

Material Safety Data Sheet in according to EEC-Regulation 91/155/EEC

Product Name: AKSACA® Carbon Fiber  
Product Code : AKSACA® A38 / A-42 / A-49  
Issue Date : February 27th, 2009 MSDS No : AK-CF-T.09.001.rev2  
Revision Date : 09/03/ 2012 Page No : 1/6

## 1- CHEMICAL PRODUCT & COMPANY IDENTIFICATION

**Product Name** : AKSACA® Carbon Fiber

**Product Code** : A38, A-42, A-49

**Company Identification** : DowAksa İleri Kompozit Malzemeler Sanayi Ltd Şti  
**Head:** Miralay Şefik Bey Sok. Akhan No: 15  
34437 Gümüşsuyu Beyoğlu İstanbul / Türkiye  
**Plant:** Denizçalı Köyü Yalova - İzmit Yolu Caddesi  
No.34 77600 Yalova / Türkiye

**Emergency Telephone** : 00 -90 226- 353 25 45

## 2- COMPOSITION / INFORMATION ON INGREDIENTS

**Chemical Type** : Carbon (Carbon Fiber)  
**CAS No** : 7440-44-0

Ingredient	Composition, % by weight	Chemical Formula	Hazards Identification	CAS No.	TSCA
Carbon Fiber	≥ 96%	Carbon Fiber	-	7440-44-0	Registered
Sizing Agent	≤ 4%	Trade Secret	-	Registered	Registered

## 3- HAZARDS IDENTIFICATION

### Potential Health Effects:

**Inhalation:** Inhalation exposure to respirable fibers of this product is not expected to occur under normal industrial conditions. Under very limited circumstances, however, exposure to respirable fibers from exposure to sizing present on the carbon fiber.

**Skin:** May cause skin irritation. Mechanical irritation may occur from carbon fiber abrading or becoming imbedded in the skin.

**Eyes:** Fragments of this product may cause mechanical eye irritation. Chemical irritation may occur of this product can occur and may result in respiratory tract irritation.

**Ingestion:** Not expected to occur during industrial activities since ingestion is not a relevant route of exposure.

**Permissible Exposure:** 15 MCCPF OSHA TWA, 10 mg/m<sup>3</sup> ACGIH TWA(Total Dust)

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**Chronic Effects/Carcinogenicity:** Not regulated as a carcinogen.

NTP: Not listed

IARC: Not listed

OSHA: Not listed

**Environmental Effects:** Carbon fiber is electrically conductive, and it can cause the short-circuiting of electrical equipment.

#### 4- FIRST AID MEASURES

##### **Inhalation**

Move to fresh air and wash inside mouth with water. If dizzy or unbalanced seek medical attention as soon as possible.

##### **Skin Contact**

No special measures requested.

##### **Eye Contact**

Wash eyes with an excessive amount of water immediately for no less than 15 minutes. If contacts are being used, remove the lens and flush the eyes again with water for an additional 5 to 10 minutes. If the eyes feel uncomfortable or have prickling feeling, seek medical attention as soon as possible.

##### **Ingestion**

Rinse mouth with fresh water. Then drink two or three glasses of water. Induce vomiting by touching the finger to the back of the throat. Then seek medical attention as soon as possible. No kind of substance must be orally given to the unconscious person.

#### 5- FIRE FIGHTING MEASURES

**Special Fire Fighting Procedures:** As in any fire, wear a self-contained breathing apparatus pressure demand (MSHA/NIOSH approved or equivalent) and full protective gear. Fight fires from a safe distance or protected areas. Fire hoses with fog nozzles may be used for controlling fires but care must be exercised not to spread flaming. Water may not always be effective for large fires.

**Extinguishing Media:** This material is not expected to burn in a fire. If this product is present in a fire, fight fire based on the presence of flammable materials.

#### 6- ACCIDENTAL RELEASE MEASURES

**Measures For Handling Personnel:** No special measures required.

**Measures For Environmental Effects :** No special measures required.

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## 7- HANDLING and STORAGE

**Handling** : Touching Carbon Fiber directly can cause transient skin irritation. Hold the paper tube while handling bobbins.

Exposure control for handling personnel : N/A  
Protective measures against fire and explosion : N/A

**Storage** : Storage in a cool , dry place. Wash hands with soap and water after handling. Wear appropriate protective clothing as described in section 8 during handling activities.

## 8- EXPOSURE CONTROL / PERSONNEL PROTECTION

**Respiratory/Protection:** Normal use and processing of this product are not expected to generate carbon fiber dust. Respirable fibers of this product under certain very limited circumstances can be generated. In such circumstances, HEPA respiratory protection should be used to prevent exposure.

**Protective Gloves:** Latex gloves should be worn when handling this product. Rinse and remove gloves after use, and wash hand thoroughly with soap and water. Gloves should be removed and replaced if there are any signs of degradation or breakthrough.

**Protective Clothing:** Wear protective clothing to minimize the potential for skin contact. An emergency shower should be readily accessible. Discard any clothing that has become contaminated.

**Eye protection:** Wear safety goggles or glasses when handling or processing this product in any form.

**Exposure Guidelines:**OSHA and ACGIH have not established air contaminant limits for carbon fibers. Under certain conditions, this substance may be a nuisance dust. OSHA has an established standard for particulates not otherwise regulated (nuisance dust) set at 5 mg/m<sup>3</sup> (respirable fraction) and 15 mg/m<sup>3</sup> (total dust). ACGIH has established an exposure value of 3 mg/m<sup>3</sup> (respirable fraction) and 10 mg/m<sup>3</sup> (inhalable fraction) for particulates not otherwise classified.

**Ventillation:** Local extract ventillation is recommended where dust and fly are generated by cutting or processing carbon fiber.Ventillation filter is required to prevent dust and fly from being discharged into open air.

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## 9- PHYSICAL and CHEMICAL PROPERTIES

**Physical State/Appearance** : Black Continue Fiber  
**Odor** : None  
**Specific Gravity** : 1.7 – 2.0 gr/cm<sup>3</sup>  
**Vapor Pressure/Density** : N/A  
**Viscosity** : N/A  
**Boiling point** : N/A  
**Melting point** : N/A  
**Volatility** : N/A  
**Solubility** : Insoluble  
in water : N/A  
in others: N/A

## 10-STABILITY and REACTIVITY

**Hazardous Decompositions:** Not expected under normal conditions processing and use. Oxidation can progress slowly and become red-hot when exposed to high temperatures greater than 240°C (464 °F) in air. Heat, sparks, flames, and other ignition sources; avoid heating above 240°C (464 °F).

**Hazardous Polymerization:** Will not occur.

**Incompatibility:** Oxidized by strong oxidizing agent such as fluorine. Stable for other chemicals.

**Others:** Flash point : None  
Explosion limit (%) : None  
Flammability : N/A  
Combustibility : Not spontaneous  
Dust Explosion : N/A

## 11-TOXICOLOGICAL INFORMATION

**Carcinogenity** : N/A

**Epidomology** : Contact with fly or dust can cause skin irritation.

**Teratogenicity** : N/A

**Mutagenicity/Neurotoxicity** : In one component of the sizing agent ,Biphenol A epoxy resin, the mutagenic effect on a microbe is recognized.

**Acute toxicity** : N/A

**Chronic toxicity** : N/A

**Sub-chronic toxicity** : N/A

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## 12-ECOLOGICAL INFORMATION

**Biodegradability** : N/A

**Bioaccumulation** : N/A

**Fish toxicity** : N/A

## 13-DISPOSAL CONSIDERATIONS

**Classification:** If discarded in its manufactured form, this product is not expected to be a characteristic or specifically listed hazardous waste under RCRA. However, it is the responsibility of the user to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a hazardous waste. In case of disposal, this product must be treated as industrial waste, separated from public waste.

**Special Instructions:** This product should not be incinerated. This product should not be incinerated. Carbon fiber can not be incinerated well by a general incinerator, and the fibrous fragments, which may be generated by insufficient incineration, may cause the short-circuiting of electrical equipment.

## 14-TRANSPORT INFORMATION

N/A

This product is not regulated as dangerous or hazardous goods under ADR, RID, DOT, IMO, ICAO, IATA or UN shipping.

## 15-REGULATORY INFORMATION

Regulatory/Classification	Reg.Info	Substance Name	Allowed Concentration	
TSCA (USA)	N/A	7440-44-0 Carbon Fiber	N/A	N/A
EINECS (European Union)	N/A	N/A	N/A	N/A
DSL (Canada)	N/A	N/A	N/A	N/A
California Proposition 65	N/A	N/A	N/A	N/A
CAS	N/A	7440-44-0	N/A	N/A
FDA	N/A	N/A	N/A	N/A
UL	N/A	N/A	N/A	N/A
OSHA	N/A	N/A	N/A	N/A
REACH	Article Only	Carbon Fiber	N/A	N/A

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### **SARA Hazard Notification :**

Hazard Categories Under Title III Rules (40 CFR 370) : N/A

Section 302 Extremely Hazardous Substances : N/A

Section 313 Toxic Chemicals : N/A

### **16-OTHER INFORMATION**

#### **DISCLAIMER :**

The information and recommendations set forth above are taken from sources believed to be accurate as of the date hereof, however Aksa Acrylic Chemical Co. Inc. make no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assume no liability to any user thereof. The information is supplied upon the condition that the persons receiving it will make their own determination as to its suitability for their purposes prior to use. The information contained in this sheet does not constitute a hazard assessment and should not be used in place of the user's own assessment of work place risks as required by other health and safety legislation.

#### **ACRONYMS :**

ACGIH : American Conference of Governmental Industrial Hygienists

CAS : Chemical Abstracts Service

DSL : Domestic Substance List

DOT : Department of Transportation

EINECS : European Inventory of Existing Commercial chemical Substance

FDA : Food and Drug Administration

HEPA : High-Efficiency Particle Air

IARC : International Agency for Research on Cancer

IATA : International Air Transport Association

ICAO : International Civil Aviation Organization

IMO : International Maritime Organization

MSHA : Mine Safety and Health Administration

N/A : Not Applicable

NTP : National Toxicology Program

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

RCRA : Resource Conservation and Recovery Act

REACH : Registration, Evaluation and Authorization/Restriction of Chemicals

SARA : Superfund Amendments and Reauthorization Act

TSCA : Toxic Substances Control Act

TWA : Time Weighted Average

UN : United Nations Number