

SAFETY DATA SHEET

Revision Date 13-May-2015

Version 1

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 5.9% 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 / -43 °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 | 61.1% |
| Percent solids by volume | 10.3% |
| Actual VOC (lbs/gal) | 3.9 |
| Actual VOC (grams/liter) | 465.5 |
| EPA VOC (lbs/gal) | 4.7 |
| EPA VOC (grams/liter) | 560.8 |
| EPA VOC (lb/gal solids) | 37.6 |

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

57.69% 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 |
|----------------------|----------|

| | |
|------------------------------|-----------------------|
| 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 13-May-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