

SAFETY DATA SHEET



Effective date: 19 June 2019
Replaced edition from: 15 June 2016
Distribution date: 19 June 2019

TRADE NAME
ZOLTEK™ OX

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

1.1 Product identifier

Product name	ZOLTEK™ OX
Synonyms	OPAN, OPF
Chemical family	Oxidized/stabilized polyacrylonitrile (PAN) fiber
Product description	continuous fiber made from precursor

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

1.2.1 Relevant uses	industrial applications
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1.2.2 Uses advised against	none known
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1.3 Details of the supplier of the safety data sheet

Company	Zoltek Corporation 3101 McKelvey Rd. St. Louis, MO 63044 (314) 291-5110 www.zoltek.com
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E-mail enquiry	sds@zoltek.com
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1.4 Emergency telephone number	+1 (314) 291-5110 8AM-5PM / M-F
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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]

not classified

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

Hazard symbols none

R-phrases none

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

Product is non-hazardous and therefore does not require a hazard warning label, in accordance with OSHA HazCom and EC-directives

2.3 Other hazards

Physio-chemical hazards see SECTION 10

Human health dangers see SECTION 11 and below

Eye Flush eyes with water for 15 minutes.

Skin Wash affected areas thoroughly with soap and water.

Inhalation Remove from the dust area to fresh air.

Environmental hazards see SECTION 12

Other hazards -

SECTION 3: Composition/information on ingredients

3.1 Product-type article

Component	CAS. NO	Weight %
Oxidized or stabilized Polyacrylonitrile (PAN) fiber	308060-39-1	100

SECTION 4: First aid measures

4.1 Description of first aid measures

General information	not applicable
Inhalation	Remove from the dust area to fresh air.
Skin contact	Wash affected areas thoroughly with soap and water.
Eye contact	Flush eyes with water for 15 minutes.
Ingestion	In the event of deliberate ingestion, consult with a doctor.

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment

no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	normal firefighting media and procedures
Unsuitable extinguishing media	-

5.2 Special hazards arising from the substance or media

upon intense heating, CO₂, CO and a minute amount of NO_x, HCN and H₂O may be released

5.3 Advice for firefighters

self-contained breathing apparatus (SCBA)

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 not applicable

6.3.2 For cleaning up not applicable

6.4 Reference to other sections personal protective equipment (PPE)
See SECTION 8
disposal considerations
See SECTION 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling Keep the package sealed, away from dirt and moisture.
Avoid exposure to sunlight.

7.2 Conditions for safe storage, including any incompatibilities

None

7.3 Specific end use(s) see SECTION 1.2

SECTION 8: Exposure controls/personal protection

8.1 Control parameters None

8.2 Exposure controls

8.2.1 Appropriate engineering controls local exhaust for airborne dust removal
emergency eyewash

8.2.2 Personal protection equipment

8.2.2.1 Eye and face protection safety glasses

8.2.2.2 Skin protection

Hand protection	Choose appropriate gloves to protect hands against hazards specific to place of work.
Other skin protection	not applicable

8.2.2.3 Respiratory protection Normal industrial hygiene practice (dust mask) if high degree of fiber fly is experienced.

8.2.2.4 Thermal hazards not applicable

8.2.3 Environmental exposure controls see SECTIONS 6 & 7

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	solid
Odor	not determined
pH	not determined
Melting point / freezing point	not determined
Initial boiling point and boiling range	not determined
Flashpoint	not determined
Evaporation rate	not determined
Flammability (solid, gas)	not determined
Upper/lower flammability or explosive limits	not determined
Vapor pressure	not determined
Vapor density	not determined
Specific gravity (relative density)	$\geq 1.35 \text{ g/cm}^3$
Solubility(ies) water	not soluble
Partition coefficient n-octanol/water	not applicable
Auto ignition temperature	670°C
Decomposition temperature (in Air)	500°C
Viscosity	not applicable
Explosive properties:	not applicable
Oxidizing properties	not applicable

9.2 Other information not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity	see SECTION 10.3
10.2 Chemical stability	stable
10.3 Possibility of hazardous reactions	not determined
10.4 Conditions to avoid	see SECTION 7
10.5 Incompatible materials	see SECTION 10.3
10.6 Hazardous decomposition products	Burning will produce CO ₂ , CO, and minute amounts of NO _x , HCN and H ₂ O.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity	no data available
Skin corrosion/irritation	See section 4.
Serious eye damage/irritation	See section 4.
Respiratory or skin sensitization	See section 4.
Germ cell mutagenicity	no data available (skin sensitization)
Carcinogenicity	no data available
Reproductive toxicity	no data available
STOT-single exposure	no data available
STOT-repeated exposure	no data available
Aspiration hazard	not an inhalation hazard

SECTION 12: Ecological information

12.1 Toxicity	not 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

Landfill sites - industrially approved. Do not incinerate. If necessary, consult local, state, and federal agencies prior to disposal of this material.

SECTION 14: Transport information

14.1 UN number

see SECTION 14.2

14.2 UN proper shipping name

not Dangerous Goods
ADR/RID (land)
ADN (inland navigation)
IMDG (marine)

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 SECTIONS 6 to 8

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

not Dangerous Goods

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 Diethanolamine (CAS 111-42-2 – trace amount / impurity), which is known to the State of California to cause cancer.

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

Toxic Substances Control Act (TSCA) Status

This product is TSCA-compliant

15.2 Chemical safety assessment

has not been carried out

SECTION 16: Other information

16.1 Revision date: 19 June 2019, CN #1836

16.2 Previous revision: 15 June 2016, CN #1389

16.3 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 Code 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

16.4 Disclaimer

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