



SAFETY DATA SHEET

Waterproof Matches

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name **Waterproof Matches**

Other means of identification

Synonyms Waterproof Matches Part No. 20-02118-02
Safety Matches; Camping Matches
UST Survival Kits containing Waterproof Matches.

Recommended use of the chemical and restrictions on use

Recommended Use Fire starting.
Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name UST Brands
Supplier Address 7720 Philips Highway
Jacksonville
Florida
32256
USA
Supplier Phone Number Phone: 904-786-0033
Fax: 904-786-0890
Supplier Email sales@ustbrands.com

Emergency Response Information (ERI) telephone number

ERI Provider: INFOTRAC USA or Canada: 1-800-535-5053 International: 001-352-323-3500

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Flammable Solid 2; H228	Flammable Solid
Ox. Sol. 1; H271	May cause fire or explosion; strong oxidizer.
Acute Tox. 5; H303	May be harmful if swallowed. (Not adopted by US OSHA)
Acute Tox. 4; H332	Harmful if inhaled.
Skin Irrit. 3; H316	Causes mild skin irritation. (Not adopted by US OSHA)
Skin Sens. 1; H317	May cause an allergic skin reaction.
Carc. 2; H351	Suspected of causing cancer.
Aquatic Chronic 2; H411	Toxic to aquatic life with long lasting effects.

Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows:



Danger:

H228 Flammable Solid.
H271 May cause fire or explosion; strong oxidizer.
H303 May be harmful if swallowed.
H316 Causes mild skin irritation.
H317 May cause an allergic skin reaction.



SAFETY DATA SHEET

Waterproof Matches

H332 Harmful if inhaled.
H351 Suspected of causing cancer.
H411 Toxic to aquatic life with long lasting effects.

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.
P220 Keep / Store away from clothing combustible materials.
P221 Take any precaution to avoid mixing with combustibles.
P261 Avoid breathing dust / fume / gas / mist / vapors / spray.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection / face protection.
P283 Wear fire / flame resistant / retardant clothing.

Response:

P302+352 IF ON SKIN: Wash with plenty of soap and water.
P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.
P306+360 IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P308+313 IF exposed or concerned: Get medical advice / attention.
P321 Specific treatment (see information on this label).
P333+313 If skin irritation or a rash occurs: Get medical advice / attention.
P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P363 Wash contaminated clothing before reuse.
P370+380+375 In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.
P371 In case of major fire and large quantities:
P378 Use alcohol resistant foam, CO₂, powder, water spray for extinction. Do not use water jet.
P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents / container in accordance with local / national regulations.



SAFETY DATA SHEET

Waterproof Matches

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	CAS Number	Weight %	GHS Classification	Notes
Potassium Chlorate (Chloric acid, potassium salt)	3811-04-9	25 - 50	Ox. Sol. 1; H271 Acute Tox. 4;H332 Acute Tox. 4;H302 Aquatic Chronic 2;H411	[1]
Quartz Powder (Synthetic, amorphous silicon dioxide calcium- ion exchange)	7631-86-9	10 - 25		[1][2]
Sulfur	7704-34-9	1.0 - 10	Skin Irrit. 2;H315	[1]
Animal Bone Glue (Gelatin)	9000-70-8	1.0 - 10		[1]
Antimony trioxide	1309-64-4	1.0 - 10	Carc. 2;H351	[1]
Zinc oxide	1314-13-2	1.0 - 10	Aquatic Acute 1;H400 Aquatic Chronic 1;H410	[1][2]
Rosin	8050-09-7	1.0 - 10	Skin Sens. 1;H317	[1]

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*The full texts of the phrases are shown in Section 16.

4. FIRST AID MEASURES

Description of first aid measures

General	Move victim to fresh air. Call 911 or emergency medical service if deemed necessary. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. Remove and isolate contaminated clothing and shoes. In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes. Removal of solidified molten material from skin requires medical assistance. Keep victim warm and quiet. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
Inhalation	Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
Eyes	Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.
Skin	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
Ingestion	Wash with soap and water. If irritation or other symptoms develop, seek medical attention.

Most important symptoms and effects, both acute and delayed

Overview	Effects of contact or inhalation may be delayed. Possible cancer hazard. Contains an ingredient which may cause cancer based on animal data (See Section 3 and Section 15 for each ingredient). Risk of cancer depends on duration and level of exposure. See section 2 for further details.
Inhalation	Harmful if inhaled.
Skin	May cause an allergic skin reaction. Causes mild skin irritation. (Not adopted by US OSHA)
Ingestion	May be harmful if swallowed. (Not adopted by US OSHA)

SDS No.: 1017

Issue Date: Jul 23/2014

Revision Date: Feb 11/2019

Revision: B

Page 3 of 12



SAFETY DATA SHEET

Waterproof Matches

5. FIRE-FIGHTING MEASURES

Extinguishing media

Carbon dioxide, water, water spray.

Special hazards arising from the substance or mixture

Hazardous decomposition:

High temperatures and fires may produce such toxic substances as carbon monoxide and carbon dioxide.

Keep away from heat / sparks / open flames / hot surfaces - No smoking.

Keep / Store away from clothing combustible materials.

Take any precaution to avoid mixing with combustibles.

Avoid breathing dust / fume / gas / mist / vapors / spray.

Advice for fire-fighters

Wear positive pressure self-contained breathing apparatus (SCBA).

Structural firefighters' protective clothing will only provide limited protection.

Flammable/combustible material.

May be ignited by friction, heat, sparks or flames.

Some may burn rapidly with flare burning effect.

Powders, dusts, shavings, borings, turnings or cuttings may explode or burn with explosive violence.

Substance may be transported in a molten form at a temperature that may be above its flash point.

May re-ignite after fire is extinguished.

Fire may produce irritating and/or toxic gases.

Contact may cause burns to skin and eyes.

Contact with molten substance may cause severe burns to skin and eyes.

Runoff from fire control may cause pollution.

ERG Guide No. 133

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

Environmental precautions

Do not allow spills to enter drains or watercourses.

Use good personal hygiene practices.

Wash hands before eating, drinking, smoking or using toilet.

Promptly remove soiled clothing and wash thoroughly before reuse.

Methods and material for containment and cleaning up

Increase ventilation.

Use clean non-sparking tools to collect material and place it into a properly labeled container for later disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Handle containers carefully to prevent damage and spillage. Use approved storage containers in the work area. Keep away from sparks, flames or ignition sources. Do not use near welding operations, flames or hot surfaces. Post "No Smoking" signs. Empty containers may contain residue, which is hazardous. Ensure a high level of personal hygiene is maintained when using this product; wash hands before eating, drinking, smoking or using the toilet.

See section 2 for further details. - [Prevention]:



SAFETY DATA SHEET

Waterproof Matches

Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Naked flames and smoking should not be permitted in storage areas. It is recommended that fork lift trucks and electrical equipment are protected to the appropriate standard.

Incompatible materials: Strong Oxidizing Agents, Strong Acids and Alkalis.

Store in a cool, dry, well-ventilated area away from sources of ignition, oxidizing agents, foodstuffs, and clothing. Keep out of direct sunlight. Keep containers sealed and protected against physical damage. Keep in original container. Have appropriate fire extinguisher available. Do not stack more than 3 palates high.

See section 2 for further details. - [Storage]:

Specific end use(s)

No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

CAS No.	Ingredient	Exposure	
		Source	Value
1309-64-4	Antimony trioxide	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
1314-13-2	Zinc oxide	OSHA	TWA 5 mg/m ³ (fume) TWA 15 mg/m ³ (total dust) TWA 5 mg/m ³ (resp dust)
		ACGIH	TWA: 2 mg/m ³ STEL: 10 mg/m ³ A1, 1, Revised 2003,
		NIOSH	No Established Limit
		Supplier	No Established Limit
3811-04-9	Chloric acid, potassium salt	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
7631-86-9	Synthetic, amorphous silicon dioxide calcium-ion exchanged	OSHA	TWA 20 mppcf (80 mg/m ³ /%SiO ₂)
		ACGIH	No Established Limit
		NIOSH	TWA 6 mg/m ³
		Supplier	No Established Limit
7704-34-9	Sulfur	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
8050-09-7	Rosin	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
9000-70-8	Gelatin	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit



SAFETY DATA SHEET

Waterproof Matches

Carcinogen Data			
CAS No.	Ingredient	Source	Value
1309-64-4	Antimony trioxide	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: Yes; Group 3: No; Group 4: No
1314-13-2	Zinc oxide	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No
3811-04-9	Chloric acid, potassium salt	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No
7631-86-9	Synthetic, amorphous silicon dioxide calcium-ion exchanged	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No
7704-34-9	Sulfur	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No
8050-09-7	Rosin	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No
9000-70-8	Gelatin	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No

Exposure Controls

- Respiratory If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.
- Eyes Protective safety glasses recommended.
- Skin Overalls which cover the body, arms and legs should be worn. Skin should not be exposed. All parts of the body should be washed after contact. Protective gloves recommended.
- Engineering Controls Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.
- Other Work Practices Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.
- See section 2 for further details. - [Prevention]:



SAFETY DATA SHEET

Waterproof Matches

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Red match head, woody matchstick - Solid
Odor	Odorless
Odor threshold	Not Measured
pH	< 4.7
Melting point / freezing point	N/A
Initial boiling point and boiling range	N/A
Flash Point	28 C
Evaporation rate (Ether = 1)	N/A
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: 1.2% Upper Explosive Limit: 9.0%
Vapor pressure (Pa)	N/A
Vapor Density	N/A
Specific Gravity	2.477
Solubility in Water	Insoluble
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	~250 C
Decomposition temperature	N/A
Viscosity (cSt)	N/A

Other information

No other relevant information.

10. STABILITY AND REACTIVITY

Reactivity

Hazardous Polymerization will not occur.

Chemical Stability

Stable under normal circumstances.

Possibility of hazardous reactions

No data available.

Conditions to avoid

High temperatures, flames, and incompatibles.

Incompatible materials

Strong Oxidizing Agents, Strong Acids and Alkalis.

Hazardous decomposition products

High temperatures and fires may produce such toxic substances as carbon monoxide and carbon dioxide.



SAFETY DATA SHEET

Waterproof Matches

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Chloric acid, potassium salt (3811-04-9)	1,870.00, Rat - Category: 4	>2,000.00, Rabbit - Category: 5	5.59, Rat - Category: 3	No data available	No data available
Synthetic, amorphous silicon dioxide calcium-ion exchanged (7631-86-9)	5,110.00, Rat - Category: NA	5,000.00, Rabbit - Category: 5	No data available	No data available	No data available
Sulfur (7704-34-9)	8,437.00, Rat - Category: NA	5,587.00, Guinea Pig Category: NA	9.23, Rat - Category: 3	No data available	No data available
Gelatin (9000-70-8)	No data available	No data available	No data available	No data available	No data available
Antimony trioxide (1309-64-4)	34,600.00, Rat - Category: NA	No data available	No data available	No data available	No data available
Zinc oxide (1314-13-2)	5,000.00, Rat - Category: 5	No data available	No data available	2.50, Mouse - Category: 4	No data available
Rosin (8050-09-7)	7,600.00, Rat - Category: NA	2,500.00, Rabbit - Category: 5	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	5	May be harmful if swallowed. (Not adopted by US OSHA)
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	4	Harmful if inhaled.
Skin corrosion/irritation	3	Causes mild skin irritation. (Not adopted by US OSHA)
Serious eye damage/irritation	---	Not Applicable
Respiratory sensitization	---	Not Applicable
Skin sensitization	1	May cause an allergic skin reaction.
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	2	Suspected of causing cancer.
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

SDS No.: 1017

Issue Date: Jul 23/2014

Revision Date: Feb 11/2019

Revision: B

Page 8 of 12



SAFETY DATA SHEET

Waterproof Matches

12. ECOLOGICAL INFORMATION

Toxicity

Toxic to aquatic life with long lasting effects.

Aquatic Toxicity			
Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Chloric acid, potassium salt (3811-04-9)	Not Available	Not Available	Not Available
Synthetic, amorphous silicon dioxide calcium-ion exchanged (7631-86-9)	10,000.00, Danio rerio	10,000.00, Daphnia magna	10,000.00 (72 hr), Scenedesmus subspicatus
Sulfur (7704-34-9)	866.00, Danio rerio	Not Available	Not Available
Gelatin (9000-70-8)	Not Available	Not Available	Not Available
Antimony trioxide (1309-64-4)	00, Pimephales promelas	423.45, Daphnia magna	0.74 (96 hr), Pseudokirchneriella subcapitata
Zinc oxide (1314-13-2)	Oncorhynchus mykiss	0.098, Daphnia magna	0.042 (72 hr), Pseudokirchneriella subcapitata
Rosin (8050-09-7)	1.00, Danio rerio	10.00, Daphnia magna	100.00 (72 hr), Selenastrum capricornutum

Persistence and degradability

There is no data available on the preparation itself.

Bioaccumulative potential

Not Measured

Mobility in soil

No data available.

Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Dispose of waste according to relative regulations. Labels should not be removed from containers until they have been cleaned. Do not cut, puncture, or weld on or near containers. Empty containers may contain hazardous residues. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Do not incinerate closed containers.



SAFETY DATA SHEET

Waterproof Matches

14. TRANSPORT INFORMATION

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
UN number	UN1944	UN1944	UN1944
UN proper shipping name	Matches, safety Ground shipments not subject to Hazardous Material Regulations (except marking) when shipped in accordance with 49 CFR173.186(c).	Matches, safety	Matches, safety
Transport hazard class(es)	DOT Hazard Class: 4.1 DOT Label: 4.1	IMDG: 4.1 Sub Class: Not Applicable	Air Class: 4.1
Packing group	III	III	III

Environmental hazards

IMDG

Marine Pollutant: Yes (Chloric acid, potassium salt)

Special precautions for user

No further information

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not Applicable

15. REGULATORY INFORMATION

Regulatory Overview

The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented. All ingredients of this product are listed on the TSCA (Toxic Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

US EPA Tier II Hazards

Fire:	No
Sudden Release of Pressure:	No
Reactive:	Yes
Immediate (Acute):	Yes
Delayed (Chronic):	Yes

EPCRA 311/312 Chemicals and RQs (lbs):

Antimony trioxide (1,000.00)

EPCRA 302 Extremely Hazardous:

Phosphorus

EPCRA 313 Toxic Chemicals:

Zinc oxide



SAFETY DATA SHEET

Waterproof Matches

California Proposition 65

WARNING: The combustion of wood, charcoal, and other fuels can expose you to chemicals including carbon monoxide and soot, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Proposition 65 - Carcinogens (>0.0%):

Antimony trioxide

Proposition 65 - Developmental Toxins (>0.0%):

(No Product Ingredients Listed)

Proposition 65 - Female Repro Toxins (>0.0%):

(No Product Ingredients Listed)

Proposition 65 - Male Repro Toxins (>0.0%):

(No Product Ingredients Listed)

N.J. RTK Substances (>1%):

Antimony trioxide
Chloric acid, potassium salt
Sulfur
Zinc oxide

Penn RTK Substances (>1%):

Synthetic, amorphous silicon dioxide calcium-ion exchanged
Antimony trioxide
Chloric acid, potassium salt
Sulfur
Zinc oxide

16. OTHER INFORMATION

The full text of the phrases appearing in section 3 is:

H228 Flammable Solid.
H271 May cause fire or explosion; strong oxidizer.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H351 Suspected of causing cancer.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

Prepared By:

Quantum Compliance
A Subsidiary of Logic Solutions, Inc.
2929 Plymouth Road, Suite 207
Ann Arbor, Michigan 48105, USA
(734) 930-0009
www.usequantum.com



SAFETY DATA SHEET

Waterproof Matches

Revision A

Revision Date 23-Jul-2014

Revision Note First version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

Revision B

Revision Date 11-Feb-2019

Revision Note In Section 2, Hazards Identification, added Flammable Solids and GHS pictogram.

Disclaimer Liability: Since conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this product. The information contained in this SDS is believed to be true and accurate. All statements or suggestions are made without warranty, express or implied, regarding the accuracy of the information, the hazards connected with the use of the product, or the results to be obtained from the use thereof. Compliance with all federal, state, and local laws and regulations remains the responsibility of the user.

User Responsibility: This SDS cannot cover all possible situations which the distributor, retailer, or end user may experience during transport, storage, processing, or use. The user should examine each aspect of his operation and determine if additional precautions should be taken. All health and safety information contained in this SDS should be provided to the user's employees or customers. It is the user's responsibility to use this information to develop appropriate work practice guidelines and employee training programs for his operation.

End of Safety Data Sheet