expedition research

SAFETY DATA SHEET

This Safety Data Sheet complies with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR 1910.1200.

1. Product and Supplier Identification

1.1 Product: Expedition Fuel Tablets (Hexamine Solid Camping Fuel)

1.2 Product Use: Solid Fuel

1.3 Restrictions on Use: None

1.4 Importer: Expedition Research LLC
1311 N Lake Cushman Rd
Hoodsport, WA 98548 U.S.A

Telephone: +1(954) 655-4625
Safety Data Sheet Contact: aaron@expedition-research.com

1.5 Emergency Contact: Company: +1(954) 655-4625
Poison Control: +1(800) 222-1222

2. Hazards Identification

2.1 Classification of product or mixture:
GHS Classification: Flammable Solid, Category 2
Skin Sensitization, Category 1

2.2 GHS Label and Statements:

Signal Word: Warning

Hazard Statement: H228 Flammable solid
H317 May cause an allergic skin reaction

Pictogram:

Precautionary Statements:

Prevention: P210: Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.

P261: Avoid breathing dust/fume/gas/mist/vapors.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response: P302+P352: IF ON SKIN: Wash with plenty of water.

P333+P313: If skin irritation or rash occurs: get medical advice/attention.

P370+P378: In case of fire: Use water, spray, alcohol resistant foam, dry chemical or carbon dioxide to extinguish.

Storage: P402: Store in a dry place.

Disposal: P501: Dispose of content/container in accordance with local/regional regulations.

2.3 Hazards not otherwise classified by GHS: None

3. Composition/Information on Ingredients

Component	% (w/w)	Exposure Limits	LD_{50}	LC_{50}
Hexamethylenetetramine CAS No 100-97-0 EINECS No 202-905-8	<99	N/d	>20,000 mg/kg (oral/rat) >2,000 mg/kg (dermal/rat)	>2,000 mg/m3 (inh, rat/ 4 hr)
Wax CAS No 8002-74-2 EINECS No 232-315-6	<1	N/d	N/d	N/d

4. First Aid Measures

4.1 Description of First Aid Measures

General Advice: Wash hands after handling and skin areas where contact has occurred. It is recommended that hands be washed before eating, drinking or smoking. If ingested or a sudden rash occurs and persists, consult a physician.

In case of eye contact: Immediately flush eyes with plenty of water for 15 minutes. Get medical attention immediately. Remove contact lenses if easy to do.

In case of skin contact: Wash hands immediately with soap and water after handling. Do not eat, drink or smoke until hands are thoroughly washed. If irritation occurs or persists, seek medical advice.

If inhalation: Remove from exposure and into fresh air immediately Seek medical attention if breathing is difficult or discomfort occurs.

If ingestion: This product has low oral toxicity, if ingested do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth and 2-4 cups of water. If ingested immediately call Poison Control or consult a Physician.

4.2 Most important symptoms and effects, both acute and delayed

Effects of Short-Term (Acute) Exposure:

***Inhalation*:** Prolonged inhalation of the smoke may cause eye and Respiratory irritation and headache and/or nausea.

Skin Contact: Contact with tablets may cause skin irritation or sensitization. Skin rash may occur in persons predisposed to skin problems and in some cases upon initial contact.

Eye Contact: Smoke or vapors from the burning tablets may cause eye discomfort.

Ingestion: Accidental ingestion may cause stomach upset, headache and/or nausea.

Effects of Long-Term (Delayed) Exposure:

Continued or prolonged use of this product may produce sensitization effects. Symptoms may be sudden with a rash occurring after use when no previous rash occurred through use.

4.3 Immediate medical attention/special treatment needed:

If unconscious, seek emergency response or nearest hospital for treatment advice.

5. Fire Fighting Measures

5.1 Extinguishing Equipment: Product is a flammable solid. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish fire.

5.2 Special hazards arising from mixture:

Combustion or thermal decomposition may produce toxic fumes of hydrogen cyanide, nitrogen oxides and carbon oxides.

5.3 Advice for firefighters: Firefighters should wear full protective clothing including self contained breathing apparatus. Dispose of contaminated extinction water according to official regulations.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid forming dust. Ensure adequate ventilation. Avoid eye and skin contact. Remove sources of heat, flame and ignition. Evacuate personnel to safe areas. All spill responders involved in a cleanup of this product must follow good industrial hygiene practices.

6.2 Environmental Precautions

If safe to do so, cleanup spilled tablets and place in a secure container. Ensure that spilled material does not enter sewers or natural waterways. If spill catches fire, the water used to extinguish the fire contain a chemical which may be toxic to the environment.

6.3 Methods and materials for containment and cleanup

Clean up spills immediately. Sweep up tablets and place into an appropriate container for disposal. Avoid generating dusts and remove all sources of heat, ignition and flame. Tools used must be spark-proof. Once the spill has been remediated, arrange for disposal of the containers. Properly label containers to identify contents.

For disposal, see section 13.

7. Handling and Storage

7.1 Precautions for safe handling

Handle tablets with care not to create dust. Provide appropriate ventilation in places where dust is formed. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. While handling the tablets, a residue on skin may be transferred to mouth by accident. Wash thoroughly and immediately after handling this product before eating, drinking or smoking.

7.2 Precautions for safe storage

Keep out of reach of children and animals. Store products only in original packing. Keep container closed when not in use and store in a Dry area away from heat. Protect from sparks, heat or flame. Store separate from strong acids.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters

This product does not contain any ingredient with a known workplace exposure limit.

8.2 Exposure Controls

Engineering Controls: Provide adequate ventilation. Eye rinse available for wash.

Respiratory Protection: Not required

Skin Protection: Wear suitable protective equipment to prevent skin Contact. Nitrile gloves may be used.

Eye/Face Protection: Not required

8.3 Environmental Exposure

Prevent from entering the environment through natural waterways, sewers or drains.

9. Physical and Chemical Properties

9.1 Appearance:	Solid Tablets, White
Odor:	Slight ammoniacal
Odor Threshold:	No data available
pH:	No data available
Melting Point:	280°C
Initial Boiling Point:	No data available
Flash Point:	250°C (closed cup)
Evaporation Rate:	No data available
Flammability:	Highly flammable
Upper Explosion Limit:	No data available
Lower Explosion Limit:	No data available
Vapor Pressure:	<0.01 mm Hg (20°C)
Vapor Density:	No data available
Relative Density:	1.33
Solubility:	895 g/L (20°C)
Partition Coefficient:	Log Pow = -2.179@ 20°C (Hexamethylenetetramine)
Autoignition Temp:	390°C
Decomposition Temp:	No data available
Viscosity:	No data available

10. Stability and Reactivity

10.1 Reactivity: Contact with strong acids, oxidizing agents, peroxides halides leads to exothermic reaction. Hygroscopic, absorbing moisture from air.

10.2 Chemical Stability: Stable under recommended storage conditions. Storage should be in a dry, cool area away from incompatibles, heat, sparks, flame and sources of ignition.

10.3 Possibility of hazardous reactions: No data available

10.4 Conditions to avoid: Avoid exposure to moisture. Heat, sparks, flame and sources of ignition.

10.5 Incompatible Materials: Strong acids and oxidizing agents.

10.6 Hazardous decomposition products: See section 5.2

11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity and Immediate effects:

Ingestion:	>20,000 mg/kg (oral/rat)	No data
Inhalation:	>2,000 mg/m3 (inh,rat/ 4 hr)	No data
Skin/eye contact:	>2,000 mg/kg (dermal/rat)	No data

Delayed and chronic effects:

Sensitization: May cause an allergic skin reaction.

Carcinogenicity: None listed by IARC, ACGIH, NTP or OSHA.

Mutagenicity: No data

Reproductive toxicity: No data

Specific target organ toxicity (single and repeated exposure): No data

Aspiration hazard: No data

Symptoms/effects both acute and delayed:

Symptoms of an allergic reaction may include rash, itching, swelling, trouble breathing or lightheadedness.

12. Ecological Information

12.1 Toxicity: Data

LC_{50} (pimephales promelas) 49,800 mg/l, 96 hour static test
LC_{50} (Sheepshead minnow) 49,000 mg/l, 96 hour
EC_{50} (Water flea), 36,000 mg/l, 48 hour

12.2 Persistence and degradability: No data

12.3 Bioaccumulative potential: No data

12.4 Mobility in soil: No data

12.5 Results of PBT and vPvB assessment: Not conducted

13. Disposal Considerations

13.1 Waste treatment methods

See section 8 for Exposure Controls/Personal Protection

Product: Do not reuse empty containers. Dispose of product according to all applicable local, state and federal regulations. Offer to a licensed disposal company, properly contained and labeled.

Prevent from entering the environment through natural waterways, sewers or drains.

Contaminated Packaging: Same as above.

14. Transport Information

14.1

UN Number: UN 1328
UN Name: Hexamethylenetetramine
Hazard Class: Class 4
Packing Group: III

14.2 Transport of Dangerous Goods (TDG and CLR):

UN 1328, Hexamethylenetetramine, Class 4.1, PG III

United States Department of Transport:

UN 1328, Hexamethylenetetramine, Class 4.1, PG III

International Air Transport Association (IATA):

UN 1328, Hexamethylenetetramine, Class 4.1, PG III

International Maritime Organization (IMO):

UN 1328, Hexamethylenetetramine, Class 4.1, PG III

15. Regulatory Information

American Federal Regulation:

CERCLA Hazardous Substance List (40 CFR 302.4): Not regulated

SARA 302 Extremely Hazardous Substance: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Hazardous chemical category: Fire Hazard

SARA 313 (TRI reporting): This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by the SARA Title III, Section 313.

16. Other Information

Original Preparation Date: July 3, 2018

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This Safety Data Sheet (SDS) was prepared according to UN GHS and the information included is based on the present state of our Knowledge.