

PRODUCT SAFETY DATA SHEET
According to Regulation (EC) No. 1907/2006

akasa


Product Name: AK-460

Date: June, 2017

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

Trade Name	AK-460 Thermal Interface Material
Company	Akasa (Europe) Ltd. Unit 31, Metropolitan Centre, Taunton Road, Greenford, Middlesex. United Kingdom. UB6 8UQ Tel: +44 (0)20 8578 0055 Fax: +44 (0)20 8578 1122
Service	Akasa (Asia) Corp. Tel: +886 (0) 2 2999 6289 Akasa (Europe) Ltd. Tel: +44 (0)20 8578 0055
Use of substance/preparation	Electrical & Electronics Applications (Silicone Compound) Thermal conductive compound material

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture	
Classification (REGULATION (EC) No 1272/2008)	
Acute aquatic toxicity, Category 1	H400: Very toxic to aquatic life.
Chronic aquatic toxicity, Category 1	H410: Very toxic to aquatic life with long lasting effects
Labelling (REGULATION (EC) No 1272/2008)	
Hazard pictograms	
	
Signal word	: Warning
Hazard statements	: H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements :	Prevention: P273 Avoid release to the environment. Response: P391 Collect spillage.

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3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Characterization	
Substance / Mixture	Mixture
Chemical nature	Silicone compound
Hazardous Ingredients	
No hazardous ingredients	

4. FIRST AID MEASURES

On contact with eyes	Immediately flush with water as a precaution. Get medical attention if irritation develops and persists.
On skin contact	Wash with water and soap as a precaution. Get medical attention if symptoms occur.
If inhaled	No first aid should be required
On ingestion	If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and delayed	None known
Protection of first aiders	No special precautions are necessary for first aid responders
Notes to physician	Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media	Water spray Alcohol-resistant foam Carbon dioxide (Co2)
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Unsuitable extinguishing media	Dry chemical
Hazards during fire fighting	Exposure to combustion may be hazard to health. Applying foam will release significant amounts of hydrogen gas that can be trapped under foam blanket.
Special protective equipment/procedures	Self-contained respirator and protective clothing should be worn. Keep containers cool with water spray until well after fire is out.
Hazardous combustion products	Carbon oxides Silicon oxides Metal oxides Formaldehyde

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear proper protective equipment.
Precautions to protect the environment	Prevent from spreading or entering into drains , ditches or rivers by using sand , earth or other appropriate barriers.
Methods for cleaning up	Scrape up and place in a container fitted a lid. The spilled product produces an extremely slippery surface.

7. HANDLING AND STORAGE

Advice on safe handling	General ventilation is required. Local ventilation is recommended. Avoid Eye contact.
Advice on storage	Do not store with oxidising agents. This product slowly evolves hydrogen on storage. Keep container closed and store away from water

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	or moisture.
Specific uses	Refer to Technical data sheet
Unsuitable packaging materials	Do not store in or use glass containers.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters	
Contains no substance with occupational exposure limit values.	
Exposure controls for hazardous components	
<u>Personal protection equipment</u>	
Respiratory protection	Suitable respiratory protection should be worn if the product is used in large quantities, confined spaces or in other circumstances where the OEL may be approached or exceeded . A filtering half mask is recommended. BP filter. Contact your respiratory protection supplier.
Hand protection	Gloves are not normally required.
Eye protection	Safety glasses should be worn.
Skin protection	Protective equipment is not normally necessary
Hygiene measures	Exercise good industrial hygiene practise. Wash after handling ,especially before eating .
Environmental exposure controls	Refer to section 6 & 12
Additional information	These precautions are for room temperature handling. Use at Elevated temperature or aerosol / spray applications may be added precautions.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Grease
Colour	Gray
Odour	Slight
Odour Threshold	No data available
Flash point	> 100°C Method: closed cup
Evaporation rate	Not applicable
Flammability (solid, gas)	Not classified as a flammability hazard
Relative density	3.4
Oxidizing properties	The substance or mixture is not classified as oxidizing

The above information is not intended for use in preparing product specification.
Contact Akasa for more details.

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10. STABILITY AND REACTIVITY

Stability	Stable under normal usage conditions.
Conditions to avoid	Exposure to moisture.
Materials to avoid	Can react with strong oxidising agents. Hydrogen is liberated on contact with water, alcohols ,acidic or basic materials , many metals or metallic compounds and can form explosive mixtures in the air.
Hazardous decomposition products	Formaldehyde

11. TOXICOLOGICAL INFORMATION

On contact with eyes	May cause temporary discomfort.
On skin contact	No adverse effects are normally expected.
If inhaled	No adverse effects are normally expected
On ingestion	No adverse effects are normally expected

¹ Based on product test data

² Based on test data from similar products

12. ECOLOGICAL INFORMATION

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<p><u>Environmental fate and distribution</u></p> <p>Solid material, insoluble in water.</p>
<p><u>Ecotoxicity effects</u></p> <p>Very toxic to aquatic organisms and may cause long – tern adverse effects in the aquatic environment. However due to the physical form and the water insolubility of the bioavailability is negligible.</p>
<p><u>Fate and effects in waste water treatment plants</u></p> <p>No adverse effects on bacteria are predicted.</p>

13. DISPOSAL CONSIDERATIONS

Product disposal	This material must be disposed of as hazardous waste. According to the European waste catalogue Waste codes are not specific, application specific. Waste codes should be assigned by the user preferably in discussion with the waste disposal authorities.
Packaging disposal	Dispose of in accordance with local regulations, Waste codes should be assigned by the user preferably in discussion with the waste disposal authorities’.

14. TRANSPORT INFORMATION

International Regulation	
UNRTDG	Not regular as a dangerous good
IATA-DGR	Not regular as a dangerous good
IMDG-Code	Not regular as a dangerous good
Transport in bulk according to Annex Annex II of MARPOL 73/78 and the IBC Code	Not applicable for product as supplied.
Domestic regulation	
49 CFR	Not regular as a dangerous good

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15. REGULATORY INFORMATION

EPCRA-Emergency Planning and Community Right-to Know							
CERCLA Reportable Quantity	This material does not contain any components with a CERCLA RQ.						
SARA 304 Extremely Hazardous Substances Reportable Quantity	This material does not contain any components with a section 304 EHS RQ.						
SARA 311/312 Harzards	No SARA Hazards						
SARA 302	No chemicals in the material are subject to the reporting requirements of SARA Title III, Section 302.						
SARA 313	The following components are subject to reporting level established by SARA Title III, Section 313: <table style="margin-left: 40px; border: none;"> <tr> <td>Organosilane modified</td> <td>Not</td> <td>29%</td> </tr> <tr> <td>Zinc Oxide</td> <td>Assigned</td> <td></td> </tr> </table>	Organosilane modified	Not	29%	Zinc Oxide	Assigned	
Organosilane modified	Not	29%					
Zinc Oxide	Assigned						
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.							
E1	<table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">ENVIRONMENTAL</td> <td style="text-align: center;">Quantity 1</td> <td style="text-align: center;">Quantity 2</td> </tr> <tr> <td style="text-align: center;">HAZARDS</td> <td style="text-align: center;">100 t</td> <td style="text-align: center;">200 t</td> </tr> </table>	ENVIRONMENTAL	Quantity 1	Quantity 2	HAZARDS	100 t	200 t
ENVIRONMENTAL	Quantity 1	Quantity 2					
HAZARDS	100 t	200 t					
Other regulations :	Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.						
The ingredients of this product are reported in the following inventories:							
REACH	All ingredients (pre-)registered or exempt.						
IECSC	All ingredients listed or exempt.						
TSCA	All chemical substances in this material are included on or exempted from listing on the Toxic Substances Control Act 8(b) Inventory. One or more chemical substances in this material meet the polymer exemption criteria in 40 CFR 723.250.						

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ENCS/ISHL	Some components are not listed or not identified on ENCS/ISHL.
KECI	All ingredients listed, exempt or notified.
PICCS	All ingredients listed or exempt.
TCSI	All ingredients listed or exempt.

16. OTHER INFORMATION

This product safety datasheet was prepared in compliance with commission directive **(EC) No. 1907/2006 and (EC) No 1272/2008** As well as their relevant amendments , on the approximation of the law , regulations & administrative provisions relative to the classification , packaging and labelling of dangerous substances & preparations.

All information and instruction provided in this Safety Datasheet (SDS) are based on the current state of the scientific and technical knowledge at the date indicated on the SDS. Should the existence of such defect not be detectable considering the current state of scientific and technical knowledge .