



INDUSTRIES 3R

# MATERIAL SAFETY DATA SHEET

## IDENTITY

Part Number: **EKA 451**  
 Identity: Aluminized fiberglass cloth  
 Description: Aluminized fiberglass cloth

## SUPPLIER

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## COMPOSITION / INFORMATION ON INGREDIENTS

The products covered by this data sheet are laminates formed by adhering a variety of reflective materials to the surface of glass fabrics. The glass fabrics are manufactured using continuous filament, borosilicate E Glass fibres, (CAS-65997-17-3) and individual filaments are approximately 9 microns in diameter. The fibres are sized with less than 2% by weight of polymeric dressings, which may include starch, silane or PVA type materials.

EKA series products are aluminised by either:

- a) The application of aluminium foil, ranging from 15 to 30 microns in thickness or
- b) The application of PET film, metallised on one or both surfaces.

The foil or film is bonded to the surface of the base fabric by means of an aliphatic polyurethane adhesive which has been optimised for flame retardant performance. It incorporates a synergistic blend of Antimony Trioxide (CAS-1309-64-4) and Decabromodiphenyl ethane (CAS-84852- 53-9). These compounded additives are fully bonded into the adhesive polymer and are not therefore present as free agents.

EKCA Series products are manufactured using base fabrics that have been stabilised by the application of an organic, polymeric "Weavelock" treatment, prior to their aluminisation by means of the EKA series process described above.

These products do not contain any SVHC's or substances which require authorisation under REACH legislation

## HAZARD IDENTIFICATION

Under current EC, REACH legislation the range of products covered by this data sheet is classified as Non-Hazardous Articles. They are not classified as chemicals, chemical preparations or mixtures and do not contain substances of Very High Concern (SVHC's) at a level greater than 0.1% by weight so do not require a safety data sheet (SDS). In order to satisfy an ongoing volume of user requests and in continuance of its long-standing support policy has however decided to provide additional information, guidance and advice in the safe use of its products for the convenience of our customers. Whenever possible this information will be presented in the established format, for onward transmission along the supply chain.

In their original supply condition and under normal circumstances of use, these products do not pose any generalised health risk to the customer. It should be noted however that the glass filaments used in the manufacture of these articles are small, measuring approximately 9-microns in diameter. Their use in some fabrication operations such as cutting and drilling may subject the fibres to harsh mechanical abrasion, during which individual fibres may break horizontally into smaller lengths, but they will not divide longitudinally into fibrils of a smaller diameter. This size of glass filament (9µm) is greatly in excess of the 3-micron limit below which a fibre is generally categorised as being respirable. The products do not therefore constitute an inhalable hazard.

Users should be aware that direct exposure to glass fibres can lead to a temporary irritation of the skin, eyes, mucous membranes or upper respiratory tract. Skin irritation is not an uncommon symptom to people with sensitive skin and whilst they may be affected on first-contact exposure, users should be acquainted with the fact that the effects are usually short-lived and should disappear when the source of irritation has been removed by a thorough cleansing of the skin surface. With long-term exposure, the skin surface usually hardens, leading to either a reduction or elimination of symptoms. Workers who make use of barrier creams and employ sensible hygiene precautions do not usually report ongoing problems. If workers are withdrawn from frequent exposure to glass fibres, the skin surface usually re-softens. Those people who have a history of skin complaints may be particularly susceptible to the effects listed above. They should be carefully managed to minimise or avoid contact, making use of personal protective equipment such as gloves (see section “Exposure control / personal Protection”).

Within the class of articles covered by this safety data sheet, the risks identified above have been significantly reduced below that of loomstate glass fabrics. Aluminium foil or PET film laminated to the surface of the fabric acts to shield at least one surface from direct skin contact and minimise any hazard of filament release during handling. The EKCA ranges of products have additionally been treated with an organic polymer, which acts to stabilise the weave and partially encapsulate the glass, further minimising the potential for dust or fibre release. It’s also carefully selected the size of glass filament used in the construction of these fabrics to lessen the degree of potential irritation that could be evident following skin contact. Our products generally use glass which is below 11 micron in diameter, (above that size the potential for irritation increases dramatically). This point being made, care should still be taken to control and eliminate contact with loose fibres in so far as this is reasonably practicable.

### **PHYSICAL AND CHEMICAL PROPERTIES**

Weights:	See appropriate Product Data Sheets
Appearance:	White fabric one side, silver other side.
Odor:	The products have no discernible odor.
Solubility in water:	Insoluble
Melting Point:	>700°C
Boiling Point:	Not Applicable
Vapour Pressure:	Not Applicable
Percent Volatile (vol):	Not Applicable
Evaporation Rate:	Not Applicable

### **FIRE-FIGHTING MEASURES**

Flammability:	The materials are inherently flame resistant.
Special Fire-Fighting Procedures:	Wear self-contained breathing apparatus in a sustained fire.
Extinguishing Media:	Use that appropriate to the surrounding fire.

### **STABILITY AND REACTIVITY**

The products are stable and un-reactive under normal conditions of use.

### **FIRST AID MEASURES**

Inhalation:	In the event of excessive inhalation of dust, (or fumes from a sustained fire situation), remove the individual to fresh air. Obtain medical advice.
Skin Irritation:	In the event of skin irritation wash affected part with mild soap and water. If irritation persists obtain medical advice.
Eye Irritation:	Irrigate eyes if affected by entry of dust. Obtain medical advice if irritation persists.

### **DISPOSAL CONSIDERATIONS**

The disposal of waste should be carried out in accordance with national or regional directives – normally by burial in controlled industrial landfill sites.

## **EXPOSURE CONTROL / PERSONAL PROTECTION**

Workplace exposure to dust arising from the physical or mechanical abrasion of these fabrics should be kept to the minimum that is reasonably practicable and should not be allowed to exceed the exposure limits detailed below.

Substance	Workplace Exposure Limit				References See section other information
	Long-term exposure limit (8-hour TWA reference period)		Short-term exposure limit (15-minute reference period)		
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	
MMMF (machine -made mineral fibre) – glass fibres	--	5 (and 2 fibres per ml)	--	--	1,2
Dust (inhalable)		10			1,3
Dust (respirable) if inhalable dust exceeds or equals 10 mg/m <sup>3</sup>		4			1,3

When used in an operation that gives rise to the generation of dust, the process should be closely monitored and provision of local exhaust ventilation should be considered as a control measure. Should this not be practicable, protective masks approved for use against irritant dust should be worn. (Take care to follow manufacturer's instructions relating to the use of safety equipment). Accumulated dust should be removed using the safest practicable method, preferably by high efficiency particulate air (HEPA), filtered vacuum collection or wet cleaning.

To reduce the chance of skin irritation when handling glass fibre based products, protective overalls of a closely woven structure should be worn. Gloves, arm cuffs or barrier creams may be advantageous in some circumstances. Emphasis should, always be placed on personal hygiene, ensuring that hands and arms are washed with copious quantities of cool running water to remove any loose fibres before the application of soap for washing purposes.

Eye protection (spectacles with side shields or enclosed goggles) should always be worn to prevent the possibility of glass fibres and other particles entering the eye.

## **ACCIDENTAL RELEASE MEASURES**

If these products are rendered friable (e.g. fire damaged), personal protective equipment should be used for clean-up and containment activities.

## **HANDLING AND STORAGE**

Normal handling of these products is unlikely to give rise to the generation of dust. Control measures will rarely be required but may be necessary in circumstances where physical or mechanical abrasion of the product gives rise to the generation of particulate debris. This condition may arise for example, when cutting parts to size or perforating holes through the fabric. When these conditions occur, the production of debris should be controlled and minimised in accordance with good working practice. Accumulated dust should be removed by dustless methods, preferably by vacuum collection. If these products are used in a manufacturing process that generates dust, exposure controls detailed in section (Exposure Control / Personal Protection) must be followed.

It is recommended that the fabrics are stored within their original wrappings, out of direct sunlight and in a dry location until ready for use. No special storage conditions are required on health grounds.

## **TOXICOLOGICAL INFORMATION**

Primary Routes of Potential Exposure: Inhalation, skin and eye contact.

Effects of Over-exposure (Acute and Chronic):

- Inhalation (Dust): Dust arising from harsh mechanical abrasion of the fabric could be irritating to the upper respiratory tract. Such effects are usually transitory leaving no permanent damage.
- Fume: Contact with molten metal or flame may give rise to localised emission of fume.
- Skin irritation: Glass fibres can be irritating causing itching and a localised reddening of the skin surface.
- Eye irritation: Entry of dust fragments or glass fibres into the eye will cause foreign body irritation.
- Carcinogenicity: Continuous glass filament is not classified as a carcinogen - (Group 3 IARC) [Section "Other information" ref (4)]
- Ingestion: Glass fibres and PVA used to manufacture these products are low toxicity materials. Ingestion is not generally classed as an applicable route to exposure for fabrics made from continuous filament glass fibres. Some data is available however for PVA (used as a finishing treatment for the products covered by this data sheet). See below.  
PVA weavelock system : Oral LD50 >2000 mg/kg (rat)  
Extrapolated to finished product composition (maximum loading): Oral LD50 >2000 mg/kg (based on PVA listed above)

## **ECOLOGICAL INFORMATION**

These products are not associated with any known ecological problems.

## **TRANSPORT INFORMATION**

The disposal of waste should be carried out in accordance with national or regional directives - normally by burial in controlled industrial landfill sites.

## **REGULATORY INFORMATION**

No specific regulatory information is applicable to these products.

## **OTHER INFORMATION**

The information provided in this Health & Safety Data Sheet is based on our current knowledge.

References:

1. Health & Safety Executive Guidance Note EH 40/2005 Workplace Exposure Limits – second edition published 2011
2. EH40/2005: MMMF, Page 23.
3. EH40/2005: Para 44, Page 33. (Dust of any kind when present at a concentration in air equal or greater than 10mg.m<sup>-3</sup> 8-hour TWA of respirable dust).
4. IARC Monographs on the evaluation of Carcinogenic Risks to humans – Volume 81 Man Made Vitreous Fibres (Published 2002)

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The information provided in this Health & Safety Data Sheet is based on our current knowledge. While the information and recommendations set forth herein are believed to be accurate, Industries 3R takes no warranty with respect thereto and disclaims all liability in reliance thereon. We recommend testing according to local conditions. The specifications are subject to change without notice.