



Perlite
MSDS

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor

Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072



IDENTITY (As Used on Label and List) **PERLITE (EXPANDED)** Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that

Section I Trade name; **PERSOLITE (Masonry Fill Insulation, Concrete Aggregate, Horticultural)**
 Manufacturer's Name **Persolite Products, Inc.** Emergency Telephone Number **719-784-6531**
 Address (Number, Street, City, State, and ZIP Code) **P.O. Box 505** Telephone Number for Information **719-784-6531**
Florence, CO 81226 Date Prepared **January 5, 2004**
(201 S. Robinson) Florence, CO Signature of Preparer (optional) **Lori L. Soden**

Section II - Hazardous Ingredients/Identify Information

Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	by (optional)
PERLITE (expanded)		5 mg/m³	respirable dust	100%

Formula: **Sodium Potassium Aluminum Silicate of Variable Composition**
 Chemical Family: **Amorphous Mineral Silicate**

Crystalline Silica: **Cristobalite < 0.1%**
 Quartz: **< 0.1%**

Section III - Physical/Chemical Characteristics

Boiling Point	N/A	Specific Gravity (H ₂ O = 1)	2.3
Vapor Pressure (mm Hg.)	N/A	Melting Point	N/A
Vapor Density (AIR = 1)	N/A	Evaporation Rate (Butyl Acetate = 1)	N/A

Solubility in Water: **Slight**
 Appearance and Odor: **White Dry Aggregate. No odor.**

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used)	Non Flammable	Flammable Limits	N/A	LEL	N/A	UEL
Extinguishing Media	N/A					
Special Fire Fighting Procedures	None					

Unusual Fire and Explosion Hazards: **No Hazard**

(Reproduce locally)

Section V -- Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	None in designed use

Incompatibility (Materials to Avoid) **Hydrofluoric Acid: (Reacts to form toxic silicon tetrafluoride gas)**

Hazardous Decomposition or Byproducts

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	Contact with Hydrofluoric Acid

Section VI -- Health Hazard Data

Route(s) of Entry:	Inhalation? Yes	Skin? No	Ingestion? Not hazardous
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Health Hazards (Acute and Chronic)

Generally regarded as safe by the FDA.

Chronic: None Known: Follow safe handling practices below.

Carcinogenicity: No	NTP? No	IARC Monographs? No	OSHA Regulated? No (See below)
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Signs and Symptoms of Exposure
Inhalation over long periods of high amounts of any nuisance dust may overload lung clearance mechanism and make lungs more vulnerable to respiratory illness.

Medical Conditions
Generally Aggravated by Exposure Pre-existing conditions upper respiratory and lung diseases, such as, but not limited to, bronchitis, emphysema and asthma.

Emergency and First Aid Procedures
Move person to dust free area, drink water to clear throat and blow nose.

Eyes: Flush eyes with water for a minimum of 15 minutes. DO NOT RUB.

Section VII -- Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled
Vacuum or wet sweep. Avoid creating dust. Maintain good housekeeping procedures regarding nuisance dust.

Waste Disposal Method
Product as manufactured is acceptable for landfill. If contaminated by toxic substances the manner of disposal would be governed by the toxic substance.

Precautions to Be Taken in Handling and Storing
Handle to avoid creating dust. Repair broken bags. we recommend the use of NIOSH approved respirators for protection for specified threshold values.

Other Precautions
Normally no required.

Section VIII -- Control Measures

Respiratory Protection (Specify Type)
We recommend the use of NIOSH approved respirators for protection for specified threshold

Ventilation	Local Exhaust Provide adequate exhaust ventilation.	Special Normally not required.	limit value
	Mechanical (General) and or dust collection	Other Maintain good housekeeping procedures.	

Protective Gloves Normally not required

Eye Protection Normally not required.

Other Protective Clothing or Equipment Normally not required.

Work/Hygiene Practices maintain good housekeeping procedures.

Federal and State regulations sometimes change and differ. To stay current, consult your State OSHA Authorities. While the information and recommendations set forth herein are believed to be accurate as of the date hereof, Persolite Products, Inc., makes no warranty with respect thereto, and disclaims all liability from reliance thereon.

Insulfoam LLC

Material Data Safety Sheet

I. PRODUCT INFORMATION Effective date 6/20/07

<p>Product : Insulfoam Molded EPS Products, R-TECH</p> <p>Synonyms : Molded Expanded Polystyrene (MEPS)</p> <p>Product Grades : Type I, VIII, II, IX, XIV and XV (modified)</p> <p>Chemical Family : Polystyrene Thermoplastic</p> <p>CAS Registry No. : 9003536</p> <p>CAS Name : Benzene, Ethenyl, Homopolymer</p> <p>Formula : (C₈ H₈) n</p> <p>TSCA Inventory Status : Listed</p>	<p>Hazard Rating</p> <p>0 = Minimal 3 = Serious</p> <p>1 = Slight 4 = Severe</p> <p>2 = Moderate</p>	<p>Health 0</p> <p>Fire 2</p> <p>Reactivity 0</p>
<p><i>Contact:</i></p> <p style="text-align: center;">Insulfoam LLC 1019 Pacific Avenue, Suite 1501 Tacoma, Washington 98402-4483 (253) 572-5111 FAX (253) 383-7100</p>		

II. INGREDIENTS

<i>Hazardous Components:</i>	<i>CAS Registry No.:</i>	<i>Approx. Weight Percentage:</i>
Pentane	109660	<2%
Bromine Flame Retardant	3194-55-6	<1%
Polymeric Film		1-3%
<i>Non-Hazardous Components:</i>	<i>CAS Registry No.:</i>	<i>Approx. Weight Percentage:</i>
Polystyrene	9003536	>92%

III. PHYSICAL DATA

<p>Form : Rigid, cellular foam blocks, boards and shapes</p> <p>Color : White</p> <p>Odor : Very slight pentane</p> <p>Boiling Point : N/A</p> <p>Melting Point : N/A (Softening begins @ 160° F)</p>	<p>Specific Gravity (Water = 1) : <1</p> <p>Volatile by Volume : <1.8% (Pentane & Water)</p> <p>Vapor Pressure : N/A</p> <p>Vapor Density (Air = 1) : N/A</p> <p>Evaporation Rate : None</p> <p>Solubility in Water : Insoluble</p> <p>Density : 0.6 pcf to 3.0 pcf</p>
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IV. FIRE & EXPLOSION DATA

Flash Pt. and Method Used :	610° F min. (ASTM D1929)
Special Fire-Fighting Instructions :	Use approved self-contained breathing apparatus respirator and personal protective clothing (turn out gear).
Extinguishing Media :	Water fog, carbon dioxide, dry chemical, foam
Autoignition Temperature :	850° F min.
Unusual Fire & Explosion Hazards :	If exposed to fire, high heat will develop and may produce dense, black smoke. Dust generated by fabrication (ie. sanding, sawing, etc.) will increase fire hazard and should be handled accordingly.

V. REACTIVITY DATA

Stability (Conditions to Avoid) :	Stable. Avoid fire and high temperatures.
Incompatibility (Materials to Avoid) :	Will dissolve in most organic solvents and some insecticides, aldehydes and amines.
Hazardous Decomposition :	CO, CO ₂ , H ₂ O and Hydrogen Bromides
Hazardous Polymerization :	None.

<u>Principal Health Hazards and Signs & Symptoms of Exposure</u>	<u>First Aid</u>
<p>Eye Contact : Dust or particles may cause mechanical eye irritation and/or injury.</p> <p>Inhalation : Dust from mechanical fabrication may cause upper respiratory irritation. Fumes from hot-wire cutting can also cause upper respiratory irritation.</p> <p>Skin Contact : None. May produce slight skin irritation in a few individuals.</p> <p>Ingestion : Biological inert. May act as an obstruction if swallowed.</p> <p>Carcinogenicity : None.</p> <p>Safety Precautions: Use positive ventilation. Mechanical fabrication, sanding, etc. requires the use of safety glasses or goggles and dust mask.</p>	<p>Eyes : Rinse with clean water. Remove foreign particles with clean, lint-free cloth. Obtain medical treatment if pain, blinking, tears or redness persists.</p> <p>Inhalation : If overcome by exposure, remove to fresh air. Provide oxygen and artificial respiration. Get medical attention.</p> <p>Skin : Not expected to present skin hazard. Wash exposed areas with mild soap and water. Consult physician if irritation persists.</p> <p>Ingestion : Not expected to present significant ingestion hazard. Consult physician if swallowed.</p>

VII. EMPLOYEE PROTECTION

Personal Protection Equipment	
Respiratory Protection :	Use approved dust mask when sawing or sanding.
Skin Protection :	Wear gloves and/or sleeves if sensitivity is noted.
Eye Protection :	Use approved safety glasses/goggles when sawing or sanding.
General Control Measures :	Use positive ventilation. Wear safety glasses/goggles and dust mask if mechanical fabrication is to take place.

VIII. SPILL OR LEAK PROCEDURE

Spill, Leak or Release Procedures :	Normal good housekeeping should be observed. Material can be swept or picked up and placed into a suitable container for disposal.
Reportable Quantity :	None.
Disposal Method :	Recycle, incinerate (WTE) or land-fill per local and state regulations.

IX. SPECIAL PRECAUTIONS

Storage and Handling :	Expanded Polystyrene is considered to be combustible, and adequate protection from sources of ignition should be taken.
Transportation Requirements :	Not a D.O.T. Hazardous Material.

The information contained herein is provided as a general reference only. Insulfoam believes the data set forth herein to be accurate and given in good faith. Insulfoam makes no guarantee or warranty and does not assume any liability with respect to the accuracy or completion of such information or of the product results in any specific instance, and hereby expressly disclaims any implied warranties of merchantability or fitness for a particular purpose, or any other warranties or representations whatsoever, expressed or implied.

MSDS 085

**INSULFOAM LLC
1019 Pacific Avenue, Suite 1501
Tacoma, Washington 98402-4483**

Emergency Telephone Number CHEMTREC 1-800-424-9300 (This number is available days, nights, weekends & holidays.)

INSULFOAM LLC
TECHINCAL CENTER
17001 Fish Point Road, Suite 101
Prior Lake, Minnesota 55372
(800) 469-8870

REPORT NUMBER: 703

UNIVAR USA INC.

PAGE: 001

MSDS NO: 39475

MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 01/19/06

VERSION: 003

PRODUCT: WITCONATE ADK

ORDER NO: 235633

PROD NO : 383810

CONDECK CORPORATION
3230 MATTHEW AVE NE

ALBUQUERQUE ,NM 87107

UNIVAR USA INC.

(425)889-3400

7425 NE UNION HILL RD , REDMOND

, WA 98052

----- EMERGENCY ASSISTANCE -----

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL - CHEMTREC
(800)424-9300

PRODUCT IDENTIFICATION

PRODUCT NAME: WITCONATE ADK
MSDS#: 39475
DATE ISSUED: 06/06/2002
SUPERSEDES: 01/03/2001
ISSUED BY: 008081

This MSDS has been reviewed on 1/19/2006, and is
current as of the DATE ISSUED above.

MATERIAL SAFETY DATA SHEET

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: WITCONATE ADK

REPORT NUMBER: 703

UNIVAR USA INC.

PAGE: 002

MSDS NO: 39475

MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 01/19/06

VERSION: 003

PRODUCT: WITCONATE AOK

ORDER NO: 235633

PROD NO : 383810

Chemical name: Sodium alpha olefin sulfonate

Supplier: Akzo Nobel Industrial Specialties, Inc.
300 South Riverside Plaza
Chicago, IL 60606-6697, USA

Emergency telephone number: Akzo Nobel Emergency Response
(24 hours) 914-693-6946
CHEMTREC (24 hours) 800-424-9300

For MSDS, Product Safety, or regulatory
inquiries, call: Mike CurI 713-434-4421

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS#	CONCENTRATION
Sodium (C14-16) alpha olefin sulfonate	68439-57-6	94.0 %
Sodium sulfate	7757-82-6	6.0 %

SECTION 3. HAZARDS IDENTIFICATION

APPEARANCE

Physical state: Flakes
Color: Cream white
odor: Bland

EMERGENCY OVERVIEW

WARNING!
CAUSES EYE IRRITATION.
MAY BE HARMFUL IF SWALLOWED.

POTENTIAL HEALTH EFFECTS

Inhalation:
Acute effects:
Moderately toxic.

Skin absorption:
Acute effects:
Harmful effects are not expected from short periods of contact.

REPORT NUMBER: 703

UNIVAR USA INC.

PAGE: 003

MSDS NO: 39475

MATERIAL SAFETY DATA SHEET

MAINFRAME UPLOAD DATE: 01/19/06

VERSION: 003

PRODUCT: WITCONATE ADK

ORDER NO: 235433

PROD NO : 383810

Inhalation

Acute effects

Short-term harmful health effects are not expected from vapor generated at ambient temperature.

Skin contact

Acute effects

Causes slight to moderate irritation.

Eye contact

Acute effects

Causes moderate to severe irritation.

POTENTIAL ENVIRONMENTAL EFFECTS

This product is expected to be moderately toxic to aquatic organisms.

SECTION 4. FIRST AID MEASURES

Swallowing

Do not induce vomiting. Obtain medical attention immediately.

Skin

Immediately flush skin thoroughly with water for at least 15 minutes while removing contaminated clothing and shoes. Obtain medical attention if irritation persists.

Inhalation

Remove to fresh air. Give artificial respiration if not breathing. Obtain medical attention.

Eye contact

Immediately flush eyes with water and continue washing for at least 15 minutes.

SECTION 5. FIRE-FIGHTING MEASURES

Flash point: > 94 C (> 200 F)

Special protective equipment for firefighters

Use self-contained breathing apparatus when fighting fires in enclosed areas.

Extinguishing media

RODUCT: WITCONATE ADK

ORDER NO: 235633

PROD NO : 383810

uitable: Extinguish with:

- water fog
- dry chemical
- CO2
- alcohol resistant foam
- water spray

nsuitable: None.

SECTION 6. ACCIDENTAL RELEASE MEASURES

ersonal precautions:

ear suitable protective equipment.

nvironmental precautions

void runoff to sewers or waterways. Product is dispersible in water.
ay be harmful to aquatic life.

ethods for cleaning up

weep up and collect in a suitable container for disposal.

esidue:

lush with large amounts of water.

bserve government regulations.

SECTION 7. HANDLING AND STORAGE

HANDLING

andling precautions

o not get in eyes, on skin, on clothing. Wear recommended personal
rotection equipment.

TORAGE

torage requirements

tore and use with adequate ventilation. Store at ambient temperature.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ERSONAL PROTECTION

espiratory protection

f personnel exposure exceeds the exposure limits, select appropriate

RODUCT: WITCONATE AOK

ORDER NO: 235433

PROD NO : 383810

rotective equipment in accordance with NIOSH recommendations.

and protection / protective gloves
 esistant gloves

ye protection
 afety glasses.

ndustrial hygiene measures
 emove contaminated clothing and clean it.

NGINEERING CONTROLS

entilation
 eneral (mechanical) room ventilation is expected to be satisfactory
 or normal handling.

XPOSURE LIMITS

o exposure limits have been established

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

PEARANCE

hysical state: Flakes
 olor: Cream white
 dor: Bland

THER PROPERTIES

oiling Point: No data available.
 elting Point: No data available.
 H: 7 - 10
 apor pressure: Negligible
 apor density (air=1): Non Volatile
 olubility in water: Soluble
 ash point: > 94 C (> 200 F)
 Method: Pinsky-Martens closed cup ASTM D 93
 ercent volatiles: 0 %(m)

SECTION 10. STABILITY AND REACTIVITY

stability: Stable.

stability - Conditions to avoid
 stable under normal conditions.

EPORT NUMBER: 703

UNIVAR USA INC.

PAGE: 006

SDS NO: 39475

MATERIAL SAFETY DATA SHEET

AINFRAME UPLOAD DATE: 01/19/06

VERSION: 003

PRODUCT: WITCONATE ADK

ORDER NO: 235633

PROD NO : 383810

incompatible materials
strong oxidizing agents.

hazardous combustion products
carbon monoxide,
carbon dioxide,
oxides of sulfur.

hazardous polymerization: Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

ALLOWING

test results

acute toxicity: LD50-Rats ((Males)

Result: 2,161 mg/kg

acute toxicity: LD50 - Rats(Females)

Result: 1,895 mg/kg

KIN ABSORPTION

test results

acute Toxicity: LD50 - Rabbit

Result: > 2,020 mg/kg

SENSITIZATION

test results: Remark: Non-sensitizing

CARCINOGENICITY

assessment

Our carcinogenicity studies evaluated AOS and that AOS is not
carcinogenic in rodents when administered either percutaneously
or orally.

SECTION 12. ECOLOGICAL INFORMATION

This product is expected to be moderately toxic to aquatic organisms.

SECTION 13. DISPOSAL CONSIDERATIONS

General:

It is our opinion this product is not a RCRA hazardous waste. It is the

REPORT NUMBER: 703

UNIVAR USA INC.

PAGE: 007

SDS NO: 39475

MATERIAL SAFETY DATA SHEET

FRAME UPLOAD DATE: 01/19/06

VERSION: 003

PRODUCT: WITCONATE AOK

ORDER NO: 235633

PROD NO : 383810

generator's responsibility to make their own determination as to the RCRA status of waste they generate. We have not performed a Toxicity Characteristic Leachate Procedure (TCLP) on this product. Incinerate in a furnace where permitted under appropriate Federal, State, and local regulations.

on-cleaned packages

dispose of washing solution in the same way as product.

SECTION 14. TRANSPORT INFORMATION

DOT Classification

This product is not regulated by DOT.

Weight description road: CLEANING, SCOURING & WASHING COMPOUND,
LIQUID OR POWDER

MDG Classification

This product is not regulated by IMDG.

ICAO Classification

This product is not regulated by ICAO.

SECTION 15. REGULATORY INFORMATION

Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of hazardous substances equal to or greater than the reportable quantities (RQ's) in 40CFR302.4.

Components present in this product at a level which could require reporting under the statute are:

*** NONE ***

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQ's) and release reporting based on Reportable Quantities (RQ's) in 40CFR355 (used for SARA 302 and 304).

Components present in this product at a level which could require reporting under the statute are:

none.

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40CFR372 (for SARA 313). This information must be included in SDS's that are copied and distributed for this material.

PRODUCT: WITCONATE AOK

ORDER NO: 235433

PROD NO : 383810

Components present in this product at a level which could require reporting under the statute are:
none.

Pennsylvania Right-To-Know Hazardous Substance List--Hazardous Substances and Special Hazardous Substances on the list must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:
none.

New Jersey Worker and Community Right-To-Know Act (Labeling Requirements)

Chemical name	CAS#	New Jersey TS
Amber		
Sodium sulfate	7757-82-6	
Sodium (C14-16) alpha olefin sulfonate	68439-57-6	

SECTION 16. OTHER INFORMATION

RECOMMENDED USES AND RESTRICTIONS

Please consult the product and/or application information bulletins for this product.

HMIS RATING

Health: 2 Flammability: 1 Reactivity: 0 PPI: -

LEGEND

TP Standard temperature and pressure

/W Weight/Weight

(HMIS) Minimal hazard

(HMIS) Slight hazard

(HMIS) Moderate hazard

(HMIS) Serious hazard

(HMIS) Severe hazard

(HMIS) Personal protection rating to be supplied by user depending on use conditions

REPORT NUMBER: 703

UNIVAR USA INC.

PAGE: 009

SDS NO: 39475

MATERIAL SAFETY DATA SHEET

AIRFRAME UPLOAD DATE: 01/19/06

VERSION: 003

PRODUCT: WITCONATE AOK

ORDER NO: 235433

PROD NO : 383810

----- FOR ADDITIONAL INFORMATION -----

CONTACT: MSDS COORDINATOR

UNIVAR USA INC.

DURING BUSINESS HOURS, PACIFIC TIME

(425)889-3400

07/03/06 06:06

PRODUCT: 383810

CUST NO: 425230

ORDER NO: 235433

----- NOTICE -----

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THIS INFORMATION RELATES ONLY TO THE PRODUCT DESIGNATED HEREIN, AND DOES NOT
RELATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY OTHER
PROCESS.

*** END OF MSDS ***

Product Name: Zell-Crete Fiber
File: MSDS ZCFiber

Page 1 of 3

MATERIAL SAFETY DATA SHEET
Revised 11/13/06 EMG/ML

Product Name: Zell-Crete Fiber

A 1/2 inch, 15-denier polyester filament, specifically designed to be used in Elastizell cellular concrete.

SECTION I - LOCATION

Manufacturer's Name and Address:

Superior Fiber Products
9391 Mentor Avenue, Suite 289
Mentor, OH 44060
tel: (800) 243-0789

Distributor's Name and Address:

Research Center:

Elastizell Corporation of America
7900 Second Street
Dexter, MI 48130
tel: (734) 426-6076
fax: (734) 426-6078

Office:

Elastizell Corporation of America
267 Collingwood - P. O. Box 1462
Ann Arbor, MI 48106
tel: (734) 761-6900
fax: (734) 761-8016

Emergency Telephone Number: Superior Fiber Products @ (800) 243-0789

SECTION II - INGREDIENTS

Polyethylene terephthalate polymer (PET) (CAS # 25038-59-9)
Surface finishes (surfactants) < 2%

There are no known physical or health hazards associated with this product. In skin tests on human subjects, the fibers produced no irritation or sensitization.

Thermoplastic polyester (PET) products are not considered hazardous by criteria of the OSHA Hazardous Communication Standard (29 CFR 1910-1200).

Product Name: Zell-Crete Fiber
File: MSDS ZCFiber

Page 2 of 3

SECTION III - CHEMICAL & PHYSICAL PROPERTIES

Chemical Name:	Polyethylene terephthalate polymer (PET)
Specific Gravity:	1.34
Tensile Strength:	130-160 ksi
Initial Modulus:	50-60 grams/denier
Ignition Point:	Over 1100°F
Melting Point:	Over 495°F
Ductility Range:	-100°F through +440°F
Weak Acid Resistance:	High
Weak Alkali Resistance:	High
Thermal Conductivity:	Low
Electrical Conductivity:	Low
Elongation / Tenacity	5.5 grams/denier
Young's Modulus:	2500 ksi

SECTION IV - FIRE AND EXPLOSION HAZARD

Extinguishing Media:	Water, fog, foam, carbon dioxide, dry chemical.
Special Fire Fighting Information:	Combustion products are carbon dioxide and carbon monoxide. Combustion products will depend on conditions of combustion. Wear self-contained breathing apparatus.
Unusual Fire and Explosion Hazards:	Decomposition products generated from molten product may be subject to auto ignition.

SECTION V - HEALTH HAZARD DATA

Health Hazards (Acute and Chronic):	None likely
Carcinogenicity:	None likely
Signs and Symptoms of Exposure:	None likely
Emergency and First Aid Procedures:	Not required

SECTION VI - REACTIVITY DATA

Stability:	Stable
Hazardous Polymerization:	Will not occur
Incompatibility (Materials to avoid):	Oxidizing materials
Hazardous Decomposition or by-products:	Carbon dioxide, carbon monoxide

SECTION VII - SPILL OR LEAK PROCEDURES

Release or Spill:	Collect and contain for disposal.
Waste Disposal Method:	Incineration or landfill. Observe all federal, state, and local disposal laws.

These products are not classified as hazardous wastes under the Resource Conservation And Recovery Act and, unless prohibited by state or local regulations, can be disposed of in municipal landfills or incinerated.

Product Name: Zell-Crete Fiber
File: MSDS ZCFiber

Page 3 of 3

SECTION VIII - SPECIAL PROTECTION INFORMATION

Avoid eye contact. Safety glasses with side shields recommended.
Use cloth gloves in case of continuous contact.
Full length clothing suggested.
Normal hygiene measures such as washing hands recommended after use.
Adequate ventilation is recommended to maintain finish mist levels below $3\text{mg}/\text{m}^3$ per 8 hour TWA.

SECTION IX - TRANSPORTATION DATA

Department of Transportation:	Not regulated
U.S. DOT Shipping Name:	PET fiber for concrete
U.S. DOT Hazard Class:	Not hazardous
NMFC Number:	106420 sub 8
Label(s) Required:	None
Reportable Quantity:	N/A
Freight Classification:	Rate class 50
Special Transportation Notes:	None

Signature:



Ned Glysson

Title: Director of Research and Operations

Supersedes: 05/14/02

Revision Date: 11/13/06

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