

WEST SYSTEM® 420 Aluminum Powder

Safety Data Sheet

According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Date of issue: 08/29/2016

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Version: 420-2016b

SECTION 1: Identification

Identification

Product form : Substance
Substance name : WEST SYSTEM® 420 Aluminum Powder
Product code : 420, 420-36

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

Recommended use : Pigment additive for liquid epoxy resins.

Details of the supplier of the safety data sheet

Manufacturer

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

Emergency telephone number

Emergency number : CHEMTREC 1 (800) 424-9300
CHEMTREC International +1 (703) 527-3887 24 hr

SECTION 2: Hazard(s) identification

Classification of the substance or mixture

Comb. Dust

Label elements

Hazard pictograms (GHS) :

Signal word (GHS) :

Warning

Hazard statements (GHS) :

May form combustible dust concentrations in air

Precautionary statements (GHS) :

Keep away from all ignition sources including heat, sparks and open flame. Prevent dust accumulations to minimize explosion hazard.

Other hazards

No additional information available

Unknown acute toxicity

Not applicable

SECTION 3: Composition/information on ingredients

Substance

Name	Product identifier	%
Aluminum	(CAS No) 7429-90-5	98 - 100

The exact chemical identity and/or exact percentage (concentration) of each ingredient may be held as confidential business information (CBI). Any ingredient not disclosed in this section may have been determined not to be hazardous to health or the environment, or it may be present at a level below its disclosure threshold. Refer to Section 15 for additional information regarding this CBI claim.

Mixtures

Not applicable

SECTION 4: First aid measures

Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

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- First-aid measures after skin contact** : If irritation occurs, flush skin with plenty of water. Get medical attention if irritation persists.
- First-aid measures after eye contact** : In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.
- First-aid measures after ingestion** : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation** : May cause respiratory tract irritation.
- Symptoms/injuries after skin contact** : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
- Symptoms/injuries after eye contact** : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
- Symptoms/injuries after ingestion** : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry sand, sodium chloride powder, graphite powder or Met-L-X powder.
- Unsuitable extinguishing media** : Do not use water, foam, carbon dioxide.

Special hazards arising from the substance or mixture

- Fire hazard** : Combustible dust. Products of combustion may include, and are not limited to: oxides of carbon.
- Explosion hazard** : Avoid generating dust. Airborne dust in sufficient concentrations when confined and exposed to a sufficient ignition source can explode.
- Reactivity** : No dangerous reaction known under conditions of normal use.

Advice for firefighters

- Protection during firefighting** : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Use water spray or fog for cooling exposed containers.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

- General measures** : Remove all sources of ignition. Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (ie, clearing dust surfaces with compressed air). Use only non-sparking tools.

For non-emergency personnel

No additional information available

For emergency responders

No additional information available

Environmental precautions

No additional information available

Methods and material for containment and cleaning up

- For containment** : Contain spill, then place in a suitable container. Minimize dust generation. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
- Methods for cleaning up** : Vacuum or sweep material and place in a disposal container. Provide ventilation.

Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

Precautions for safe handling

- Precautions for safe handling** : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid contact with skin and eyes. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Avoid generating and breathing dust. Good housekeeping is important to prevent accumulation of dust. The use of compressed air for cleaning clothing, equipment, etc, is not recommended. Use only in well-ventilated areas. Handling this product may result in electrostatic accumulation. Use proper grounding procedures.

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- Hygiene measures** : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.
- Conditions for safe storage, including any incompatibilities**
- Storage conditions** : Keep out of the reach of children. Keep container tightly closed. Store in dust-tight, dry, labelled containers. Avoid any dust buildup by frequent cleaning and suitable construction of the storage area. Keep away from sources of ignition. Store in well ventilated area. Storage temperature: 0°F (-17°C) / 95°F (35°C).

SECTION 8: Exposure controls/personal protection

Control parameters

Aluminum (7429-90-5)		
ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³ (respirable particulate matter)
OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ (total dust) 5 mg/m ³ (respirable fraction)
NIOSH	NIOSH REL (TWA) (mg/m ³)	10 mg/m ³ (total dust) 5 mg/m ³ (respirable dust)

Exposure controls

- Appropriate engineering controls** : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e. there is not leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.
- Hand protection** : Wear suitable gloves.
- Eye protection** : Safety glasses or goggles are recommended when using product.
- Skin and body protection** : Wear suitable protective clothing.
- Respiratory protection** : In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Environmental exposure controls** : Maintain levels below Community environmental protection thresholds.
- Other information** : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

- Physical state** : Solid
- Appearance** : Powder
- Colour** : Silver
- Odour** : Odourless
- Odour threshold** : No data available
- pH** : No data available
- Melting point** : No data available
- Freezing point** : No data available
- Boiling point** : 4220.6 °F (2327 °C) estimated
- Flash point** : No data available
- Relative evaporation rate (butylacetate=1)** : No data available
- Flammability (solid, gas)** : Combustible Dust
- Vapour pressure** : No data available
- Relative vapour density at 20 °C** : No data available
- Relative density** : 2.5 - 2.7
- Solubility** : Insoluble
- Partition coefficient n-octanol/water** : No data available
- Auto-ignition temperature** : 1094 °F (590 °C)
- Decomposition temperature** : No data available

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Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: Dust may form explosive mixture in air.
Oxidising properties	: No data available
Other information	
Minimum ignition energy	: 50 mJ
Bulk density	: 20.86 - 22.53 lb/gal calculated
Dust Deflagration Index (Kst)	: 300 - 400 bar.m/s
Maximum Explosion Pressure (Pmax)	: 12.4 bar

SECTION 10: Stability and reactivity

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal storage conditions. May form combustible dust concentrations in air.
Possibility of hazardous reactions	: On contact with water may emit flammable hydrogen gas.
Conditions to avoid	: Heat. Incompatible materials. Sources of ignition. Avoid dust formation. Moisture.
Incompatible materials	: Strong oxidizing agents. Nitrates. Water. Acids.
Hazardous decomposition products	: May include, and are not limited to: oxides of carbon.

SECTION 11: Toxicological information

Information on toxicological effects

Aluminum (7429-90-5)	
LD50 oral rat	> 2000 mg/kg
LC50 inhalation rat	< 888 mg/l/4h

Acute toxicity (oral)	: Not classified.
Acute toxicity (dermal)	: Not classified.
Acute toxicity (inhalation)	: Not classified.
Skin corrosion/irritation	: Not classified.
Serious eye damage/irritation	: Not classified.
Respiratory or skin sensitization	: Not classified.
Germ cell mutagenicity	: Not classified.
Carcinogenicity	: Not classified.
Reproductive toxicity	: Not classified.
STOT-single exposure	: Not classified.
STOT-repeated exposure	: Not classified.
Aspiration hazard	: Not classified.
Symptoms/injuries after inhalation	: May cause respiratory tract irritation.
Symptoms/injuries after skin contact	: May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Symptoms/injuries after eye contact	: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/injuries after ingestion	: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.
Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

Toxicity	
Ecology - general	: May cause long-term adverse effects in the aquatic environment.

Persistence and degradability

WEST SYSTEM® 420 Aluminum Powder	
Persistence and degradability	Not established.

Bioaccumulative potential

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Bioaccumulative potential	Not established.

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Mobility in soil

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Ecology - soil	Not established.

Other adverse effects

Effect on the global warming : No known effects from this product.

Other information : Avoid release to the environment.

Name	Product identifier	Ecotoxicity Classification Information
Aluminum	(CAS No) 7429-90-5	No data available

SECTION 13: Disposal considerations

Waste treatment methods

Product/Packaging disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

SECTION 14: Transport information

Department of Transportation (DOT) and Transportation of Dangerous Goods (TDG)

In accordance with DOT and TDG

Not regulated

Transport by sea

In accordance with IMDG

Not regulated

Transport by air

In accordance with IATA

Not regulated

SECTION 15: Regulatory information

Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

Aluminum (7429-90-5)	
Subject to reporting requirements of United States SARA Section 313	
SARA Section 313 - Emission Reporting	1 % (dust or fume only)

Canada WHMIS Confidential Business Information (CBI): No data available

International regulations

No additional information available

US State regulations

California Proposition 65 - This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm

Aluminum (7429-90-5)
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

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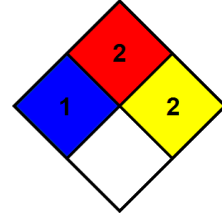
According to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Other information : Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

NFPA health hazard : 1

NFPA fire hazard : 2

NFPA reactivity : 2



HMIS III Rating

Health : 1

Flammability : 2

Physical : 2

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