

SAFETY DATA SHEET

Revision Date 15-Jul-2015

Version 2

1. IDENTIFICATION

Product identifier

Product Name AZ-2402 Aerosol High Temp. Aluminum

Other means of identification

Product Code TP402HHSP

UN/ID no. UN1950

SKU(s) None

Recommended use of the chemical and restrictions on use

Recommended Use No information available.

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address

TISCO

PO Box 82222

Lincoln, NE 68501

Phone: 402-476-6558

Fax: 402-476-6749

Emergency telephone number

Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1A
Specific target organ toxicity (repeated exposure)	Category 1
Aspiration toxicity	Category 1
Flammable aerosols	Category 1

Emergency Overview

Danger

Hazard statements

Causes serious eye irritation

May cause genetic defects

May cause cancer

Causes damage to organs through prolonged or repeated exposure

May be fatal if swallowed and enters airways

Extremely flammable aerosol

**Appearance** No information available**Physical state** Aerosol**Odor** No information available**Precautionary Statements - Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Do not breathe dust/fume/gas/mist/vapors/spray
 Do not eat, drink or smoke when using this product

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)**Other Information**

Unknown acute toxicity 5.85% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Propane	74-98-6	10 - 30	*
Acetone	67-64-1	10 - 30	*
Aliphatic Hydrocarbon	64742-49-0	7 - 13	*
Aluminum Powder	7429-90-5	7 - 13	*
Butane	106-97-8	7 - 13	*
Mineral Spirits	64742-48-9	5 - 10	*
Stoddard Solvent	8052-41-3	3 - 7	*
Solvent Naphtha, Medium Aliphatic	64742-88-7	1 - 5	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures**General advice**

Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Eye contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately.

Skin Contact	Wash off immediately with plenty of water.
Inhalation	Immediate medical attention is required. Remove to fresh air. If not breathing, give artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Drink plenty of water.
Self-protection of the first aider	Remove all sources of ignition.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

No information available.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

In the event of fire and/or explosion do not breathe fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded. Avoid contact with eyes. Avoid breathing vapors or mists. Contents under pressure. Do not puncture or incinerate cans. Do not stick pin or any other sharp object into opening on top of can.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep tightly closed in a dry and cool place. Keep in properly labeled containers.

Incompatible materials Strong acids. Strong oxidizing agents. Chlorinated compounds.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Propane 74-98-6	: See Appendix F: Minimal Oxygen Content	TWA: 1000 ppm TWA: 1800 mg/m ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1800 mg/m ³	IDLH: 2100 ppm TWA: 1000 ppm TWA: 1800 mg/m ³
Acetone 67-64-1	STEL: 500 ppm TWA: 250 ppm	TWA: 1000 ppm TWA: 2400 mg/m ³ (vacated) TWA: 750 ppm (vacated) TWA: 1800 mg/m ³ (vacated) STEL: 2400 mg/m ³ The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors (vacated) STEL: 1000 ppm	IDLH: 2500 ppm TWA: 250 ppm TWA: 590 mg/m ³
Aluminum Powder 7429-90-5	TWA: 1 mg/m ³ respirable fraction	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 5 mg/m ³ Al Aluminum	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust TWA: 5 mg/m ³ Al
Butane 106-97-8	STEL: 1000 ppm	(vacated) TWA: 800 ppm (vacated) TWA: 1900 mg/m ³	TWA: 800 ppm TWA: 1900 mg/m ³
Stoddard Solvent 8052-41-3	TWA: 100 ppm	TWA: 500 ppm TWA: 2900 mg/m ³ (vacated) TWA: 100 ppm (vacated) TWA: 525 mg/m ³	IDLH: 20000 mg/m ³ Ceiling: 1800 mg/m ³ 15 min TWA: 350 mg/m ³

NIOSH IDLH *Immediately Dangerous to Life or Health*

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection No special technical protective measures are necessary.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Aerosol	Odor	No information available
Appearance	No information available	Odor threshold	No information available
Color	No information available		

Property	Values	Remarks • Method
pH	No information available	
Melting point/freezing point	No information available	
Boiling point / boiling range	>= -42 °C / -44 °F	
Flash point	-104 °C / -155 °F	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific Gravity	0.76	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	6.35 lbs/gal
Bulk density	No information available
Percent solids by weight	21.2%
Percent volatile by weight	61.6%
Percent solids by volume	10.3%
Actual VOC (lbs/gal)	3.9
Actual VOC (grams/liter)	468.6
EPA VOC (lbs/gal)	4.7
EPA VOC (grams/liter)	561.7
EPA VOC (lb/gal solids)	37.8

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

Strong acids. Strong oxidizing agents. Chlorinated compounds.

Hazardous Decomposition Products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	No data available
Inhalation	No data available.
Eye contact	No data available.
Skin Contact	No data available.
Ingestion	No data available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Propane 74-98-6	-	-	= 658 mg/L (Rat) 4 h
Acetone 67-64-1	= 5800 mg/kg (Rat)	-	= 50100 mg/m ³ (Rat) 8 h
Aliphatic Hydrocarbon 64742-49-0	> 5000 mg/kg (Rat)	> 3160 mg/kg (Rabbit)	= 73680 ppm (Rat) 4 h
Butane 106-97-8	-	-	= 658 g/m ³ (Rat) 4 h
Mineral Spirits 64742-48-9	> 5000 mg/kg (Rat)	> 3160 mg/kg (Rabbit)	-
Solvent Naphtha, Medium Aliphatic 64742-88-7	> 5000 mg/kg (Rat)	= 3000 mg/kg (Rabbit)	> 5.28 mg/L (Rat) 4 h

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 3 - Not classifiable as a human carcinogen

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target Organ Effects

Central nervous system, Eyes, kidney, Respiratory system, Skin.

Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document mg/kg mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

68.15% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Acetone 67-64-1	-	4.74 - 6.33: 96 h Oncorhynchus mykiss mL/L LC50 6210 - 8120: 96 h Pimephales promelas mg/L LC50 static 8300: 96 h Lepomis macrochirus mg/L LC50	10294 - 17704: 48 h Daphnia magna mg/L EC50 Static 12600 - 12700: 48 h Daphnia magna mg/L EC50
Aliphatic Hydrocarbon 64742-49-0	-	-	2.6: 96 h Chaetogammarus marinus mg/L LC50
Mineral Spirits 64742-48-9	-	2200: 96 h Pimephales promelas mg/L LC50	2.6: 96 h Chaetogammarus marinus mg/L LC50
Solvent Naphtha, Medium Aliphatic 64742-88-7	450: 96 h Pseudokirchneriella subcapitata mg/L EC50	800: 96 h Pimephales promelas mg/L LC50 static	100: 48 h Daphnia magna mg/L EC50

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Chemical Name	Partition coefficient
Propane 74-98-6	2.3
Acetone 67-64-1	-0.24
Butane 106-97-8	2.89

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

US EPA Waste Number U002 U239

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Acetone 67-64-1	-	Included in waste stream: F039	-	U002

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Acetone 67-64-1	Ignitable
Aluminum Powder 7429-90-5	Ignitable powder

14. TRANSPORT INFORMATION

DOT

UN/ID no.	UN1950
Proper shipping name	Aerosols
Hazard Class	2.1
Description	UN1950, Aerosols, 2.1
Emergency Response Guide Number	126

TDG

UN/ID no.	UN1950
Proper shipping name	Aerosols
Hazard Class	2.1
Description	UN1950, Aerosols, 2.1

MEX

UN/ID no.	UN1950
Proper shipping name	Aerosols
Hazard Class	2
Description	UN1950, Aerosols, 2

ICAO (air)

UN/ID no.	UN1950
Proper shipping name	Aerosols
Hazard Class	2.1
Special Provisions	A145, A167
Description	UN1950, Aerosols, 2.1

IATA

UN/ID no.	UN1950
Proper shipping name	Aerosols, flammable
Hazard Class	2.1
ERG Code	10L
Special Provisions	A145, A167, A802
Description	UN1950, Aerosols, flammable, 2.1

IMDG

UN/ID no.	UN1950
Proper shipping name	Aerosols
Hazard Class	2
EmS-No.	F-D, S-U
Special Provisions	63,190, 277, 327, 344, 959
Description	UN1950, Aerosols, 2

RID

UN/ID no.	UN1950
Proper shipping name	Aerosols
Hazard Class	2.1
Classification code	5F
Description	UN1950, Aerosols, 2.1

ADR

UN/ID no.	UN1950
Proper shipping name	Aerosols
Hazard Class	2.1
Classification code	5F
Tunnel restriction code	(D)
Special Provisions	190, 327, 344, 625
Description	UN1950, Aerosols, 2.1, (D)
Labels	2.1

ADN

Proper shipping name	Aerosols
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Hazard Class	2.1
Classification code	5F
Special Provisions	190, 327, 344, 625
Description	UN1950, Aerosols, 2.1
Hazard label(s)	2.1
Limited quantity (LQ)	1 L
Ventilation	VE01, VE04

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies *
EINECS/ELINCS	Complies *
ENCS	Does not comply *
IECSC	Complies *
KECL	Complies *
PICCS	Complies *
AICS	Complies *

* This product contains an unknown chemical, therefore, this product's compliance to the inventory list is NOT DETERMINED

Legend:

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS** - Japan Existing and New Chemical Substances
- IECSC** - China Inventory of Existing Chemical Substances
- KECL** - Korean Existing and Evaluated Chemical Substances
- PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- AICS** - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Aluminum Powder - 7429-90-5	1.0

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	Yes
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Acetone 67-64-1	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
Ethyl Benzene - 100-41-4	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Propane 74-98-6	X	X	X
Acetone 67-64-1	X	X	X
Aluminum Powder 7429-90-5	X	X	X
Butane 106-97-8	X	X	X
Stoddard Solvent 8052-41-3	X	X	X
Solvent Naphtha, Medium Aliphatic 64742-88-7	X	-	-
Ethylene Glycol Butyl Ether 111-76-2	X	X	X
Propylene Glycol Methyl Ether 107-98-2	X	X	X
1,2,4-Trimethylbenzene 95-63-6	X	X	X
Xylene 1330-20-7	X	X	X
Ethyl Benzene 100-41-4	X	X	X
Cobalt 2-ethylhexanoate 136-52-7	X	-	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

Hazardous air pollutants (HAPS) content

This product contains no reportable Hazardous Air Pollutants

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	Health hazards 2	Flammability 4	Instability 0	Physical and Chemical Properties *
HMIS	Health hazards 2 *	Flammability 4	Physical hazards 0	Personal protection X

Chronic Hazard Star Legend * = Chronic Health Hazard

Revision Date 15-Jul-2015

Revision Note
No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Shipping information may vary based upon container size and shipping destination. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage, or release to the environment. The manufacturer assumes no responsibility for injury to the recipient or third persons, or for any damages to any property resulting from misuse of the product.

End of Safety Data Sheet