

# SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:**.....WEST SYSTEM® 406 Colloidal Silica  
**APPLICABLE PRODUCT CODES:** .....406, 406-2, 406-7, 406-B.  
**CHEMICAL FAMILY:**..... Synthetic amorphous pyrogenic silica.  
**INTENDED PRODUCT USES:**..... Thickening agent for liquid epoxy resins.  
**PRODUCT RESTRICTIONS:**..... None identified.  
**SDS VERSION:** .....406-2016a

**MANUFACTURER:**  
Gougeon Brothers, Inc.  
100 Patterson Ave.  
Bay City, MI 48706, U.S.A.  
Phone: 866-937-8797 or 989-684-7286  
www.westsystem.com

**EMERGENCY TELEPHONE NUMBERS (24 HRS):**  
Transportation  
CHEMTREC: ..... 800-424-9300 (U.S.)  
703-527-3887 (International)  
Non-transportation  
Poison Hotline: ..... 800-222-1222

## 2. HAZARDS IDENTIFICATION

### Classification of Substance or Mixture

None

### Label Elements

**Hazard Pictogram(s):**  
None

**Signal Word:**  
None

**Hazard Statements:**  
None

**Precautionary Statements:**  
None

### Other Hazards

Handling and conveyance of material may create static electrical charge. Earth/ground handling and processing equipment to prevent against static discharge.

## 3. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

INGREDIENT NAME	CAS #	CONCENTRATION (%)
Synthetic amorphous pyrogenic silica	112945-52-5	60-100

The exact chemical identity and/or exact percentage (concentration) of each ingredient has been held as confidential business information (CBI). Refer to Section 15 for additional information regarding this CBI claim.

## 4. FIRST AID MEASURES

**FIRST AID FOR EYES:**..... SYMPTOMS: Excessive exposure may cause irritation and tearing.  
**RESPONSE:** Flush with water for at least 15 minutes. Remove contact lenses if present and easy to do. Consult a physician as a precautionary measure if symptoms develop and persist.

**FIRST AID FOR SKIN:**..... SYMPTOMS: May cause skin dryness or slight irritation. **RESPONSE:**  
Wash with mild soap and water. Consult a physician if effects occur and persist.

**FIRST AID FOR INHALATION:**..... SYMPTOMS: Excessive exposure may cause coughing, respiratory irritation or shortness of breath due to temporary lung overload. **RESPONSE:** Remove to fresh air if symptoms develop and keep comfortable for breathing. Seek medical advice if symptoms persist.

**FIRST AID FOR INGESTION:**..... SYMPTOMS: No acute adverse health effects expected from amounts ingested under normal conditions of use. **RESPONSE:** Seek medical attention if a significant amount is ingested.

## 5. FIRE FIGHTING MEASURES

**EXTINGUISHING MEDIA:** ..... **SUITABLE:** Foam, carbon dioxide (CO<sub>2</sub>), water, or dry chemical. Fog or mist is recommended if water is used. **NON-SUITABLE:** Avoid using high pressure media.

**FIRE AND EXPLOSION HAZARDS:** ..... This product will not support combustion. Will not form combustible dust concentrations in the air.  
**SPECIAL FIRE FIGHTING PROCEDURES:** ..... Wear a self-contained breathing apparatus and complete full-body personal protective equipment. Dust may form an explosive mixture in the air, possibly resulting in a secondary explosion.

**6. ACCIDENTAL RELEASE MEASURES**

**PERSONAL PRECAUTIONS AND PROTECTIVE EQUIPMENT:** ..... Keep unnecessary and unprotected personnel from entering area. Use appropriate safety and personal protective equipment as indicated in Section 8.  
**MITIGATION AND CLEAN UP PROCEDURES:** ..... Use methods that avoid generating airborne dust. Use a vacuum with high efficiency particulate air (HEPA) filtration is recommended. Avoid creating a dust cloud by brushing or sweeping, or using compressed air.  
**ENVIRONMENTAL PRECAUTIONS:**..... Contain spilled product to the extent practical and feasible.

**7. HANDLING AND STORAGE**

**STORAGE TEMPERATURE (min./max.):** ..... 0°F (-17°C) / 100°F (38°C)  
**STORAGE:** ..... Store in cool, dry place. Store in sealed containers to prevent moisture absorption or absorption of other volatile materials.  
**HANDLING PRECAUTIONS:** ..... Avoid dust formation. Avoid breathing dust. Wash after handling. Provide appropriate exhaust ventilation at points of operation where dust can be generated. Avoid using compressed air. Take precautionary measures against static discharges. Metal parts of mixing and processing equipment should be earthed/grounded.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**EYE PROTECTION GUIDELINES:** ..... Safety glasses with side shields, or goggles if necessary.  
**SKIN PROTECTION GUIDELINES:**..... Gloves or a barrier cream may be useful to help prevent skin from drying.  
**RESPIRATORY/VENTILATION GUIDELINES:**..... Use with adequate general ventilation and/or local ventilation to keep exposures below established limits. When ventilation cannot be made adequate enough to keep exposures below established limits, use a NIOSH approved respirator with particulate filter, such as a N95 or greater, depending on specific workplace conditions. Consult with your respirator and cartridge supplier to ensure proper selection of respirator and cartridge based on ingredients listed in Section 3 and specific workplace conditions. Use and select a respirator according to the guidelines established in OSHA 1910.134 or other applicable respiratory protection standard.  
**ADDITIONAL PROTECTIVE MEASURES:**..... Practice good caution and personal cleanliness to avoid skin and eye contact. Wash thoroughly after handling. Generally speaking, working cleanly and following basic precautionary measures will greatly minimize the exposure to this product under normal use conditions.  
**OCCUPATIONAL EXPOSURE LIMITS:** ..... Exposure limits may not be established for this product as a whole. For established exposure limits of specific ingredients in this product, or other available exposure limit information, refer to the table below.

Ingredient Name	CAS#	Exposure Limit Information
Synthetic amorphous pyrogenic silica	112945-52-5	Amorphous silica: OSHA PEL 6 mg/m <sup>3</sup>  Dust and PNOS: ACGIH 10mg/m <sup>3</sup> , TWA, Inhalable; 3 mg/m <sup>3</sup> , TWA, Respirable; OSHA PEL 15 mg/m <sup>3</sup> , TWA, total dust; 5 mg/m <sup>3</sup> , TWA, Respirable

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**PHYSICAL FORM:** ..... Powder, solid.  
**COLOR:** ..... White.  
**ODOR:** ..... None.  
**ODOR THRESHOLD:** ..... No data available  
**pH:** ..... No data available  
**MELTING POINT / FREEZING POINT** ..... No data available  
**BOILING POINT (760mm/Hg):** ..... No data available  
**FLASH POINT:** ..... No data available  
**AUTO IGNITION TEMPERATURE** ..... No data available  
**LOWER EXPLOSIVE LIMIT (LEL)** ..... No data available  
**UPPER EXPLOSIVE LIMIT (UEL)** ..... No data available  
**VAPOR PRESSURE** ..... No data available  
**SPECIFIC GRAVITY/DENSITY (water = 1)** ..... 2.2  
**BULK DENSITY** ..... No data available  
**VAPOR DENSITY (air = 1)** ..... No data available  
**EVAPORATION RATE (Butyl Acetate = 1)** ..... No data available  
**WATER SOLUBILITY (% BY WT.)** ..... Only slightly soluble

PARTITION COEFFICIENT, n-OCTANOL/WATER (log Pow)..... No data available  
 KINEMATIC VISCOSITY: ..... No data (mm<sup>2</sup>/s @ 20°C)  
 DECOMPOSITION TEMPERATURE: ..... No data available.  
 % VOLATILE BY WEIGHT: ..... Not applicable.  
 EXPLOSIVE PROPERTIES: ..... Not applicable. This product will not support combustion.  
 Kst VALUE:..... No data available  
 MAXIMUM EXPLOSION PRESSURE (Pmax) ..... No data available  
 MINIMUM IGNITION ENERGY (MIE): ..... No data available  
 MAXIMUM EXPLOSION CONCENTRATION (MEC): ..... No data available  
 DUST EXPLOSION CLASSIFICATION: ..... No data available

**10. STABILITY AND REACTIVITY**

STABILITY: ..... Product is stable at normal temperatures and pressures.  
 REACTIVITY/HAZARDOUS REACTIONS: ..... Product will not react by itself.  
 INCOMPATIBILITIES: ..... None known.  
 CONDITIONS TO AVOID: ..... Avoid excessive airborne dust formation.  
 DECOMPOSITION PRODUCTS: ..... None known.

**11. TOXICOLOGICAL AND HAZARD ENDPOINT INFORMATION**

Component Name	CAS#	LD <sub>50</sub> Oral	LD <sub>50</sub> Dermal	LC <sub>50</sub> Inhalation
Synthetic amorphous pyrogenic silica	112945-52-5	>5000 mg/kg OECD 401	>2000 mg/kg OECD 402	No data

ACUTE TOXICITY: ..... No specific toxicity data exists for this mixture. Classification is based on acute toxicity estimation methods using ingredient data.

Oral: ..... Not classified. Does not meet acute oral toxicity criteria.  
 Dermal: ..... Not classified. Does not meet acute dermal toxicity criteria.  
 Inhalation:..... Not classified. Does not meet acute inhalation toxicity criteria.

SKIN CORROSION / IRRITATION: ..... Not classified. Does not meet criteria for skin corrosion/irritation.

SERIOUS EYE DAMAGE / IRRITATION: ..... Not classified. Does not meet criteria for skin eye damage/irritation, OECD 405. High dust concentrations may cause mechanical irritation.

RESPIRATORY SENSITIZATION: ..... Not classified. Does not meet criteria for respiratory sensitizer.

SKIN SENSITIZATION: ..... Not classified. Does not meet criteria for skin sensitization.

REPRODUCTIVE TOXICITY: ..... Not classified. Does not meet criteria for reproductive toxicity.

MUTAGENICITY: ..... Not classified. Does not meet criteria for mutagenicity.

CARCINOGENICITY: ..... Not classified. Does not meet criteria for carcinogenicity.

No evidence of carcinogenicity was observed in multiple animal species following repeated oral or inhalation exposure to synthetic amorphous silica. Similarly, epidemiology studies show no evidence of carcinogenicity in workers who manufacture synthetic amorphous silica.

STOT (Single Exposure): ..... Not classified. Does not meet STOT SE criteria.

STOT (Repeated Exposure): ..... Not classified. Does not meet STOT RE criteria.

Repeated dose toxicity: oral (rat), 13 weeks, LOEL = 1.3 mg/m<sup>3</sup> based on mild reversible effects in the lungs. Repeated dose toxicity: inhalation (rat), 90 days, LOEL = 1 mg/m<sup>3</sup> based on reversible effects in the lungs and effects in the nasal cavity.

ASPIRATION HAZARD: ..... Not classified. Does not meet aspiration toxicity criteria.

OTHER HEALTH HAZARD INFORMATION: ..... While product does not meet the classification of a respiratory irritant, excessive inhalation exposure can irritate the respiratory tract. Temporary lung overload can cause coughing and shortness of breath.

**12. ECOLOGICAL INFORMATION**

ACUTE AQUATIC TOXICITY: ..... Not classified. Does not meet acute aquatic toxicity criteria.

Fish (brachydanio rerio) LC50 96h = >10,000 mg/L (OECD 203). No acute toxicity to daphnia with EL and EL<sub>50</sub> ranging from >1000 – 10,000 mg/L (OECD 202).

**CHRONIC AQUATIC TOXICITY:** ..... No specific test data available.

**PERSISTENCE AND BIODEGRADABILITY:** ..... Not applicable to inorganic substances.

**MOBILITY IN SOIL:** ..... No specific test data available for the mixture.

**ADDITIONAL ECOTOXICITY INFORMATION:** ..... Prevent release to the environment, sewers and natural waters.

Ingredient	CAS#	Ecotoxicity Classification Information
Synthetic amorphous pyrogenic silica	112945-52-5	Not classified.

**13. DISPOSAL CONSIDERATIONS**

**WASTE DISPOSAL METHOD:** ..... Evaluation of this product using RCRA criteria shows that it is not a hazardous waste, either by listing or characteristics, in its purchased form. It is the responsibility of the user to determine proper disposal methods.

Recycle (fuel blending) or reclaim may be preferred methods when conducted in accordance with federal, state and local regulations.

**14. TRANSPORTATION INFORMATION**

**US DOT**

UN NUMBER: ..... Not regulated.  
 SHIPPING NAME: ..... Not applicable.  
 TECHNICAL SHIPPING NAME: ..... Not applicable.  
 HAZARD CLASS: ..... Not applicable.  
 PACKING GROUP: ..... Not applicable.

**CANADA TDG**

UN NUMBER: ..... Not regulated.  
 SHIPPING NAME: ..... Not applicable.  
 TECHNICAL SHIPPING NAME: ..... Not applicable.  
 HAZARD CLASS: ..... Not applicable.  
 PACKING GROUP: ..... Not applicable.

**ICAO/IATA**

UN NUMBER: ..... Not regulated.  
 SHIPPING NAME: ..... Not applicable.  
 TECHNICAL SHIPPING NAME: ..... Not applicable.  
 HAZARD CLASS: ..... Not applicable.  
 PACKING GROUP: ..... Not applicable.  
 MARINE POLLUTANT: ..... Not applicable.

**IMDG**

UN NUMBER: ..... Not regulated.  
 SHIPPING NAME: ..... Not applicable.  
 TECHNICAL SHIPPING NAME: ..... Not applicable.  
 HAZARD CLASS: ..... Not applicable.  
 PACKING GROUP: ..... Not applicable.  
 EmS Number: ..... Not applicable.  
 MARINE POLLUTANT ..... Not applicable.

**15. REGULATORY INFORMATION**

COUNTRY	INVENTORY LIST	STATUS
United States	TSCA	All ingredients are listed or otherwise compliant.
Europe	EINECS or ELINCS	All ingredients are listed or otherwise compliant.
Canada	CEPA (DSL/NDSL)	All ingredients are listed or otherwise compliant.
Australia	AICS	All ingredients are listed or otherwise compliant.
Japan	ENCS	All ingredients are listed or otherwise compliant.
South Korea	KECI	All ingredients are listed or otherwise compliant.
China	IECSC	All ingredients are listed or otherwise compliant.
Philippines	PICCS	All ingredients are listed or otherwise compliant.
New Zealand	NZIoC	All ingredients are listed or otherwise compliant.

**US EPA SARA TITLE III Reporting and Notification Requirements:**

Subject to Section 302 (TPQ) ..... Not regulated.  
 Subject to Section 304 (RQ) ..... Not regulated.  
 Subject to Section 311 or 312 ..... Not regulated.  
 Subject to Section 313 ..... Not regulated.

**Canada WHMIS Confidential Business Information (CBI):**..... The HMIRA number issued for this CBI claim is #10271. The date of filing is 2016-08-08.

**STATE REGULATORY INFORMATION:**

Chemicals listed below may be specifically regulated by individual states. For details on state regulatory requirements you should contact the appropriate state agency.

**COMPONENT NAME**

**/CAS NUMBER**

Amorphous silica  
7631-86-9 or 112945-52-5

**STATE CODE**

PA, NJ, MA

**16. OTHER INFORMATION**

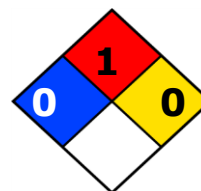
**REASON FOR ISSUE:**..... Update to Sections 3 and 15 to Canada WHMIS 2015 requirements.  
**PREPARED BY:**..... G. M. House  
**APPROVED BY:**..... G. M. House  
**SDS CONTACT:**..... safety@gougeon.com  
**TITLE:**..... Health, Safety & Environmental Manager  
**APPROVAL DATE:**..... August 16, 2016  
**SUPERSEDES DATE:**..... June 1, 2015  
**SDS VERSION:**..... 406-2016a

**OTHER HAZARD INFORMATION AND RATING SYSTEMS:**

**HMIS® RATING**

<b>HEALTH:</b>	<b>0</b>
<b>FLAMMABILITY:</b>	<b>1</b>
<b>PHYSICAL HAZARD:</b>	<b>0</b>
<b>PERSONAL PROTECTION:</b>	

**NFPA® 704 CODES**



*Approximate HMIS and NFPA Risk Ratings Legend:*  
 0 = Low or None; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe

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