

# MATERIAL SAFETY DATA SHEET

## West System Inc.

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ..... WEST SYSTEM® 420™ Aluminum Powder.  
PRODUCT CODE: ..... 420  
CHEMICAL FAMILY: ..... Metal.  
CHEMICAL NAME: ..... Aluminum.  
FORMULA: ..... Al

MANUFACTURER:  
West System Inc.  
102 Patterson Ave.  
Bay City, MI 48706, U.S.A.  
Phone: 866-937-8797 or 989-684-7286  
www.westsystem.com

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

### 2. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

HMIS Hazard Rating:    Health - 1                      Flammability - 2                      Physical Hazards - 3

Explosive once suspended in a dust cloud. Dangerous when wet. Reacts violently with halogenated hydrocarbons and with oxidizers to produce heat. Nuisance dust. Possible skin and eye irritant. Silver, gray powder-no odor.

PRIMARY ROUTE(S) OF ENTRY: ..... Inhalation, skin contact.

#### POTENTIAL HEALTH EFFECTS:

ACUTE INHALATION: ..... High concentrations can cause irritation.

CHRONIC INHALATION: ..... Long term exposure can have an adverse effect on lungs.

ACUTE SKIN CONTACT: ..... Repeated contact can cause irritation.

CHRONIC SKIN CONTACT: ..... Repeated contact can cause irritation.

EYE CONTACT: ..... Can cause abrasion and irritation.

INGESTION: ..... Repeated or large dose exposure can result in adverse health effects.  
Ingestion not anticipated under normal use conditions.

SYMPTOMS OF OVEREXPOSURE: ..... Skin irritation. Possible lung irritation.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: ..... Existing skin and lung conditions.

### 3. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

| <u>INGREDIENT NAME</u> | <u>CAS#</u> | <u>CONCENTRATION</u> |
|------------------------|-------------|----------------------|
| Aluminum               | 7429-90-5   | 99.7%                |

### 4. FIRST AID MEASURES

FIRST AID FOR EYES ..... Immediately flush with water as necessary to remove material. Consult physician.

FIRST AID FOR SKIN ..... Remove contaminated clothing. Wash affected area with soap and water.

FIRST AID FOR INHALATION ..... Remove to fresh air.

FIRST AID FOR INGESTION ..... Seek medical advice.

### 5. FIRE FIGHTING MEASURES

**FLASH POINT:**..... None. Lower Explosive Limit (LEL) 40 mg/L. Airborne dust can be readily ignited by static discharge.

**EXTINGUISHING MEDIA:**..... Class D dry chemical extinguishing agent or similar extinguishing material such as dry sand or clay. Do not use class A, B or C extinguishers or halogenated agents. Do not use water.

**SPECIAL FIRE FIGHTING PROCEDURES:**..... Wear a self-contained breathing apparatus and full-body protective gear. Gently sprinkle the extinguishing agent so that it covers the burning/smoldering powder. Do not disturb the burning powder until it has had a chance to cool to ambient temperature. Material will react with water and generate flammable hydrogen gas.

## 6. ACCIDENTAL RELEASE MEASURES

**SPILL OR LEAK PROCEDURES:**..... Remove potential ignition sources. Use non-sparking equipment (plastic scoop shovel) to transfer spilled material to container. Avoid action that would generate airborne material. If a vacuum cleaner is used, only use vacuum cleaners that are properly grounded and approved for Class II, Group E locations. Standard commercial industrial vacuum cleaners should not be used.

## 7. HANDLING AND STORAGE

**STORAGE TEMPERATURE (MIN./MAX):**..... 32°F (0°C) / 95°F (35°C)

**STORAGE:**..... Store in cool, dry area.

**HANDLING PRECAUTIONS:**..... Use non-sparking equipment when handling, including motors, lights, etc. Keep completely dry. Avoid events that generate airborne material, such as using compressed air to clean work area. Ensure the availability of a Class D extinguishing agent. Use properly grounded equipment when moving material. Wear gloves.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**EYE PROTECTION GUIDELINES:**..... Safety glasses with side shields or goggles, depending on the potential for exposure to airborne material.

**SKIN PROTECTION GUIDELINES:**..... Use Neoprene or Nitrile impervious glove and other body-covering clothing to prevent prolonged or repeated skin contact.

**RESPIRATORY/VENTILATION GUIDELINES:**..... If necessary, use explosion-proof ventilation, with minimum face velocity of 60 fpm. Use NIOSH/MSHA approved respirator for dust/nuisance particulate or a HEPA cartridge.

**ADDITIONAL PROTECTIVE MEASURES:**..... Generally speaking, working cleanly and following basic precautionary measures will greatly minimize the potential for harmful exposure to this product under normal use conditions.

**OCCUPATIONAL EXPOSURE LIMITS:**..... This product should be treated as a nuisance dust. Refer to OSHA's Permissible Exposure Level (PEL) or the ACGIH Guidelines for information on specific ingredients.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL FORM**..... Powder.  
**COLOR**..... Dull gray to metallic silver.  
**ODOR**..... No odor.  
**BOILING POINT**..... 2467°C.  
**MELTING POINT/FREEZE POINT**..... 660°C.  
**pH**..... Not applicable.  
**SOLUBILITY IN WATER**..... Insoluble.  
**SPECIFIC GRAVITY**..... 2.7  
**APPARENT DENSITY**..... 0.8 – 1.2 g/cm<sup>3</sup>.  
**VAPOR PRESSURE**..... Not volatile.  
**VAPOR DENSITY**..... Not volatile.  
**% VOLATILE BY WEIGHT**..... 0.0%

## 10. STABILITY AND REACTIVITY

**STABILITY:**..... Stable under normal conditions of use.

**HAZARDOUS POLYMERIZATION:**..... Will not occur.

**INCOMPATIBILITIES:**..... Strong oxidizing agents, water, mineral acids, alkalis and halogenated compounds.

**DECOMPOSITION PRODUCTS:**..... Aluminum powder reacts with water, acids or alkalis to form highly flammable hydrogen gas and aluminum oxide.

**11. TOXICOLOGICAL INFORMATION**

No specific toxicological information available. Repeated or prolonged exposure through inhalation, skin absorption or ingestion can result in adverse health effects. Incidental short-term exposure not expected to result in adverse effects. Generally speaking, working cleanly and following basic precautionary measures will greatly minimize the potential for harmful exposure to this product under normal use conditions.

**CARCINOGENICITY:**

NTP..... No.  
IARC..... No.  
OSHA..... No.

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA, NTP or IARC.

**12. ECOLOGICAL INFORMATION**

This product may cause adverse environmental effects. Prevent this product from entering stormwater, waterways, or otherwise impacting plant and animal species.

**13. DISPOSAL CONSIDERATIONS**

**WASTE DISPOSAL METHOD:**..... Evaluation of this product using RCRA criteria shows that this material is not a hazardous waste when in its purchased form. It is the responsibility of the user to determine proper disposal methods at the time of disposal.

Burial in a landfill may be a preferred method when conducted in accordance with federal, state and local regulations. Consult state and local solid waste authorities for guidance.

**14. TRANSPORTATION INFORMATION****DOT**

D.O.T. SHIPPING NAME:..... Not regulated.  
TECHNICAL SHIPPING NAME:..... Not applicable.  
D.O.T. HAZARD CLASS:..... Not applicable.  
U.N./N.A. NUMBER:..... Not applicable.  
PACKING GROUP:..... Not applicable.

**IATA**

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

**15. REGULATORY INFORMATION**

**OSHA STATUS:**..... Possible irritant.

**TSCA STATUS:**..... Ingredients are listed on TSCA Inventory or otherwise comply with TSCA requirements.

**SARA TITLE III:**

**SECTION 313 TOXIC CHEMICALS**..... This product contains **aluminum powder** and is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

**Canada WHIMIS Classification:**..... D2B

**STATE REGULATORY INFORMATION:**

The following chemicals are specifically listed or otherwise regulated by individual states. For details on your regulatory requirements you should contact the appropriate agency in your state.

**COMPONENT NAME****/CAS NUMBER****CONCENTRATION****STATE CODE**

Aluminum  
7429-90-5

100%

PA, NJ, RI, MA

**16. OTHER INFORMATION**

**REASON FOR ISSUE:**..... Changes made in Sections 5, 10, 11, 14 & 15.

**PREPARED BY:**..... G. M. House

**APPROVED BY:**..... G. M. House

**TITLE:**..... Health, Safety & Environmental Manager

**APPROVAL DATE:** ..... February 6, 2011  
**SUPERSEDES DATE:** ..... January 3, 2008  
**MSDS NUMBER:** ..... 420-11a

Note: The Hazardous Material Indexing System (HMIS), cited in the Emergency Overview of Section 3, uses the following index to assess hazard rating: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; and 4 = Severe.

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