SAFETY DATA SHEET

1- CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product Name : AKSACA Carbon Fiber
Company Identification : DowAksa Ileri Kompozit Malzemeler Sanayi Ltd Sti
Head : Miralay Şefik Bey Sok. Ak Han No: 15
34437 Gümüşsuyu - Istanbul / TURKEY
Plant : Denizçalı Köyü Yalova - İzmit Yolu Cad. No:34
77600 Yalova / TURKEY
Emergency Telephone : 00 -90 226- 353 25 45

2- HAZARDS IDENTIFICATION

Classification according to Regulation (EC) No 1272/2008 [CLP] : Not classified
Physio-chemical hazards : See chapter 10
In the supplied form the product is not explosive at all; however, the build-up of fine dust can lead to a risk of dust explosions.
Human health dangers : See chapter 11 and below.
Eye : Dust may cause temporary irritation.
Skin : Dust may cause mild irritation. In some cases, the dust may cause allergic skin reactions.
Inhalation: Carbon fibers commonly in use are also greater than six micrometers in diameter, making them unlikely to be respirable. An ongoing survey of workers in a carbon-fiber production plant shows no pulmonary function abnormalities and no evidence of dust-related disease.
(Ref. : OSHA Technical Manual (OTM) Section III: Chapter 1 / VI.HEALTHY HAZARDS/ C Reinforcement Fibers /I. Carbon/graphite fibers)
Permissible Exposure : 15 MCCPF OSHA TWA, 10 mg/m3 ACGIH TWA(Total Dust)
Environmental hazards : See chapter 12
Other hazards : This product and its dusts are electrically conductive.

<table>
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<tr>
<th>Least: 0; Slight: 1; Moderate: 2; High: 3; Extreme: 4</th>
<th>Health</th>
<th>Fire</th>
<th>Reactivity</th>
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3- COMPOSITION / INFORMATION ON INGREDIENTS

**Chemical Type**: Carbon (Carbon Fiber)

**CAS No**: 7440-44-0

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Composition, % by weight</th>
<th>Chemical Formula</th>
<th>Hazards Identification</th>
<th>CAS No.</th>
<th>TSCA</th>
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4- FIRST AID MEASURES

**Eye contact**: Flush eyes with water for 15 minutes.

**Skin contact**: Wash affected areas thoroughly with soap and water.

**Inhalation**: Remove from the area of the dust to fresh air. Seek medical attention if you feel unwell.

**Ingestion**: In the event of deliberate ingestion, do not induce vomiting unless directed to do so by consulting with a doctor.

5- FIRE FIGHTING MEASURES

**Flash Point**: N/A

**LEL**: N/A

**UEL**: N/A

**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.
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

Additional advice on system design: Ensure adequate ventilation on workstation. If dust handling systems are used they should be designed in a manner to prevent the escape of dust into the work area.

Respiratory protection: Breathing apparatus in the event of high concentrations. Short term: filter apparatus, filter N95. Dust may produce mechanical irritation to the mucus membranes of the nose, throat and upper respiratory tract.

Hand protection: Butyl rubber, > 120 min (EN 374)

Eye protection: Safety glasses

Skin protection: Mechanical irritation accompanied by itching or dermal effects may occur from exposure to material. Cleanroom type clothing that is a light weight fabric and is well ventilated and prevents the transfer of dust. Consider taping at the wrist and ankle areas to control contact with exposed areas. PPE hazard analysis based on user process should be completed.

General protective measures: Avoid contact with eyes. Do not inhale dust.

Hygiene measures: Wash hands before breaks and after work. Use barrier skin cream.

Delimitation and monitoring of the environmental exposition: Not determined

9- PHYSICAL and CHEMICAL PROPERTIES

Physical State/Appearance: Black Chopped Fiber

Odor: None

Specific Gravity: 1.7 – 2.0 gr/cm³

Vapor Pressure/Density: Not Applicable

Viscosity: Not Applicable

Boiling point: Not Applicable

Melting point: Not Applicable

Volatility: Not Applicable

Solubility:

in water: Not Applicable

in others: Not Applicable

Electrically Conductivity: Yes
10- STABILITY and REACTIVITY

Stability : Stable
Conditions to avoid : Can react with strong oxidizing agents.
Incompatible materials : See above.
Hazardous decomposition or byproducts : Products of combustion and decomposition depend on other materials present in the fire and the fire conditions. Burning will produce CO2, CO, and a minute amount of N2, HCN and H2O. Avoid inhalation.
Hazard polymerization : Will not occur. Carbon fiber is basically inert.

11- TOXICOLOGICAL INFORMATION

Carcinogenity : not determined
Epidomology : Contact with fly or dust can cause skin irritation.
Teratogenicity/Toxic for reproduction : not determined
Mutagenicity/Neurotoxicity : not determined
Acute toxicity : not determined
Chronic toxicity : not determined
Sub-chronic toxicity : not determined

12- ECOLOGICAL INFORMATION

Aquatic toxicity : not determined
Biological degradability : not determined
Bioaccumulative potential : not determined
Mobility in soil : not determined
General information : Ecological data is not available.

13- DISPOSAL CONSIDERATIONS

Product:
For recycling, consult manufacturer or recycling, consult waste disposal centers.
EU Waste Number:
160306, 061399
Contaminated packaging:
Packaging that cannot be cleaned should be disposed of as for product. Uncontaminated packaging may be taken for recycling.
EU Waste Number:
150101, 150102

14- TRANSPORT INFORMATION

UN Number : None
Labeling : None
Classification Code : None
This product is not regulated as dangerous or hazardous goods under ADR, RID, DOT, IMO, ICAO, IATA, IMDG or UN shipping.
15- REGULATORY INFORMATION

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*N/A: Not applicable

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 DowAkSA İleri Kompozit Malzemeler Sanayi Ltd Sti. 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

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Prepared By : Ayşegül Mendi
Document Nr: 01.46.02

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