

P.O. Box 4980
The Woodlands, TX 77387-4980

8 am to 5 pm Phone: (800) 257-5547
24-Hour Emergency Phone: (800) 328-8501
International Emergency Phone: (409) 727-0831
Asia Pacific Emergency Phone: (65) 6336-6011

Effective Date: 7/21/10

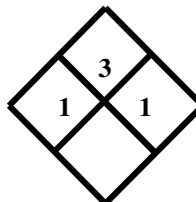
Material Safety Data Sheet

MSDS No: 6079

1. PRODUCT IDENTIFICATION

Trade Name: RP 34 US

Chemical Family: Aluminum



NFPA RATING

Health:	1
Flammability:	1
Reactivity:	1
Personal Protection:	

HMIS RATING

Intended Use or Product Type: Aluminum powder

2. COMPOSITION / INFORMATION ON INGREDIENTS

O S H A	CAS No.	CHEMICAL IDENTITY	EXPOSURE LIMITS				CARCINOGEN STATUS			
			ACGIH		OSHA		MFR.	IARC	NTP	OSHA
			TWA	STEL	PEL	STEL				
*	7429-90-5	Aluminum	2 mg/m3	NE	5 mg/m3	NE	NE	NR	NR	NR
	Concentration	95.00 - 100.00 % by wt								

NE = Not Established NR = Not Reviewed * = OSHA Hazardous Ingredient

3. HAZARDS IDENTIFICATION

Emergency Overview: Aluminum dust is potentially explosive when dispersed with air. Avoid formation of dust.

Primary Route(s) of Entry: Dermal or inhalation

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Skin: Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes. Seek immediate medical attention.

Inhalation: Remove to fresh air. Seek immediate medical attention.

Eyes: Immediately flush eyes with water for at least 15 minutes. Seek immediate medical attention.



Effective Date: 7/21/10

Overexposure Effects: Aluminum is practically inert with little degree of toxicity.

Medical Conditions Aggravated by Exposure: Skin and eye conditions.

Additional Information: Referral to a physician is recommended if there is any question about the seriousness of any injury.

5. FIRE FIGHTING MEASURES

Flash Point:	Not Applicable
Flammable Limits in Air (Lower - % by volume):	Not established
Flammable Limits in Air (Upper - % by volume):	Not established

General Hazards: Do not use water. Water and burning finely divided aluminum will react violently.

Fire Fighting Extinguishing Media: Use a class "D" fire extinguisher or inert media such as dry sand. Do not use class "A", "B", "C" or halogenated extinguishers. Do not use water.

Fire Fighting Instructions: Gently cover any burning powder with listed extinguishing agents. Surround powder with more extinguishing agent but do NOT mix into the powder. Allow mound to cool to ambient temperature before disturbing.

Fire Fighting Equipment: Use self-contained breathing apparatus.

Fire and Explosion Hazards: Do not allow a dust cloud to form, aluminum dust is potentially explosive when dispersed in air.

6. ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Sweep up into approved disposal container. Thoroughly vacuum area. Do not create dusty condition.

7. HANDLING AND STORAGE

Signal Word: Caution!

Precautions: Dust hazard. Avoid dusty conditions. Avoid breathing dust. Use with adequate ventilation. Use normal industrial hygiene practices. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

Other Handling Information: Nuisance dust may be generated when sanding or sawing cured material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Skin Protection: Wear canvas gloves as a standard handling procedure.

Respiratory Protection: Use NIOSH approved dust mask, if required during machining.

Eye Protection: Wear safety glasses to protect against dust particles during machining.

Engineering Controls: General mechanical and local exhaust in accordance with ACGIH recommendations.

Effective Date: 7/21/10

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Gray
Odor:	No Discernable Odor
Physical State:	Fine Powder
Solubility in Water:	Insoluble
Specific Gravity:	1 (water = 1)
Boiling Point:	Not Determined
Evaporation Rate:	Not Determined
Bulk Density:	22.5 lbs./gallon
Vapor Density:	Not Applicable
VOC:	0 %
pH:	Not Applicable
Coefficient of water/oil:	Not Evaluated

10. STABILITY AND REACTIVITY**Conditions to Avoid:** Open flames or sparks.**Stability:** Stable.**Incompatibility:** Water, acids, alkalies and oxidizing agents**Hazardous Decomposition Products:** Hydrogen - generated by reaction with acids, bases or water**Hazardous Polymerization:** Will not occur.**11. TOXICOLOGICAL INFORMATION****Eye Irritation:** Nuisance dust may cause irritation.**12. ECOLOGICAL INFORMATION****13. DISPOSAL CONSIDERATIONS****Waste Disposal Method:** Consult qualified local or corporate personnel for method that will comply with local, state and federal health and environmental regulations.**14. TRANSPORT INFORMATION**

DOT: Non-Bulk	
Proper Shipping Name:	Not Regulated
IATA: Non-Bulk	
Proper Shipping Name:	Not Regulated
IMDG: Non-Bulk	
Proper Shipping Name:	Not Regulated
TDG: Non-Bulk	
Proper Shipping Name:	Not Regulated

Printed: 8/24/2010

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Effective Date: 7/21/10

Department of Transportation: Material tested. Not regulated as a hazardous material by the U.S. Dept. of Transportation (DOT) 49 CFR 172.101 hazardous materials table.

15. REGULATORY INFORMATION

US Federal Regulations:

Occupational Safety and Health Act (OSHA): This Material Safety Data Sheet (MSDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.

Resource Conservation and Recovery Act (RCRA): Not a hazardous waste under RCRA (40 CFR 261).

SARA Title III: Section 304 - CERCLA: This product does not contain any chemicals regulated under Section 304 (40 CFR 302) as hazardous chemicals for emergency release notification ("CERCLA" List).

SARA Title III: Section 313 Toxic Chemical List (TCL): This product contains a toxic chemical(s) for routine annual toxic chemical release reporting under section 313 (40 CFR 372). This information must be included in all MSDS's copied or distributed for this material.

Chemical Name: Aluminum

Percent in Composition: 95 - 100 % by wt

Comment:

TSCA Section 8(b) - Inventory Status: Chemical components listed on TSCA Inventory.

TSCA Section 12(b) - Export Notification: This product does not contain any chemical(s) that are subject to a Section 12(b) export notification.

International Regulations:

Australian Inventory Status: This product contains only chemicals which are currently listed on the Australian Inventory of Chemical Substances.

Canadian Inventory Status: This product contains only chemicals that are currently listed on the Canadian Domestic Substance List.

Canadian WHMIS: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. B6

European Inventory Status (EINECS): This product contains only chemicals that are currently listed on the European Inventory of Existing Commercial Chemical Substances (EINECS).

Japanese Inventory Status: This product contains only chemicals currently listed on the Japanese Ministry of International Trade and Industry List of Existing and New Chemical Substances.

State Regulations:

Pennsylvania Right-to-Know: The following is required composition information:

Effective Date: 7/21/10

Chemical Name: Aluminum
CAS Number: 7429-90-5
Comment: Environmental Hazardous Substance

16. OTHER INFORMATION

MSDS No: 6079
Reason Issued: 7/10 update
Approved By: Matt Austin
Title: EHS Chemist

Other Information: ELW (E10020030) [E01]

Disclaimer: The information and recommendations contained herein are based upon tests in controlled laboratory conditions, are believed to be correct, and are provided for the sole purpose of hazard communication as part of Huntsman's product safety program. This product has not been tested for, and therefore is not recommended or suitable for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended or likely, or for uses for which implantation within the human body is intended, and Huntsman assumes no liability for any such uses.

The information and recommendations contained herein are not intended to constitute performance information concerning the product, which is available in separate technical data sheets available from Huntsman upon request. Users are urged, and are urged to urge others who may come in contact with the product, to obtain and consult data sheets prior to purchase, use, transportation or storage of the product.

HUNTSMAN MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY, QUALITY, OR FITNESS FOR A PARTICULAR PURPOSE. HUNTSMAN'S LIABILITY IS STRICTLY LIMITED TO REIMBURSEMENT OF BUYER'S PURCHASE PRICE, OR IN HUNTSMAN'S DISCRETION REPLACEMENT, OF THE PRODUCT IN RESPECT OF WHICH SUCH CLAIM IS MADE. HUNTSMAN'S LIABILITY IS STRICTLY LIMITED BY LEGAL NOTICES IN TECHNICAL DATA SHEETS, PRODUCT LITERATURE, AND/OR SALE DOCUMENTS. The foregoing DISCLAIMERS and LIMITATION OF LIABILITY supercede inconsistent or contradictory provisions in Buyer's documents.

USER SHOULD CONSULT A LEGAL ADVISOR OR THE APPROPRIATE GOVERNMENTAL AGENCY TO DETERMINE THE APPLICABILITY OR EFFECT OF ANY LAW OR REGULATION WITH RESPECT TO THE PRODUCT. HUNTSMAN DOES NOT UNDERTAKE TO FURNISH ADVICE ON SUCH MATTERS.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.

SECTION 1 - MANUFACTURER INFORMATION

MANUF/DIST : GLOB-AL CORPORATION
1437 WESTERN AVE. EMERGENCY PHONE.....: 574-936-2146
P.O. BOX 299 PREPARATION/REVISION DATE: 08/02/10
PLYMOUTH, IN 46563
PREPARER/CONTACT: JAMES M. FAULSTICH

LOCATION : PLYMOUTH

TRADE NAME/SYNONYMS...: ALMEG XX
CHEMICAL NAME/SYNONYMS: ALUMINUM GRANULES
CHEMICAL FAMILY.....: Al
FORMULA.....: BLENDED
PRODUCT CODE.....: FREE192

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

* HEALTH..... 1 *
* FLAMMABILITY.. 0 *
* REACTIVITY.... 1 *
* PROTECTION.... - *
*

SECTION 2 - HAZARDOUS INGREDIENTS

THIS PRODUCT CONTAINS HAZARDOUS INGREDIENTS : YES

CHEMICAL/COMMON NAME	CAS-NUMBER	%	PEL-OSHA	TLV-ACGIH
ALUMINUM Product Under Some Circumstances May Produce ALUMINUM FUMES	7429-90-5	>92		
COPPER (FUME)	7440-50-8	<3.0	.1mg/m3	.2mg/m3
MAGNESIUM	1309-48-4	<2.0	15mg/m3	10mg/m3
ZINC (FUME)	1314-13-2	<7.0	5mg/m3	5mg/m3

The above toxic chemicals are subject to the reporting requirements of section 313 of the Emergency Planning & Community Right-To-Know Act of 1986 (40 CFR 372).

THIS PRODUCT CONTAINS CARCINOGENS (NTP, IARC, or OSHA):NOT APPLICABLE

CHEMICAL/COMMON NAME	CAS-NUMBER	%	NTP	IARC	OSHA
N/A	N/A				

SECTION 3 - HEALTH HAZARD DATA

HEALTH EFFECTS (Acute And Chronic)-

High exposure to aluminum fumes may produce irritation of eyes and respiratory system.

PRIMARY ROUTES OF ENTRY-

Respiratory-inhalation of fume.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE-

Asthma and other respiratory conditions.

EMERGENCY FIRST AID PROCEDURES-

Remove from exposure, flush with water to remove particles from eyes if applicable.

SECTION 4 - CHEMICAL DATA

BOILING POINT (F)....: 4220

VAPOR PRESSURE (mmHg): N/A

VAPOR DENSITY (AIR=1): N/A

SPECIFIC GRAVITY (WATER=1).....: 2.70

PERCENT VOLATILE BY VOLUME (%).....: N/A

EVAPORATION RATE (Will not vaporize =1): N/A

SOLUBILITY IN WATER-

N/A

APPEARANCE AND ODOR INFORMATION-

Light grey metal, granules. No odor.

SECTION 5 - PHYSICAL HAZARD DATA

FLASH POINT (Method Used): N/A

FLAMMABLE LIMITS : Lel=N/A UEL=N/A

EXTINGUISHING MEDIA-

Contain fires with dry sand. Ring fire with sand using nonsparking implements. Allow fire to consume itself. Do not use water. Do not use halogenated extinguishing agents.

SPECIAL FIRE FIGHTING PROCEDURES-

See above

UNUSUAL FIRE AND EXPLOSION HAZARDS-

N/A

INCOMPATIBILITY (Materials To Avoid)-

Water (Heat generation including ignition may occur if product is damp or exposed to water.), Mineral Acids, Harsh Alkalis, and Halogenated Compounds.

HAZARDOUS DECOMPOSITION PRODUCTS-

Metal oxides, hydrogen



WILL HAZARDOUS POLYMERIZATION OCCUR-
Will not occur.

CONDITIONS TO AVOID FOR POLYMERIZATION-
N/A

IS THE PRODUCT STABLE-
Yes

CONDITIONS TO AVOID FOR STABILITY-
Improper storage which would allow introduction of water and/or foreign matter.

SECTION 6 - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED-
Clean by scooping and mild brushing. Cleaning should be done with a soft brush and pickup should be with nonspark conductive scoops. Never employ water.

WASTE DISPOSAL METHODS-
Dispose of in accordance with local, state, and federal regulations. Scrap aluminum can often be reclaimed and recycled. Contact Glob-Al Corporation.

SECTION 7 - EXPOSURE CONTROL INFORMATION

VENTILATION-
LOCAL EXHAUST: When needed
SPECIAL.....: Approved masks
MECHANICAL (General): N/A
OTHER.....: N/A

RESPIRATORY PROTECTION-
Wear MSHA/NIOSH approved air purifying respiratory equipment if fumes are encountered.

PROTECTIVE GLOVES-
Not required.

OTHER PROTECTIVE EQUIPMENT-
Safety glasses with side shields. Safety eyewash station in close proximity to work areas is recommended.

OTHER ENGINEERING CONTROLS-
N/A

WORK PRACTICES-
N/A

HYGIENIC PRACTICES-
Do not inhale or take internally.



SECTION 8 - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE-

Remove from sources of ignition, protect against water, separate from the storage of carbon tetrachloride, carbon disulfide, halogens, acids, and combustible materials. In packaged or containerized form product is stable.

MAINTENANCE PRECAUTIONS-

Use of nonsparking, nonstatic implements is recommended.

OTHER PRECAUTIONS-

Do not take internally.

ADDITIONAL COMMENTS-

All statements, technical information and recommendations contained herein are based on tests and data which this company believes to be currently reliable, but the accuracy or completeness thereof is not guaranteed and no warranty of any kind is made with respect thereto. This information is not intended as a license to operate under or a recommendation to practice or infringe any patent covering any process, composition of matter or use. Since the company shall have no control of the use of the product described herein, the company assumes no liability for loss or damage incurred from the proper or improper use of such product.

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24-Hour Emergency Phone: (800) 328-8501
International Emergency Phone: (409) 727-0831
Asia Pacific Emergency Phone: (65) 6336-6011

Effective Date: 7/23/08

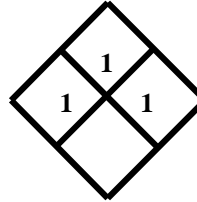
Material Safety Data Sheet

MSDS No: 6732

1. PRODUCT IDENTIFICATION

Trade Name: RP 39 Aluminum Grain

Chemical Family: Aluminum Metal



NFPA RATING

Health:	1
Flammability:	1
Reactivity:	1
Personal Protection:	

HMS RATING

Intended Use or Product Type: Aluminum grain

2. COMPOSITION / INFORMATION ON INGREDIENTS

O S H A	CAS No.	CHEMICAL IDENTITY	EXPOSURE LIMITS				CARCINOGEN STATUS			
			ACGIH		OSHA		MFR.	IARC	NTP	OSHA
			TWA	STEL	PEL	STEL				
*	7429-90-5	Aluminum	2 mg/m3	NE	5 mg/m3	NE	NE	NR	NR	NR
	Concentration	60.00 - 100.00 % by wt								

NE = Not Established NR = Not Reviewed * = OSHA Hazardous Ingredient

3. HAZARDS IDENTIFICATION

Emergency Overview: In accord with good industrial practice, handle with due care. Dust hazard. Avoid dusty conditions. Avoid breathing dust. Use with adequate ventilation.

Primary Route(s) of Entry: Dermal or inhalation

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Skin: Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes. Seek immediate medical attention.

Inhalation: Remove to fresh air. Seek immediate medical attention.

Eyes: Immediately flush eyes with water for at least 15 minutes. Seek immediate medical attention.

Effective Date: 7/23/08

Overexposure Effects: Aluminum is practically inert with little degree of toxicity.

Medical Conditions Aggravated by Exposure: Skin and eye conditions.

Additional Information: Referral to a physician is recommended if there is any question about the seriousness of any injury.

5. FIRE FIGHTING MEASURES

Flash Point:	Not Applicable
Flammable Limits in Air (Lower - % by volume):	Not established
Flammable Limits in Air (Upper - % by volume):	Not established

Fire Fighting Extinguishing Media: Carbon dioxide, dry chemical, foam.

Fire Fighting Equipment: Use self-contained breathing apparatus.

Fire and Explosion Hazards: Aluminum dust can be ignited by static discharge.

6. ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Sweep up into approved disposal container. Thoroughly vacuum area. Do not create dusty condition.

7. HANDLING AND STORAGE

Signal Word: Caution!

Precautions: Dust hazard. Avoid dusty conditions. Avoid breathing dust. Use with adequate ventilation. Use normal industrial hygiene practices. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

Other Handling Information: Nuisance dust may be generated when sanding or sawing cured material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Skin Protection: Wear canvas gloves as a standard handling procedure.

Respiratory Protection: Use NIOSH approved dust mask, if required during machining.

Eye Protection: Wear safety glasses to protect against dust particles during machining.

Engineering Controls: General mechanical and local exhaust in accordance with ACGIH recommendations.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Grey
Odor:	No Odor
Physical State:	Grain

Printed: 7/23/2008

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Effective Date: 7/23/08

Solubility in Water:	Insoluble
Vapor Pressure:	Not Determined
Specific Gravity:	Not Determined
Boiling Point:	Not Determined
Melting Point:	Not Determined
Evaporation Rate:	Not Determined
Density:	Not Determined
Vapor Density:	Not Determined
pH:	Not Determined
Coefficient of water/oil:	Not Determined

Percent Volatile: 0%

10. STABILITY AND REACTIVITY

Conditions to Avoid: Contact with water, acids or foreign materials.

Stability: Stable.

Incompatibility: Water, acids, alkalies and oxidizing agents

Hazardous Decomposition Products: Hydrogen - generated by reaction with acids, bases or water

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Eye Irritation: Nuisance dust may cause irritation.

12. ECOLOGICAL INFORMATION

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Consult qualified local or corporate personnel for method that will comply with local, state and federal health and environmental regulations.

14. TRANSPORT INFORMATION

DOT: Non-Bulk

Proper Shipping Name: Not Regulated

IATA: Non-Bulk

Proper Shipping Name: Not Regulated

IMDG: Non-Bulk

Proper Shipping Name: Not Regulated

TDG: Non-Bulk

Proper Shipping Name: Not Regulated

Effective Date: 7/23/08

15. REGULATORY INFORMATION**US Federal Regulations:**

Occupational Safety and Health Act (OSHA): This Material Safety Data Sheet (MSDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.

Resource Conservation and Recovery Act (RCRA): Not a hazardous waste under RCRA (40 CFR 261).

SARA Title III: Section 313 Toxic Chemical List (TCL): This product contains a toxic chemical(s) for routine annual toxic chemical release reporting under section 313 (40 CFR 372). This information must be included in all MSDS's copied or distributed for this material.

Chemical Name: Aluminum

Percent in Composition: 60 - 100 % by wt

Comment:

TSCA Section 8(b) - Inventory Status: All chemical components of this product are in compliance with TSCA inventory requirements.

TSCA Section 12(b) - Export Notification: This product does not contain any chemical(s) that are subject to a Section 12(b) export notification.

International Regulations:

Canadian Inventory Status: This product contains only chemicals that are currently listed on the Canadian Domestic Substance List.

Canadian WHMIS: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. Not WHMIS controlled.

State Regulations:

California Proposition 65: This product does not contain any chemicals currently on the California list of Known Carcinogens and Reproductive Toxins.

Pennsylvania Right-to-Know: The following is required composition information:

Chemical Name: Aluminum

CAS Number: 7429-90-5

Comment: Environmental Hazardous Substance

16. OTHER INFORMATION

MSDS No:

6732

Approved By:

Dianne Blessing

Title:

EHS Specialist

Disclaimer: The information and recommendations contained herein are based upon tests in controlled laboratory conditions, are believed to be correct, and are provided for the sole purpose of hazard communication as part of Huntsman's product safety

Effective Date: 7/23/08

program. This product has not been tested for, and therefore is not recommended or suitable for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended or likely, or for uses for which implantation within the human body is intended, and Huntsman assumes no liability for any such uses.

The information and recommendations contained herein are not intended to constitute performance information concerning the product, which is available in separate technical data sheets available from Huntsman upon request. Users are urged, and are urged to urge others who may come in contact with the product, to obtain and consult data sheets prior to purchase, use, transportation or storage of the product.

HUNTSMAN MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY, QUALITY, OR FITNESS FOR A PARTICULAR PURPOSE. HUNTSMAN'S LIABILITY IS STRICTLY LIMITED TO REIMBURSEMENT OF BUYER'S PURCHASE PRICE, OR IN HUNTSMAN'S DISCRETION REPLACEMENT, OF THE PRODUCT IN RESPECT OF WHICH SUCH CLAIM IS MADE. HUNTSMAN'S LIABILITY IS STRICTLY LIMITED BY LEGAL NOTICES IN TECHNICAL DATA SHEETS, PRODUCT LITERATURE, AND/OR SALE DOCUMENTS. The foregoing DISCLAIMERS and LIMITATION OF LIABILITY supercede inconsistent or contradictory provisions in Buyer's documents.

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Material Safety Data Sheet

**Phone (512) 837-6020
Chemtrec 800-424-9300
24 Hour Emergency Assistance**

Section 1 Identification						Section 6 Accidental Release Measures				
Product Number:	C1171	Health:				Dispose of in a manner consistent with federal, state and local regulations.				
Product Name:	Aluminum Shot 99%	Flammability:	0			Section 7 Handling and Storage				
Trade/Chemical Synonyms:		Reactivity:	0			Store in a cool dry well ventilated area. Keep away from heat and flame. Do not get in eyes, on skin, or on clothing.				
Formula:	Al	Hazard Rating:				Section 8 Exposure Controls & Personal Protection				
RTECS:	BD0330000	Least	Slight	Moderate	High	Extreme	Respiratory Protection: None required			
C.A.S	CAS# 7429-90-5	0	1	2	3	4	Mechanical: <input checked="" type="checkbox"/> Hand Protection: NIOSH Approved Gloves			
						Ventilation: Local Exhaust: <input checked="" type="checkbox"/> Eye Protection: Safety Glasses				
Section 2 Component Mixture						Other Protective Equipment: Use safe laboratory handling procedures.				
Sara 313	Component	CAS Number	%	Dim	Exposure Limits:	Section 9 Physical and Chemical Properties				
<input checked="" type="checkbox"/>	Aluminum Shot 99%	CAS# 7429-90-5	100%	W/W	OSHA TWA 15 mg (Al)/mf (Total Dust)	Melting Point:	660° C	Specific Gravity:	2.7	
Section 3 Hazard Identification (Also see section 11)						Boiling Point:	2450° C	Percent Volatile by Volume:	0%	
Generally not hazardous in normal handling, however good laboratory practices should always be used. Avoid long term exposure to skin or by inhalation.						Vapor Pressure:	N/A	Evaporation Rate:	N/A	
Section 4 First Aid Measures						Vapor Density:	N/A	Evaporation Standard:		
Generally not hazardous in normal handling, however good laboratory practices should always be used. Avoid long term exposure to skin or by inhalation.						Solubility in Water:	Insoluble	Auto ignition Temperature:	N/E	
FIRST AID: SKIN: Wash exposed area with soap and water. If irritation persists, seek medical attention.						Appearance and Odor:	Silvery metallic solid / no odor	Lower Flamm. Limit in Air:	N/E	
EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen						Flash Point:	N/A	Upper Flamm. Limit in Air:	N/E	
INGESTION: Give several glasses of milk or water. Vomiting may occur spontaneously, but it is not necessary to induce. Never give anything by mouth to an unconscious person.						Section 10 Stability and Reactivity Information				
Section 5 Fire Fighting Measures						Stability:	Stable	Conditions to Avoid:	None known	
Fire Extinguisher Type:	Carbon dioxide and dry chemical. DO NOT USE WATER!!					Materials to Avoid:				
Fire/Explosion Hazards:	Dust, powder forms explosive mixture with air. Dust, when damp, may heat spontaneously					Hazardous Decomposition Products: Formation of hydrogen gas possible				
						Hazardous Polymerization: Will Not Occur				

Fire Fighting Procedure:	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.	Condition to Avoid:None known
		Section 11 Additional Information
		Conditions aggravated/Target organs: None known. Acute: Essentially nonhazardous. Dusts may irritate eyes and lungs. Chronic: none known.
		DOT Classification: Not Regulated
		DOT regulations may change from time to time. Please consult the most recent version of the relevant regulations.
		Revision No:0 Date Entered: 9/1/2006 Approved by: WPF

The information contained herein is believed to be accurate and is offered in good faith for the user's consideration and investigation. No warranty is expressed or implied regarding the completeness or accuracy of this information, whether originating from Science Stuff, Inc. or from an alternate source. Users of this material should satisfy themselves by independent investigation of current scientific and medical information that this material may be safely handled.

Material Safety Data Sheet

Freeman Aluminum Shot MF-40

Date of Preparation: March 15, 2010

Section 1 Chemical Product and Company Identification

Product/Chemical Name: Freeman Aluminum Shot MF-40
Chemical Family: N/A
CAS Number: N/A
Other Designations: N/A
General Use: N/A
Manufacturer: Freeman Manufacturing and Supply Company, 1101 Moore Road, Avon, OH 44011
 Phone (440) 934-1902, FAX (440) 934-7200, Hours of Operation 8-5,
 Emergency phone number 1-800-424-9300

HMIS	
H	0
F	0
R	1
PPE Sec.8.	

Section 2 Composition/Information on Ingredients

Ingredient Name	CAS Number	%
Aluminum	7429-90-5	65-99
Silicon	7440-21-3	<12
Magnesium	7439-95-4	<10
Copper	7440-50-8	<5
Iron	7439-89-6	<4
Zinc	7440-66-6	0-6
Manganese	7439-96-5	0-2
Chromium	7440-47-3	<0.04
Nickel	7440-02-0	0-0.05

Ingredient	OSHA PEL		ACGIH TLV
	TWA	Respirable fraction	TWA
Aluminum	15 mg/m3	5 mg/m3	10 mg/m3
Silicon	15 mg/m3	5 mg/m3	10 mg/m3
Magnesium	none estab	none estab.	none estab
Copper	1 mg/m3	none estab.	1 mg/m3
Iron	none estab	none estab.	none estab
Zinc	none estab	none estab.	none estab
Manganese	none estab	none estab.	0.2 mg/m3
Chromium	1 mg/m3	none estab.	0.5 mg/m3
Nickel	1 mg/m3	none estab.	1.5 mg/m3

Section 3 Hazards Identification

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

May cause eye irritation

Freeman Aluminum Shot MF-40

Section 3 Hazards Identification continued

Potential Health Effects

Primary Entry Routes: Skin Contact

Eyes Dust or splinters may cause irritation or injury to the eyes.

Skin Contact with skin may cause irritation.

Inhalation Dusts of this product may cause irritation to the nose, throat, or respiratory tract.

Ingestion Due to material form and application, ingestion is considered unlikely. May result in irritation of the digestive tract.

Section 4 First Aid Measures

Inhalation: Remove to fresh air. If breathing is difficult, give oxygen and/or artificial respiration.

Eye Contact: Flush with plenty of water for 15 minutes and get medical attention.

Skin Contact: Wash thoroughly with soap and water. Remove contaminated clothing and launder before reuse.

Ingestion: Do not induce vomiting. Keep at rest. Get medical attention.

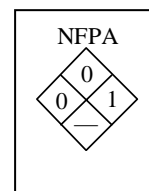
Section 5 Fire Fighting Measures

Flash Point: Not applicable

Extinguishing Media: Foam, CO₂, or dry chemical

Fire-Fighting Equipment: Use self-contained breathing apparatus. Water spray may be ineffective. Use fog nozzles. Cool fire exposed containers with water

Fire and Explosion Hazards: Not expected to be a hazard, unless there is fine dust. Metallic dust and fumes are explosive.



Section 6 Accidental Release Measures

Spill /Leak Procedures: Sweep up and dispose of.

Section 7 Handling and Storage

Handling & Storage: Use with adequate ventilation. Avoid breathing of dust and fumes. Avoid prolonged or repeated contact with skin. Wear safety goggles or face shield. Wear gloves, apron and footwear impervious to this material. Wash clothing before reuse. Store at ambient temperatures. Keep container closed and upright when not in use to prevent leakage.

Section 8 Exposure Controls/Personal Protection

Ventilation: Local exhaust recommended. General mechanical is acceptable. Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2).

Respiratory Protection: Use a NIOSH approved respirator when vapor/mist exposure is likely.

Freeman Aluminum Shot MF-40

Section 8 Exposure Controls/Personal Protection continued

Eye Protection: Wear splash-proof chemical goggles.

Skin Protection: Wear impermeable gloves.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 Physical and Chemical Properties

Appearance and Odor: Silvery solid
Specific Gravity (H₂O=1, at 4 °C): 2.5-2.9

Water Solubility: Negligible
Freezing/Melting Point: 1190-1215°F
Evaporation Rate (N-Butyl Acetate = 1): Not applicable

Section 10 Stability and Reactivity

Stability: Stable.

Polymerization: Hazardous polymerization will not occur.

Chemical Incompatibilities: Strong oxidizing agents

Conditions to Avoid: Generation of fumes and fine dusts

Hazardous Decomposition Products: Metallic oxides

Section 11 Toxicological Information

Acute Inhalation Exposure Effects: Respiratory irritant.

Skin Irritation: Irritant.

Eye Irritation: Irritant, will injure eye tissue.

Carcinogenicity: No component is considered to be a human carcinogen

Section 12 Ecological Information

No Known evidence of adverse effects from available information

Section 13 Disposal Considerations

Disposal: Use safety containers for disposal. Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations

Section 14 Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Not regulated

Freeman Aluminum Shot MF-40

Section 15 Regulatory Information

US Federal Regulations:

OSHA (Occupational Safety and Health Act): This Material Safety Data Sheet has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.

RCRA (Resource Conservation and Recovery Act): Not a hazardous waste under RCRA (40 CFR 261).

SARA 311/312 Codes:

SARA Toxic Chemical (40 CFR 372.65): This product contains the following toxic chemical subject to the reporting requirements of Section 313 of SARA Title III of 1986 and of 40 CFR 372

None

TSCA Inventory Status: All ingredients listed on TSCA inventory requirements.

State Regulations:

Listed on the following states Right to Know Lists:

Aluminum (7429-90-5), Silicon (7440-21-3), Magnesium(7439-95-4), Copper(7440-50-8), Zinc(7440-66-6), Manganese(7439-96-5), Chromium(7440-47-3), and Nickel(7440-02-0) are found on the New Jersey and Pennsylvania Right to Know Lists

Section 16 Other Information

Disclaimer: The following supersedes Buyer's documents. SELLER MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No statements herein are to be construed as inducements to infringe any relevant patent. Under no circumstances shall Seller be liable for incidental, consequential or indirect damages for alleged negligence, breach of warranty, strict of liability arising in connection with the product(s). Buyer's sole remedy and Seller's sole liability for any claims shall be Buyer's purchase price. Data and results are based on controlled lab work and must be confirmed by Buyer by testing for its intended conditions of use. The product(s) has not been tested for, and is therefore not recommended for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended; or for uses for which implantation within the human body is intended.

SECTION 6 - HEALTH HAZARD DATA (CON'T)

Acute - Irritation to eyes; fatigue; weakness; lassitude; insomnia; constipation; abdominal pain; colic.

Chronic - Pulmonary fibrosis; facial pallor; anemia; gingival lead line; tremors; wrist drop; encephalopathy; nephropathy, hypotension; Lead, cadmium, nickel, beryllium and chromium have been implicated as carcinogens.

Toxicity Data: N/A

Dusts of Silicon Carbide briquettes are classified as nuisance dust by ACGIH and OSHA

Emergency and First Aid Procedures: Consult a physician Inhalation: Remove to fresh air. Skin: Wash with water.

Eyes: Flush with water to remove particles. Ingestion: N/A

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Spills/Leaks: Solids: reconsolidate and reband ingots or sows for recycling.

Liquids: contain spill with sand or earth or other non-flammable materials. Allow spill to freeze and cool, and collect for recycling by remelting.

Waste Disposal: Dispose of in accordance with local, state and federal regulations.

Handling, Use and Storage: N/A

Grinding or Crushing: N/A

Labeling: N/A

SECTION 8 - CONTROL MEASURES

Respiratory Protection: Required when welding or machining; wear a particle dust mask or a 1/2 cartridge-type mask.

Ventilation: Engineering control by forced ventilation when aluminum alloys are processed by heat cutting, welding, and brazing.

Gloves: Protective gloves are recommended during handling as lump material may have sharp edges.

Eye Protection: Safety glasses with side shields. Clothing: Long-sleeved shirt and long-length pants. Other:

N/A

N/A = Not Applicable, N/K = Not Known

Please ensure that all persons coming into contact with this product are aware of the information contained in this MSDS Sheet. Information presented herein has been compiled from sources considered to be reliable and accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so. It is the user's responsibility to determine for himself the suitability of any material for a specific use and to adopt such safety precautions as may be necessary. If you need any further information from us to make the determinations which you must make to use this material safely, please contact ASI International, Inc.

SUPPLIER NOTIFICATION**Aluminum Deox Shot, Notch Bar and Nuggets**

The above listed product contains no toxic chemical or chemicals 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, based upon our knowledge of the raw materials comprising this product.

This notification is attached to the product Materials Safety Data Sheet (MSDS) and must not be detached from the MSDS. Any copying or redistribution of the MSDS shall include copying and redistribution of this notice attached to copies of the MSDS subsequently redistributed.

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