

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



Product Name: AK-450

Date: Nov, 2016

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

Trade Name	Akasa ® AK-450 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. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Characterization	Silicone Compounds 40% Carbon Compounds 10% Silver Compounds 50%
Hazardous Ingredients	Cat No:- 7439921 Lead content (Pb) trace only 11ppm detected see SGS safety No GZSCR050208733/LP

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3. 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.

4. FIRST AID MEASURES

On contact with eyes	No first aid should be required
On skin contact	No first aid should be required
If inhaled	No first aid should be required
On ingestion	No first aid should be required

5. FIRE FIGHTING MEASURES

Suitable extinguishing media	Carbon Dioxide, foam or dry powder. Water can be used to cool fire exposed containers.
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Unsuitable extinguishing media	None Known
Hazards during fire fighting	None Known
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	Silica , carbon oxides and traces of incompletely burned carbon compounds. Formaldehyde, Hydrogen, Metal products.

6. ACCIDENTAL RELEASE MEASURES

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

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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

Engineering Controls	Ventilation : Refer section 7 (above)
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	Form Grease Colour Gray Odour Slight
Important health, safety & environmental information Explosive properties	No
Specific gravity	>2.5 @25 .C
Oxidizing properties	No

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	None established.
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	See section 11 If this product is heated to >150 degrees .C trace quantities of vapour may be released and may require adequate ventilation.

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

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11. ECOLOGICAL INFORMATION

Environmental fate and distribution

Solid material, insoluble in water.

Ecotoxicity effects

Very toxic to aquatic organisms and may cause long – term adverse effects in the aquatic environment . However due to the physical form and the water insolubility of the bioavailability is negligible.

Fate and effects in waste water treatment plants

No adverse effects on bacteria are predicted.

12. 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’.

13. TRANSPORT INFORMATION

Inland Waterways (ADN)	UN 3077
Road (ADR)	UN 3077
Rail (RID)	UN 3077
Sea treatment (IMDG)	UN 3077
Air transport (IATA)	UN 3077
Proper shipping name	Environmentally Hazardous substance Solid , N.O.S ,
Class	9
Packing group	III

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Labels	9
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14. REGULATORY INFORMATION

<u>Safety, health and environmental regulations/legislation specific for the substance or mix-ture</u>			
Regulation (EC) No 649/2012 of the European Parlia-ment and the Council concerning the export and import of dangerous chemicals		Not applicable	
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).		Not applicable	
Regulation (EC) No 1005/2009 on substances that de-plete the ozone layer		Not applicable	
Regulation (EC) No 850/2004 on persistent organic pol-lutants		Not applicable	
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	ENVIRONMENTAL HAZARDS	Quantity 1 100 t	Quantity 2 200 t
Other regulations :		Take note of Directive 92/85/EEC regarding maternity protec- tion or stricter national regulations, where applicable.	
TSCA	All chemicals substances in this are included on or exempted from listing on the TSCA Inventory of chemical substances.		
AICS	All ingredients listed or exempt.		
IECSC	All ingredients listed or exempt.		
ENCS/ISHL	All components are listed on ENCS/ISHL or exempted from inventory listing.		

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KECI	All ingredients listed, exempt or notified.
PICCS	All ingredients listed or exempt.
DSL	All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Ca-nadian Domestic Substances List (DSL).
REACH	All ingredients listed or exempt.
TCSI	All ingredients listed or exempt.

15. 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 .