

## Material Safety Data Sheet MSDS

Date Updated: October 4<sup>th</sup>, 2008

Product: **Flexsil**<sup>®</sup> (*Phenolic-Treated Silica Mesh Filter Cloth*)

### 1. Chemical Product and Company Identification

**Trade Name:** Flexsil<sup>®</sup>

**Synonyms:** None

**Manufacturer**

AMETEK, INC., CHEMICAL PRODUCTS DIVISION

NESQUEHONING FACILITY

42 Mountain Avenue, Nesquehoning, Pennsylvania 18240

**Phone:** Product Information (570) 645-6934

**Revision Date** October 4<sup>th</sup>, 2008

**Description:** Brown, Semi-Rigid Silica Mesh Filter Cloth

**No Hazard Rating is available for this Product**

### 2. Composition and Information on Ingredients

Ingredient(s)	CAS Number	Approx. Percent
Amorphous Silica	7631-86-9	92-98%
Phenol-Formaldehyde Resin	9003354	*15-20%
Phenol (Free)	108-95-2	Unknown
Formaldehyde (Free)	50-00-0	Unknown

*\*% of actual coating*

### 3. Hazard Identification

**Emergency Overview:**

A mesh fabric coated with resin and having a slight phenolic odor, brown in color.

Exposure of product above the decomposition temperature of phenolic resin will result in toxic gases being evolved including, but not limited to, carbon monoxide and carbon dioxide. Also temperatures greater than 1800°F will cause conversion of the fabric to crystalline silica. See Sections 7 and 11.

### Effects of Overexposure

**Eye Contact:** Slight irritation may be caused in contact with eyes.

**Skin Contact:** Temporary irritation of skin may be produced.

**Inhalation:** Inhalation of airborne fibers may cause minor irritation to the mouth, nose, and throat.

**Ingestion:** May cause temporary irritation of the digestive tract, but not an expected route of entry in industrial uses.

**Primary routes of entry:** Skin contact, inhalation, ingestion & eye contact.

### Carcinogenicity Information

#### ***Formaldehyde***

POTENTIAL CANCER HAZARD (A2)

Based on animal data and limited epidemiological evidence, NTP and IARC have listed formaldehyde as a probable human carcinogen. OSHA regulates formaldehyde as a potential human carcinogen.

May cause allergic skin reaction. Some reports suggest that formaldehyde may cause respiratory sensitization, such as asthma.

#### ***Phenol***

Can cause liver, kidney, bladder, and cardiac damage.

Pre-existing heart or circulatory disorders may be aggravated by exposure.

This material has not been listed by NTP, classified by IARC, nor regulated by OSHA as a carcinogen (A4)

### **4. First Aid Information**

**Eye Contact:** Flush eyes immediately with large amounts of water for at least 15 minutes holding eyelids open while flushing. Seek medical attention promptly.

**Skin Contact:** Wash contacted area of skin thoroughly with mild soap and cool water. Seek medical attention if irritation occurs.

**Inhalation:** Remove person from source of exposure to fresh air and then seek medical attention immediately.

**Ingestion:** Seek medical attention immediately.

### **5. Fire Fighting Measures**

**Flash Point:** N.A.

**Lower Explosive Limit (%):** N.A.

**Upper Explosive Limit (%):** N.A.

**Autoignition Temperature:** N.D.

**Extinguishing Media:** Carbon dioxide, water, foam, or dry chemical as suitable for type of surrounding fire.

**Unusual Fire & Explosion Hazards:** During a fire, the combustion products of phenolic resin, carbon monoxide and/or carbon dioxide may be released, as well as other unidentified organic compounds.

**Fire Fighting Instructions:** Wear full fire fighting protective equipment including self-contained breathing apparatus.

## 6. Accidental Release Measures

**Steps to be taken in case material is released or spilled:** Dust or loose fibers can be vacuumed or swept with the aid of a dust suppressant. Dispose according to federal, state, and local environmental regulations.

## 7. Handling and Storage

Store material in a clean dry place, and keep container closed. Fabric which has been subjected to elevated temperatures (>1800°F) may undergo partial conversion to cristobalite, a form of crystalline silica, which may cause respiratory illness. The amount of cristobalite present will depend on the temperature and length of service. The OSHA permissible limit (PEL) for cristobalite is 0.05 mg/m<sup>3</sup> (respirable). Particular care should be taken when working with “used” material to minimize dust. If exposure limits are exceeded or if irritation is experienced, NIOSH approved respiratory protection should be worn.

## 8. Exposure Controls and Personal Protection

### ENGINEERING CONTROLS

#### **Ventilation:**

General ventilation and/or local exhaust ventilation should be utilized to maintain exposures below the TLV. When material is used at elevated temperatures, adequate ventilation must be provided.

**Respiratory Protection:** Use a NIOSH approved respirator when levels of fibers exceed the OSHA permissible exposure limits.

**Eye Protection:** Safety glasses with side shields or chemical splash goggles must be worn to prevent eye contact. A good safety practice is to have an eyewash station readily available near the work area.

**Protective Clothing:** Wear protective gloves when handling this product. Personnel who are more susceptible to irritation from fibers or dusts should wear full-body coveralls.

**Hygienic Practices:** Use proper personal hygiene practices. The use of protective creams before handling the material may prove beneficial.

**EXPOSURE LIMITS:**

***Amorphous Silica***

PEL (OSHA) 80 mg/m<sup>3</sup> ÷ % SiO<sub>2</sub> or 20 mppcf  
TLV (ACGIH) 10 mg/m<sup>3</sup> (inhalable); 3 mg/m<sup>3</sup> (respirable)  
NIOSH 6 mg/m<sup>3</sup>  
IDLH 3000 mg/m<sup>3</sup>

***Phenolic Resin***

PEL (OSHA) N.E.  
TLV (ACGIH) N.E.

***Phenol (Free)***

PEL (OSHA) 5 ppm (skin)  
TLV (ACGIH) 5 PPM (skin)

***Formaldehyde (Free)***

PEL (OSHA) 0.75 ppm  
STEL 2 ppm  
TLV (ACGIH) (C) 0.3 ppm  
NOTATIONS: A2

**9. Physical and Chemical Properties**

**PHYSICAL DATA (FABRIC ONLY):**

**Boiling Point:** 4046° F  
**Melting Point:** >3000° F  
**Solubility in Water:** Insoluble  
**Vapor Pressure:** N.A.  
**Vapor Density:** N.A.  
**Specific Gravity:** 2.2  
**Color:** Brown

**Odor:** Slight phenolic resin odor

**Physical State:** Mesh fabric coated with phenolic resin

## 10. Stability and Reactivity

**Chemical Stability** – Product is stable at normal temperature and storage conditions.

**Incompatibilities** – Basic phosphates, hydrofluoric acid, and some oxides and hydroxides.

**Hazardous Polymerization:** Hazardous polymerization will not occur under normal conditions.

**Hazardous Decomposition Products:** Thermal decomposition of phenolic coating may produce carbon monoxide and/or carbon dioxide, as well as other unidentified organic compounds.

## 11. Toxicological Information

Material which has been subjected to elevated temperatures (>1800°F) may undergo partial conversion to cristobalite, a form of crystalline silica, which may cause respiratory illness. The amount of cristobalite present will depend on the temperature and length of service. The OSHA PEL for cristobalite is 0.05 mg/m<sup>3</sup> (respirable).

### ***Formaldehyde 50-00-0***

Formaldehyde is currently listed as a suspected carcinogen by IARC and is also in the “D” list of suspected carcinogens as defined by Proposition 65 under California law.

### ***Phenol 108-95-2***

Inhalation, LC 50: Mouse = 177 mg/m<sup>3</sup>

Dermal, LD 50: Rabbit = 630 mg/kg

Oral, LD 50: Rat = 317 mg/kg.

## 12. Ecological Information

Phenol may possibly be leached out of product by water. Protect all waterways. Toxicity is expected to be low based on the insolubility in water of the product.

## 13. Disposal Considerations

Dispose of waste material in accordance with applicable federal, state, and local environmental regulations.

#### 14. Transportation Information

**DOT Proper Shipping Name:** Flexsil Coated Filter Fabric

**DOT Hazardous Class:** None

**DOT UN/NA Number:** None

**Emergency Response Guide Number:** None

#### 15. Regulatory Information

##### **U.S. FEDERAL REGULATIONS AS FOLLOWS:**

##### **SARA Section 313:**

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372: **None**

**TSCA: The chemical substances in this product are on the TSCA Section 8 Inventory.**

##### **EXPORT NOTIFICATION:**

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States: **None**

##### **INTERNATIONAL REGULATIONS: AS FOLLOWS:**

**Canadian WHMIS:** This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

**Canadian WHMIS CLASS:** Not Regulated.

**DSL:** The chemical substances in this product are listed on the Domestic Substances List (DSL).

#### 16. Other Information

This Material Safety Data Sheet was revised in its entirety in April 2001

##### **ABBREVIATIONS:**

- 1) ACGIH – American Conference of Governmental Industrial Hygienists
- 2) OSHA – Occupational Safety and Health Administration
- 3) NIOSH – National Institute for Occupational Safety and Health
- 4) IARC – International Agency for Research on Cancer
- 5) NTP – National Toxicology Program
- 6) TLV – Threshold Limit Value
- 7) PEL – Permissible Exposure Limit
- 8) TWA – Time Weighted Average
- 9) STEL – Short Term Exposure Limit
- 10) IDLH – Immediately Dangerous to Life or Health
- 11) N.A. – Not Applicable
- 12) N.D. – Not Determined



13) N.E. – Not Established

14) DSL – Domestic Substances List

**THE ABOVE INFORMATION IS BELIEVED TO BE ACCURATE BASED ON THE MOST CURRENT DATA AVAILABLE. AMETEK MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO SUCH INFORMATION, AND ASSUMES NO LIABILITY RESULTING FROM ITS USE. USERS ARE ADVISED TO CONDUCT THEIR OWN TESTS TO DETERMINE THE SAFETY AND SUITABILITY OF EACH PRODUCT OR PRODUCT COMBINATION FOR THEIR OWN PURPOSES. AMETEK SHALL NOT BE LIABLE FOR ANY CLAIMS, LOSSES, OR DAMAGES OF ANY THIRD PARTY OR FOR LOST PROFITS OR INCIDENTAL OR CONSEQUENTIAL DAMAGES, HOWSOEVER ARISING EVEN IF AMETEK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.**