OIL may be removed!**  
The separated oil has to be mixed again with the complete thermal compound. In box containers the thermal compound has to be stirred well. Unsealed tube containers has to be knead carefully to have the wished result.  
**Are these points well noted, the thermal compound will still keep their regularly properties.**

**Storage life**  
In experience with non silicon thermal compound we can assume a storage life up to 3 year.

- Following conditions must be observed:
- Dry and clean storage
  - Storage temperature between 0°C to the max of 40°C.
  - Relative humidity not allowed over 65%
  - No admix of other chemical reagents

After long storage time (>6 month, if necessary rather earlier) it may happen that the carrier oil can get separated. This fact is also well known at colors and lacquer.

## RoHS compliant

Due to the different chemical compositions of these materials we recommend a compatibility test prior application.

\* The indication refers to the unworked penetration  
\*\* Physical-technical Federation Office Braunschweig and Berlin (transient-hot-bridge)

⑥	Update	12.01.2021	P. Larsen		Date	Name	Customer-No.
⑤	Update	18.06.2019	S. Bölling				
④	Update	06.12.2012	A. Artzig	Approved	12.01.2021	P. Larsen	ASSMANN WSW-No. V6512, V6514-D, V6515, V6515H, V6515H1
③	Update	20.01.2012	Schulz	Drawn	11.06.2003	A.Menk	
②	Update	01.03.2011	Schulz				Drawing-No.
①	Update	25.11.2010	Schulz				ASS_0539_HS
							Replace
							Sheet 2/2

**ASSMANN**  
www.assmann-components

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