SAFETY DATA SHEET
Effective date: 06 May 2019
Replaced edition from: New
Distribution date: 07 May 2019

TRADE NAME
ZOLTEK™ PX30 COATED CARBON FIBER SCRIM

SECTION 1: Identification of the substance/mixture and the company/undertaking

1.1 Product identifier

<table>
<thead>
<tr>
<th>Product name</th>
<th>ZOLTEK™ PX30 Coated Carbon Fiber Scrim</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synonyms</td>
<td>Coated Scrim Fabric</td>
</tr>
<tr>
<td>Chemical family</td>
<td>carbon fiber</td>
</tr>
<tr>
<td>Product description</td>
<td>PX30 coated carbon fibers</td>
</tr>
</tbody>
</table>

1.2 Relevant identified uses of the substance or mixture and uses advised against

1.2.1 Relevant uses

industrial applications

1.2.2 Uses advised against

none known

1.3 Details of the supplier of the safety data sheet

Company
Zoltek Companies, Inc.
3101 McKelvey Road
St. Louis, MO 63044
USA
(314) 291-5110
www.zoltek.com

E-mail enquiry
sds@zoltek.com

1.4 Emergency telephone number
+1 (314) 291-5110 8AM-5PM / M-F
SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

Product definition  

article

2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]

not classified as hazardous

2.1.2 Classification according to Regulation 67/548/EEC or 1999/45/EC

Hazard symbols  

none

R-phrases  

none

The product does not require a hazard warning label, in accordance with OSHA HazCom and EC-directives

2.2 Label elements

Labeling according to Regulation 67/548/EEC or 1994/45/EC

Hazard symbols  

none

R-phrases  

none

S-phrases  

none

Special labeling  

not applicable

2.3 Other hazards

Physio-chemical hazards  

see SECTION 10  
In the supplied form the product itself is not explosive at all; however, the build-up of fines and dust can lead to a risk of dust explosions.

Human health dangers  

see SECTION 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  
Dust may cause mild irritation.

Environmental hazards  

see SECTION 12

Other hazards  
This product and its dusts are electrically conductive
SECTION 3: Composition/information on ingredients

3.1 Product-type article

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS. #</th>
<th>EC #</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon fiber (carbon) / high-purity polyacrylonitrile (PAN)-based</td>
<td>7440-44-0</td>
<td>231-153-3</td>
<td>55 - 65</td>
</tr>
<tr>
<td>Coating</td>
<td>trade secret</td>
<td>trade secret</td>
<td>35 – 45</td>
</tr>
</tbody>
</table>

3.2 Comments

When used for its intended purpose, this material is not classified as hazardous under Federal OSHA 29 CFR 1910.1200 regulations. This SDS contains valuable information critical to the safe handling and proper use of this product. The SDS should be retained and available for employees and other users of this product.

Substances pertaining to California Prop 65 that are not listed in this section are only present at quantities below 0.1% for California Proposition 65 listed toxins or below 1% for non-carcinogenic HAPS or they are inextricably bound in the product.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information not applicable

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

Skin contact Remove fibers by taping skin with adhesive surface material, such as Scotch® clear cellophane tape Wash affected areas thoroughly with soap and water.

Eye contact Do not rub eyes. Flush eyes with water for a minimum of 15 minutes. If irritation persists, seek medical attention.

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

4.2 Most important symptoms and effects, both acute and displayed
4.3 Indication of any immediate medical attention and special treatment

Treat symptomatically.

4.4 General information

Ensure that medical personnel are aware of the material(s) involved.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

On large fires use dry chemical, foam, or water spray. On small fires use carbon dioxide (CO2), dry chemical or water spray.

Unsuitable extinguishing media

High-volume water jet

5.2 Special hazards arising from the substance or media

Airborne fibers are electrically conductive. CO2, CO and a minute amount of N2, HCN and H2O vapors may be formed during combustion.

5.3 Advice for firefighters

Self-contained breathing apparatus (SCBA), pressure-demand/NIOSH approved or equivalent.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

Not applicable

6.1.2 For emergency responders

Not applicable

6.2 Environmental precautions

Not applicable

6.3 Methods and material for containment and cleaning up

6.3.1 For containment

In case of spill, collect the spilled materials. If the material is not contaminated, put it into a clean container and it can be reused. Otherwise, dispose of it properly.
6.3.2 For cleaning up

Because the dust is electrically conductive and may become airborne, clean up with a vacuum. If an electrical appliance is used, take the steps necessary to avoid the risk of electrical shock.

6.4 Preventative measures against second disasters

Remove possible sources of ignition in the surrounding area

SECTION 7: Handling and storage

7.1 Precautions for safe handling

No special measures necessary if used properly.

7.2 Conditions for safe storage, including any incompatibilities

Airborne particles and filaments should be controlled so as to minimize skin irritation and electrical shorts in switch gears, etc. due to conductivity of fiber.

Do not store together with oxidizing agents

7.3 Specific end use(s)

see section 1.2

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

**Occupational exposure limits**

OSHA and ACGIH (USA) have not established air contamination 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$^3$ (respirable fraction) and 15 mg/m$^3$ (total dust). ACGIH has established an exposure value of 3 mg/m$^3$ (respirable fraction) and 10 mg/m$^3$ (total).

Japan Society of Occupational Health sets 0.5mg/m3 limit for inhalation dust and 2.0mg/m3 as the total dust that are classified as “Class 1 dust” by the Japanese regulation (2011)
NHFPC (PRC) has an established standard for carbon fiber’s particulates not otherwise regulated set at 6mg/m$^3$ ESTL (total dust) and 3mg/m$^3$ TWA (total dust),

Belgium has established an Occupational Exposure Limit for carbon fiber as 2 fiber/cm$^3$ TWA.

8.2 Exposure controls

8.2.1 Appropriate engineering controls local exhaust for airborne fiber removal.

8.2.2 Personal protection equipment

8.2.2.1 Eye and face protection safety glasses

8.2.2.2 Skin protection

Hand protection protective gloves

Other skin protection Recommend disposable protective garments to eliminate possible skin irritation.

8.2.2.3 Respiratory protection Personal dust respirators applicable if high degree of fiber fly is experienced.

8.2.2.4 Thermal hazards not applicable

8.2.3 Environmental exposure controls see SECTION 6 & 7

8.2.4 General hygiene Observe good personal hygiene measures, such as washing after handling chemicals and before eating, drinking and/or smoking. Routinely ash work clothing and protective equipment separately from regular wash.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>black fiber scrim</td>
</tr>
<tr>
<td>Odor</td>
<td>mild odor</td>
</tr>
<tr>
<td>pH</td>
<td>not applicable</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>no data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>not applicable</td>
</tr>
<tr>
<td>Flashpoint</td>
<td>no data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>no data available</td>
</tr>
</tbody>
</table>
Upper/lower flammability or explosive limits: no data available
Vapor pressure: not applicable
Vapor density: not applicable
Specific gravity (relative density): no data available
Solubility(ies): partially soluble in water (-sizing)
Partition coefficient n-octanol/water: not applicable
Auto ignition temperature: no data available
Decomposition temperature (in Air): no data available
Viscosity: not applicable
Explosive properties: potential for weak explosion with milled fiber or dusts
Class St 1* / <50 Kst (bar·m/s)
*OSHA CPL 03-00-008 – Combustible Dust National Emphasis Program
Oxidizing properties: no data available

9.2 Other information: no other information available

SECTION 10: Stability and reactivity

10.1 Reactivity: see SECTION 10.3
10.2 Chemical stability: stable under normal ambient and anticipated storage and handling conditions of temperature and pressure
10.3 Possibility of hazardous reactions: carbon fiber can react with strong oxidizing agents coating is non-reactive under normal conditions of use, storage and transport
10.4 Conditions to avoid: see SECTION 7
10.5 Incompatible materials: see SECTION 10.3
10.6 Hazardous decomposition products: Products of combustion and decomposition will depend on other materials present in the fire and the fire conditions. Burning of carbon fiber will produce CO₂, CO, and minute amounts of N₂, HCN and H₂O.
None related to coating

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity

**Acute oral toxicity**
Based on available data acute toxic effects are not expected after single oral exposure

**Acute inhalation toxicity**
Based on available data a sensitization reaction is not expected from this product

**Skin corrosion/irritation**
Based on available data a clinically relevant skin irritation hazard is not expected

**Serious eye damage/irritation**
Based on available data a clinically relevant eye irritation hazard is not expected

Respiratory or skin sensitization

**Respiratory sensitization**
Based on available data a sensitization reaction is not expected from this product

**Skin sensitization**
Based on available data a clinically relevant skin irritation hazard is not expected

**Germ cell mutagenicity**
Based on known data a significant mutagenic potential may be excluded

**Germ cell mutagenicity assessment**
Animal testing of coating did not show any mutagenic effects

Carcinogenicity

**IARC Monographs. Overall evaluation of Carcinogenicity**
No ingredient of this product preset at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC

**ACGIH**
No ingredient of this product preset at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH

**OSHA**
No ingredient of this product preset at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA

**NTP Report on Carcinogens**
No ingredient of this product preset at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP
Reproductive toxicity  
Effects on fertility  
Effects on fetal development  
Not classified based on available information  
No data available  
No data available  

STOT-single exposure  
Not classified based on available information  

STOT-repeated exposure  
Aspiration hazard  
Not classified based on available information  
not an inhalation hazard  
filament diameter >3µm / non-respirable (IARC)

### SECTION 12: Ecological information

#### 12.1 Ecotoxicity  
Toxicity to fish  
(Chronic toxicity)  
no data available  

Toxicity to daphnia and other Aquatic invertebrates  
(Chronic toxicity)  
no data available  

#### 12.2 Persistence and degradability  
no data available  

#### 12.3 Bioaccumulative potential  
no data available  

#### 12.4 Mobility in soil  
no data available  

#### 12.5 Results of PBT and nPvB assessment  
no data available  

#### 12.6 Other adverse effects  
ecological data not available

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods  
Waste materials must be disposed of in accordance with the Directive on waste 2008/98/EC and any other applicable national or local regulations.

### SECTION 14: Transport information

#### 14.1 UN number  
see SECTION 14.2  

#### 14.2 UN proper shipping name  
not classified as Dangerous Goods  
ADR/RID (land)  
ADN (inland navigation)  
IMDG (marine)
IATA-DGR

14.3 Transport hazard class(es) see SECTION 14.2

14.4 Packing group see SECTION 14.2

14.5 Environmental hazards see SECTION 14.2
14.6 Special precautions to user see SECTION 6 to 8

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code

not applicable

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

CA Proposition 65

⚠️ WARNING
This product can expose you to chemicals including Acetaldehyde, Formaldehyde (gas), Acrylamide, 1,4-Dioxane and Methyl isobutyl ketone, which are known to the State of California to cause cancer, and Methanol, which is known to the State of California to cause birth defects or other reproductive harm.

For more information go to www.P65Warnings.ca.gov

TSCA Status Exempt - satisfies 'article' definition under 40 CFR 704.3

IECSC Status Listed - all components listed on China IECSC

15.2 Chemical safety assessment has not been carried out

SECTION 16: Other information

Revision date: 06 May 2019, CN: 1817

Previous revision: New
Abbreviations and acronyms

ADN = Accord européen relative au transport international des marchandises dangereuses par voie de navigation intérieure
ADR = Accord européen relative au transport international des marchandises Dangereuses par Route

CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
ELINCS = European List of Notified Chemical Substances

IBC-Code = International Coder for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IMDG = International Maritime Code for Dangerous Goods
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
OSHA = Occupational Safety and Health Administration

PBT = Persistent, Bioaccumulative and Toxic substance

RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses

Disclaimer: This information is furnished without warranty, expressed or implied, except that it is believed to be accurate to the best knowledge of Zoltek Companies, Inc. The information presented in this SDS is related only to specific material designated herein. Zoltek Companies, Inc. assumes no legal responsibility for the use or reliance upon these data. The user should review any recommendation in the specific context of the intended use to determine whether appropriate.