



PRODUCT CHANGE NOTIFICATION (PCN)

ISSUE DATE: 26.10.2023
MODIFICATION / REVISION DATE: 26.10.2023

V6512 / V6514-D / V6515 / V6515H / V6515H1
Thermal compound, silicone-free

CHANGE NOTIFICATION: PCN_20220517_V651x

DESCRIPTION OF CHANGES: CHANGE OF PRODUCT MATERIALS
PRODUCT EOL - OBSOLETE
ASS_9192_HSrev01

REASON FOR CHANGE: CHANGE OF PRODUCT DIMENSIONS, TOLERANCES AND/OR PROPERTIES
PRODUCT EOL - OBSOLETE
Replaced by follow-up products

KEY CHARACTERISTICS OF CHANGE: Details see page 2 & 3

PRODUCTS AFFECTED: V6512 / V6514-D / V6515 / V6515H / V6515H1
Replaced by follow-up products

DATE OF CHANGE AND IMPLEMENTATION: CHANGE: WEEK 40 / YEAR 2024
IMPLEMENTATION: 30.09.2024

RESPONSE: NO RESPONSE TO THIS NOTIFICATION IS REQUIRED



Auf dem Schüffel 1
D-58513 Lüdenscheid
Tel.: +49-2351 - 554-200
Fax +49 (2351) 554-861
info@assmann-wsw.com
www.assmann-wsw.com

PRODUCT CHANGE NOTIFICATION (PCN)

ISSUE DATE: 26.10.2023
MODIFICATION / REVISION DATE: 26.10.2023

REFERENCE DOCUMENTS / ATTACHMENTS:
DOCUMENT: DRAWING

ASSMANN WSW P/N	Drawing Number		ASSMANN WSW P/N	Drawing Number
V6512	Obsolete / Replaced	↔	V10310-T1	ASS_9192_HSrev01
V6514-D	Obsolete / Replaced	↔	V10310-C1	ASS_9192_HSrev01
V6515	Obsolete / Replaced	↔	V10310-C2	ASS_9192_HSrev01
V6515H1	Obsolete / Replaced	↔	V10310-B1	ASS_9192_HSrev01
V6515H	Obsolete / Replaced	↔	V10310-B2	ASS_9192_HSrev01



Auf dem Schüffel 1
 D-58513 Lüdenscheid
 Tel.: +49-2351 - 554-200
 Fax +49 (2351) 554-861
 info@assmann-wsw.com
 www.assmann-wsw.com

PRODUCT CHANGE NOTIFICATION (PCN)

ISSUE DATE: 26.10.2023
 MODIFICATION / REVISION DATE: 26.10.2023

V651x OLD VERSION	V10310-xx NEW VERSION																																																																												
<table border="1"> <thead> <tr> <th>Thickener</th> <th colspan="3">Bentonite / metal oxides</th> </tr> </thead> <tbody> <tr> <td>Unworked penetration</td> <td>$\frac{1}{10}$mm</td> <td>250-290</td> <td>1 DIN ISO 2137</td> </tr> <tr> <td>Thermal conductivity at 25°C</td> <td>W/mK</td> <td>approx. 0,5</td> <td>Method PTB** 2</td> </tr> <tr> <td>Oil separation (40°C/168h)</td> <td>%</td> <td>≤2</td> <td>DIN 51 817</td> </tr> <tr> <td>Flow pressure at 20°C</td> <td>mbar</td> <td>≤200</td> <td>3 DIN 51 805</td> </tr> <tr> <th>Base oil</th> <th colspan="3">Synthetic ester</th> </tr> <tr> <td>Kin. viscosity at 40°C</td> <td>mm²/s</td> <td>approx. 90</td> <td>4 DIN 51 562</td> </tr> <tr> <td>Kin. viscosity at 100°C</td> <td>mm²/s</td> <td>approx. 13</td> <td>5 DIN 51 562</td> </tr> </tbody> </table>	Thickener	Bentonite / metal oxides			Unworked penetration	$\frac{1}{10}$ mm	250-290	1 DIN ISO 2137	Thermal conductivity at 25°C	W/mK	approx. 0,5	Method PTB** 2	Oil separation (40°C/168h)	%	≤2	DIN 51 817	Flow pressure at 20°C	mbar	≤200	3 DIN 51 805	Base oil	Synthetic ester			Kin. viscosity at 40°C	mm ² /s	approx. 90	4 DIN 51 562	Kin. viscosity at 100°C	mm ² /s	approx. 13	5 DIN 51 562	<table border="1"> <thead> <tr> <th>Thickener</th> <th colspan="3">Bentonite, metal oxides</th> </tr> <tr> <th>Base oil</th> <th colspan="3">Synthetic ester</th> </tr> <tr> <th>Color</th> <th colspan="3">white-grey</th> </tr> </thead> <tbody> <tr> <td>Kin. viscosity at +40°C</td> <td>mm²/s</td> <td>4 approx. 100</td> <td>DIN 51562 / ASTM D 7042</td> </tr> <tr> <td>Kin. viscosity at +100°C</td> <td>mm²/s</td> <td>5 approx. 14</td> <td>DIN 51562 / ASTM D 7042</td> </tr> <tr> <td>Unworked penetration</td> <td>$\frac{1}{10}$mm</td> <td>310 – 340</td> <td>1 DIN ISO 2137</td> </tr> <tr> <td>Working temperature range</td> <td>°C</td> <td>-40 – +150</td> <td>-</td> </tr> <tr> <td>Density</td> <td>g/cm³</td> <td>1,9</td> <td>DIN 51757 / In style of</td> </tr> <tr> <td>Flow pressure at +20°C</td> <td>hPa</td> <td>≤300</td> <td>3 DIN 51805</td> </tr> <tr> <td>Oil separation (+40°C/168 h)</td> <td>%</td> <td>± 2</td> <td>DIN 51817</td> </tr> <tr> <td>Thermal conductivity at +25°C</td> <td>W/mK</td> <td>approx. 0,7</td> <td>2 ASTM D 7896</td> </tr> </tbody> </table>	Thickener	Bentonite, metal oxides			Base oil	Synthetic ester			Color	white-grey			Kin. viscosity at +40°C	mm ² /s	4 approx. 100	DIN 51562 / ASTM D 7042	Kin. viscosity at +100°C	mm ² /s	5 approx. 14	DIN 51562 / ASTM D 7042	Unworked penetration	$\frac{1}{10}$ mm	310 – 340	1 DIN ISO 2137	Working temperature range	°C	-40 – +150	-	Density	g/cm ³	1,9	DIN 51757 / In style of	Flow pressure at +20°C	hPa	≤300	3 DIN 51805	Oil separation (+40°C/168 h)	%	± 2	DIN 51817	Thermal conductivity at +25°C	W/mK	approx. 0,7	2 ASTM D 7896
Thickener	Bentonite / metal oxides																																																																												
Unworked penetration	$\frac{1}{10}$ mm	250-290	1 DIN ISO 2137																																																																										
Thermal conductivity at 25°C	W/mK	approx. 0,5	Method PTB** 2																																																																										
Oil separation (40°C/168h)	%	≤2	DIN 51 817																																																																										
Flow pressure at 20°C	mbar	≤200	3 DIN 51 805																																																																										
Base oil	Synthetic ester																																																																												
Kin. viscosity at 40°C	mm ² /s	approx. 90	4 DIN 51 562																																																																										
Kin. viscosity at 100°C	mm ² /s	approx. 13	5 DIN 51 562																																																																										
Thickener	Bentonite, metal oxides																																																																												
Base oil	Synthetic ester																																																																												
Color	white-grey																																																																												
Kin. viscosity at +40°C	mm ² /s	4 approx. 100	DIN 51562 / ASTM D 7042																																																																										
Kin. viscosity at +100°C	mm ² /s	5 approx. 14	DIN 51562 / ASTM D 7042																																																																										
Unworked penetration	$\frac{1}{10}$ mm	310 – 340	1 DIN ISO 2137																																																																										
Working temperature range	°C	-40 – +150	-																																																																										
Density	g/cm ³	1,9	DIN 51757 / In style of																																																																										
Flow pressure at +20°C	hPa	≤300	3 DIN 51805																																																																										
Oil separation (+40°C/168 h)	%	± 2	DIN 51817																																																																										
Thermal conductivity at +25°C	W/mK	approx. 0,7	2 ASTM D 7896																																																																										
FOR DETAIL, PLEASE TAKE ATTACHED NEW DRAWING: FOR REFERENCE																																																																													

PCN REVISION HISTORY:

DATE OF REVISION: 26.10.2023

REVISION NUMBER: 01

Silikonfreie Wärmeleitpaste - Technische Produktinformation

A

Anwendungsbereich

Für die optimierte Wärmeleitung zwischen elektronischen Bauelementen und Kühlkörper mit geringer bis mittlerer Leistungsdichte. Die silikonfreie Wärmeleitpaste vermeidet Lufteinschlüsse und sollte immer dann zum Einsatz kommen, wenn die Kontaktsysteme absolut frei von Silikonprodukten gehalten werden sollen. Geeignet für Bauteile ohne Hochfrequenzbeanspruchung.

Einsatzbeispiele

Durch Bestreichen mit silikonfreier Wärmeleitpaste wird ein optimales Anpassen an die Oberflächenrauigkeit von Halbleiter sowie Kühlkörper erreicht. Silikonfreie Wärmeleitpaste wird für alle Arten von Bauelementen wie z.B. Transistoren, Dioden, Thyristoren sowie andere Halbleiter seit Jahren mit Erfolg eingesetzt.

Dickungsmittel	Bentonit / Metalloxide		
Grundöl	Synthetischer Ester		
Farbe	weißgrau		
Kin. Viskosität bei +40°C	mm²/s	ca.100	DIN 51562 / ASTM D 7042
Kin. Viskosität bei +100°C	mm²/s	ca.14	DIN 51562 / ASTM D 7042
Ruhpenetration	$\frac{1}{10}$ mm	310 – 340	DIN ISO 2137
Einsatztemperaturbereich	°C	-40 – +150	–
Dichte	g/cm³	1,9	DIN 51757 / in Anlehnung
Fließdruck bei +20°C	hPa	≤300	DIN 51805
Ölabscheidung (+40°C/168 h)	%	≤ 2	DIN 51817
Wärmeleitfähigkeit bei +25°C	W/mK	ca. 0,7	ASTM D 7896

Wir empfehlen, insbesondere vor Serienfertigungen, die Beständigkeit der mit dem Schmierstoff in Kontakt kommenden Werkstoffe zu prüfen.

RoHS compliant

Lagerfähigkeit der Wärmeleitpaste

Bei dieser Wärmeleitpaste kann man erfahrungsgemäß von einer Lagerfähigkeit von bis zu drei Jahren ausgehen.

Folgende Bedingungen sollten eingehalten werden:

- Trockene, saubere Lagerung
- Lagertemperatur zwischen 0°C und +40°C
- Relative Luftfeuchtigkeit nicht über 65%
- Kein Zutritt von chemischen Reagenzien

Nach einer längeren Lagerzeit (> 6 Monate, ggfs. auch schon etwas eher) kann es zu einem Abscheiden des Trägeröles kommen, das in ähnlicher Form auch bei Farben und Lacken zu beobachten ist.

Dieses Öl darf in keinem Fall abgeschüttet werden.

Es ist sicherzustellen, dass das abgeschiedene Öl wieder gründlich untergemischt wird. Bei Dosengebinden (Dose / Eimer) kann dies durch sorgfältiges Verrühren geschehen. Bei Tubengebinden kann dies durch sorgfältiges Durchkneten der Tube erreicht werden.

Werden diese Punkte beachtet, behält die Paste ihre bestimmungsgemäßen Eigenschaften.

Abfülldatum

Das Abfülldatum ist den ersten vier Ziffern der Chargennummer zu entnehmen und setzt sich wie folgt zusammen:

Jahreskürzel/Kalenderwoche
 Lot-No.: 2023123456789000000 entspricht dem Jahr 2020 KW23
 Ein entsprechender Aufdruck ist auf dem dem Label zu finden.
 Tuben weisen einen Aufdruck am Tubenende auf.

Ordercode

- V10310-T1 / Tube 35 g
- V10310-C1 / Dose 250 g
- V10310-C2 / Dose 500 g
- V10310-B1 / Eimer 10 kg
- V10310-B2 / Eimer 25 kg

B

C

D


①

E

F

G

H

				Date	Name	Description:	
						Thermal compound, silicone-free	
			Approved	26.10.2023	P. Larsen	ASSMANN WSW-No. V10310-xx	
			Drawn	17.05.2022	P. Larsen		
①	Update	26.10.2023	P. Larsen			Drawing-No.	
②	Drawn	17.05.2022	P. Larsen			ASS_9192_HS	rev01
Id.	Modification	Date	Name			Replace	Sheet 1/2

Thermal compound silicone-free - technical product information

A

Description

For optimized heat transfer between electronic components and heat sink for low to medium power density. The silicone-free thermal compound avoids air inclusions and should be applied in those cases where the application has to be absolutely free of silicone products. Suitable for components without high frequency exposure.

Storage life of the thermal compound

In experience a storage life up to 3 years can be assumed for this silicone-free thermal compound.

B

Application

By spreading the thermal compound between the semiconductor and the heat sink an optimized adaption to the surface roughness is achieved. The silicone-free compound is successfully used for all types of electronic components, such as transistors, diodes, thyristors, as well as other semiconductors.

Following conditions must be observed:

- Dry and clean storage
- Storage temperature between 0°C and +40°C
- Relative humidity not allowed over 65%
- No admix of other chemical reagents

C

Thickener	Bentonite, metal oxides		
Base oil	Synthetic ester		
Color	white-grey		
Kin. viscosity at +40°C	mm²/s	approx. 100	DIN 51562 / ASTM D 7042
Kin. viscosity at +100°C	mm²/s	approx. 14	DIN 51562 / ASTM D 7042
Unworked penetration	$\frac{1}{10}$ mm	310 – 340	DIN ISO 2137
Working temperature range	°C	-40 – +150	–
Density	g/cm³	1,9	DIN 51757 / in style of
Flow pressure at +20°C	hPa	≤300	DIN 51805
Oil separation (+40°C/168 h)	%	≤ 2	DIN 51817
Thermal conductivity at +25°C	W/mK	approx. 0,7	ASTM D 7896

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. **Under no circumstances this OIL may be removed!**

The separated oil has to be mixed again with the complete thermal compound. In box containers (can / bucket) the thermal compound has to be stirred well. 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.

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 label.

Tubes show an imprint at the end of the tube.

Ordercode

- V10310-T1 / tube 35 g
- V10310-C1 / can 250 g
- V10310-C2 / can 500 g
- V10310-B1 / bucket 10 kg
- V10310-B2 / bucket 25 kg

①

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

E

F

RoHS compliant

					Date	Name	Description: Thermal compound, silicone-free
					Approved	26.10.2023	P. Larsen
					Drawn	17.05.2022	P. Larsen
							ASSMANN WSW-No. V10310-xx
							Drawing-No.
							ASS_9192_HS
							rev01
							Replace
							Sheet 2/2

H

