

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



Product Name: AK-456

Date: August, 2017

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

<b>Trade Name</b>	Akasa ® AK-456 Thermal Interface Material
<b>Company</b>	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
<b>Service</b>	Akasa (Asia) Corp. Tel: +886 (0) 2 2999 6289  Akasa (Europe) Ltd. Tel: +44 (0)20 8578 0055
<b>Use of substance/preparation</b>	<b>Electrical &amp; Electronics Applications</b> (Silicone Compound) Thermal conductive compound material


2. COMPOSITION / INFORMATION ON INGREDIENTS

<b>Chemical Characterization</b>	Silicone Compounds            50% Carbon Compounds            20% Metal Oxides Compounds    30%
<b>Hazardous Ingredients</b>	Cat No:- 7439921 Lead content (Pb) trace only 18ppm detected see SGS safety No CE/2008/30965

Product Name: AK-456

Date: August, 2017

### 3. HAZARDS IDENTIFICATION

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

### 4. FIRST AID MEASURES

<b>On contact with eyes</b>	Immediately flush with water
<b>On skin contact</b>	No first aid should be required
<b>If inhaled</b>	No first aid should be required
<b>On ingestion</b>	No first aid should be required

Product Name: AK-456

Date: August, 2017

**5. FIRE FIGHTING MEASURES**

<b>Suitable extinguishing media</b>	Carbon Dioxide, foam or dry powder. Water can be used to cool fire exposed containers.
<b>Unsuitable extinguishing media</b>	None Known
<b>Hazards during fire fighting</b>	None Known
<b>Special protective equipment/procedures</b>	A self-contained respirator and protective clothing should be worn. Keep containers cool with water spray until well after fire is out. Determine the need to evacuate or isolate the area according to your local emergency plan.
<b>Hazardous combustion products</b>	Silica , carbon oxides and traces of incompletely burned carbon compounds. Formaldehyde, Hydrogen, Metal products.

**6. ACCIDENTAL RELEASE MEASURES**

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

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Product Name: AK-456

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**7. HANDLING AND STORAGE**

<b>Advice on safe handling</b>	General ventilation is required. Local ventilation is recommended. Avoid Eye contact.
<b>Advice on storage</b>	Do not store with oxidising agents. This product slowly evolves hydrogen on storage. Keep container closed and store away from water or moisture.
<b>Specific uses</b>	Refer to Technical data sheet available on request.
<b>Unsuitable packaging materials</b>	Do not store in or use glass containers.

Product Name: AK-456

Date: August, 2017

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

<b>Engineering Controls</b>	Ventilation : Refer section 7 (above)
Exposure controls for hazardous components	
<b><u>Personal protection equipment</u></b>	
<b>Respiratory protection</b>	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.
<b>Hand protection</b>	Gloves are not normally required.
<b>Eye protection</b>	Safety glasses should be worn.
<b>Skin protection</b>	Protective equipment is not normally necessary
<b>Hygiene measures</b>	Exercise good industrial hygiene practise. Wash after handling, especially before eating .
<b>Environmental exposure controls</b>	Refer to section 6 & 12
<b>Additional information</b>	These precautions are for room temperature handling. Use at Elevated temperature or aerosol / spray applications may be added precautions.

**PRODUCT SAFETY DATA SHEET**  
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Product Name: AK-456

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Form Grease Colour White Odour Slight
<b>Important health, safety &amp; environmental information</b>  <b>Explosive properties</b>	No
<b>Specific gravity</b>	>2.3 @25 .C
<b>Oxidizing properties</b>	No

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

Product Name: AK-456

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## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under normal usage conditions.
<b>Conditions to avoid</b>	None established.
<b>Materials to avoid</b>	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.
<b>Hazardous decomposition products</b>	See section 11 If this product is heated to >180 degrees, trace quantities of MAP may be released and may require adequate ventilation.

## TOXICOLOGICAL INFORMATION

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

<sup>1</sup> Based on product test data

<sup>2</sup> Based on test data from similar products

Product Name: AK-456

Date: August, 2017

## 11. ECOLOGICAL INFORMATION

<b><u>Environmental fate and distribution</u></b>
Solid material , insoluble in water.
<b><u>Ecotoxicity effects</u></b>
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.
<b><u>Fate and effects in waste water treatment plants</u></b>
No adverse effects on bacteria are predicted.

## 12. DISPOSAL CONSIDERATIONS

<b>Product disposal</b>	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.
<b>Packaging disposal</b>	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

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



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



Product Name: AK-456

Date: August, 2017

<b>Packing group</b>	III
<b>Labels</b>	9

**14. REGULATORY INFORMATION**

<b><u>Safety, health and environmental regulations/legislation specific for the substance or mix-ture</u></b>			
Regulation (EC) No 649/2012 of the European Parliament 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 protection or stricter national regulations, where applicable.			
<b>TSCA</b>	All chemicals substances in this are included on or exempted from listing on the TSCA Inventory of chemical substances.		
<b>AICS</b>	All ingredients listed or exempt.		
<b>IECSC</b>	All ingredients listed or exempt.		

**PRODUCT SAFETY DATA SHEET**  
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Product Name: AK-456

Date: August, 2017

<b>ENCS/ISHL</b>	All components are listed on ENCS/ISHL or exempted from inventory listing.
<b>KECI</b>	All ingredients listed, exempt or notified.
<b>PICCS</b>	All ingredients listed or exempt.
<b>DSL</b>	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).
<b>REACH</b>	All ingredients listed or exempt.
<b>TCSI</b>	All ingredients listed or exempt.

Product Name: AK-456

Date: August, 2017

### **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 .