



**SAFETY DATA SHEET**

Issuing Date: 12/5/2015

Revision Date: 1/3/2018 Revision No.: 1

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

**Product identifier**

**Product Name** Safety Matches

**Other means of identification**

**UN-No.** UN1944

**Synonyms** Strike on Box Matches, Book Matches

**Recommended use of the chemical and restrictions on use**

**Recommended use** Matches

**Uses advised against** No information available

**Details of the supplier of the safety data sheet**

**Supplier Name** Royal Oak Enterprises, LLC

**Supplier Address**  
1 Royal Oak Ave  
Roswell  
GA  
30076  
US

**Supplier Phone Number** Phone:678-461-3200

**Supplier Email** CHEMTREC 1-800-424-9300

**Emergency telephone number**

**2. HAZARDS IDENTIFICATION**


**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) BUT IS ALSO COVERED BY EXCEPTION CODE OF FEDERAL REGULATION (CFR 173.186 SAFTEY MATCHES)

Flammable solids	Category 2
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**GHS Label elements, including precautionary statements**

**Emergency Overview**

<b>Signal Word</b>	<b>Warning</b>	
<b>Hazard Statements</b>	Flammable solids	
		
<b>Appearance:</b> wooden match	<b>Physical State:</b> Solid	<b>Odor:</b> none

**Precautionary Statements - Prevention**

Keep away from heat/sparks/open flames/hot surfaces - No smoking  
Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

**Precautionary Statements - Storage**

Store in a cool, dry location, away from heat, open flames or sparks, or flammable materials.

**Precautionary Statements - Disposal**

None

**Hazards not otherwise classified (HNOC)**

Smoke from fire may be irritating to lungs and eyes.

**Unknown Toxicity**

11% of the mixture consists of ingredient(s) of unknown toxicity

**Other Information**

None

**Interactions with Other Chemicals**

No information available

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS No.	Weight-%
<b>Match:</b>		
Poplar Extract	90083-05-9	88.80%
Water	7732-18-5	3.43%
Quartz	14808-60-7	3.03%
Maize Starch	9005-25-8	0.48%
Zinc Oxide	1314-13-2	0.097%
Glue	68476-37-9	2.670%
Colloidal Silicon Dioxide	99439-28-8	0.030%
Wollastonite	13983-17-0	0.120%
Chromate	94276-30-9	0.003%
Anthraquinone	84-65-1	0.001%
Potassium Dichromate	7778-50-9	0.0002%
Sodium Sulfate	7757-82-6	0.0023%
Plaster of Paris	26499-65-0	0.38%
Glass Fiber	65997-17-3	0.50%
Phosphorus	7723-14-0	0.453%

*Note: Exposure to wood dust is not expected during use and handling of this product*

#### 4. FIRST AID MEASURES

##### First aid measures

<b>Burns:</b>	Treat all thermal burns with appropriate first aid measures for degree of burn
<b>Respiratory Distress:</b>	Remove to fresh air and seek medical attention for smoke inhalation
<b>Eyes:</b>	Flush with fresh water for 15 minutes and seek medical attention.
<b>Ingestion:</b>	While potassium chlorate is classified as a harmful substance, the quantity present in a single match is very low (typically 16 mg in a kitchen match). With an LD50 of 1870 mg/kg of body weight, death may occur after ingestion of around 53 kitchen matches/pound of body weight, i.e. over 1000 matches for a 20 pound child. The quantities of matches are so large that the health risk is considered negligible.

##### Most important symptoms and effects, both acute and delayed

**Most important symptoms and Effects** Coughing and/ or wheezing from smoke inhalation. Difficulty in breathing.

##### Indication of any immediate medical attention and special treatment needed

**Notes to Physician** Treat symptomatically

##### Suitable Extinguishing Media

Water is the most effective extinguishant, but dry chemical, CO<sub>2</sub>, sand, earth, or regular foam can be used.

##### Unsuitable Extinguishing Media

Not known

##### Specific Hazards Arising from the Chemical

A large quantity of matches may burn rapidly with flare burning effect.

**Uniform Fire Code** FLAMMABLE SOLID: INORGANIC

##### Hazardous Combustion Products

Oxides of carbon, oxides of sulfur

##### Protective equipment and precautions for firefighters

Move containers from fire area if you can do it without risk

**5. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

**Personal Precautions**                      The likelihood of match head composition being released into the environment is low. If significant quantities of matches are released by breakage or spillage then remove all potential sources of ignition, salvage any undamaged product and wet down the remaining product before cleaning up.

**6. HANDLING AND STORAGE****Precautions for safe handling**

**Handling**                                      In storage, matches give off no toxic fumes or flammable gases. Matches do not spontaneously catch fire although fires can occur if the product is mishandled. Handling and storage requirements are such as to minimize sources of ignition, and other highly flammable materials.

**Conditions for safe storage, including any incompatibilities**

**Storage**                                        Store in a cool, dry location, away from heat, open flames or sparks, or flammable materials.

**Incompatible Products**                      None known based on available information

**7. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters**

**Exposure Guidelines**                        No special measures are required when handling matches.

## 8. PHYSICAL AND CHEMICAL PROPERTIES

### Physical and Chemical Properties

<b>Physical State</b>	Solid	<b>Odor</b>	None
<b>Appearance</b>	Matches	<b>Odor Threshold</b>	no information available
<b>Color</b>	Various		

<u>Property</u>	<u>Values</u>	<u>Remarks/ Method</u>
pH	No data available	None known
Melting/freezing point	No data available	None known
Boiling point/boiling range	No data available	None known
Flash Point	No data available	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air	No data available	None known
Upper flammability limit	No data available	None known
Lower flammability limit	No data available	None known
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	No data available	None known
Water Solubility	No data available	None known
Solubility in other solvents	No data available	None known
Partition coefficient:		
n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No data available	None known
Oxidizing Properties	No data available	None known
<u>Other information</u>		
Softening Point	No data available	None known
VOC Content (%)	No data available	None known
Particle Size	No data available	None known
Particle Size Distribution	No data available	None known

## 9. STABILITY AND REACTIVITY

### Reactivity

Stable under normal ambient conditions. They are liable to spontaneous combustion at temperatures exceeding 350°F

### Chemical stability

Stable under recommended storage conditions

### Possibility of Hazardous Reactions

If ignited in large quantities matches produce much smoke

### Hazardous Polymerization

Hazardous polymerization does not occur

### Conditions to avoid

Heat, flames, and sparks

### Incompatible materials

None known based on available information

### Hazardous Decomposition Products

Oxides of carbon, oxides of sulfur

**10. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

**Product Information** Product does not present an acute toxicity hazard based on known or supplied information

**Inhalation** Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Harmful by inhalation. (based on components).

**Eye Contact** Specific test data for the substance or mixture is not available. Expected to be an irritant based on components. Irritating to eyes. May cause redness, itching, and pain. May cause temporary eye irritation.

**Skin Contact** Specific test data for the substance or mixture is not available. Expected to be an irritant based on components. Irritating to skin. Prolonged contact may cause redness and irritation.

**Ingestion** Specific test data for the substance or mixture is not available. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed. (based on components).

**Component Information**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfur 7704-34-9	>3000 mg/kg (Rat)	>2000 mg/kg (Rabbit)	>9.23 mg/L (Rat) 4h
Potassium chlorate 3811-04-9	=1870 mg/kg (Rat)	<2000 mg/kg (Rabbit)	-

**Information on toxicological effects**

**Symptoms** Coughing and/ or wheezing from smoke inhalation.

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

**Sensitization** No information available

**Mutagenic Effects** No information available

**Carcinogenicity** Contains no ingredient listed as a carcinogen

**Reproductive Toxicity** No information available

**STOT - single exposure** No information available

**STOT - repeated exposure** No information available

**Chronic Toxicity** No known effect based on available information

**Target Organ Effects** Respiratory system from smoke inhalation

**Aspiration Hazard** No information available

**Numerical measures of toxicity Product Information**

The following value is calculated based on App A (A.1.3.6.2.4) of the HazCom regulation

**ATEmix (oral)**  
19,299 mg/kg

## 11. ECOLOGICAL INFORMATION

### Ecotoxicity

The environmental impact of this product has not been fully investigated

### Persistence and Degradability

No information available

### Bioaccumulation

No information available

### Other adverse effects

No information available

## 12. DISPOSAL CONSIDERATIONS

### Waste treatment methods

<b>Disposal methods</b>	Should not be released into the environment. Dispose of contents/containers in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
<b>Contaminated Packaging</b>	Dispose of contents/containers in accordance with local regulations
<b>US EPA Waste Number</b>	D001
<b>California Hazardous Waste Codes</b>	181

## 13. TRANSPORT INFORMATION

### DOT

<b>UN-No.</b>	UN1944
<b>Proper Shipping Name</b>	matches, safety
<b>Hazard Class</b>	4.1
<b>Packing Group</b>	III
<b>Description</b>	UN1944, MATCHES, SAFETY, 4.1, III
<b>Emergency Response Guide Number</b>	133

### IDG

<b>UN-No.</b>	UN1944
<b>Proper Shipping Name</b>	MATCHES, SAFETY
<b>Hazard Class</b>	4.1
<b>Packing Group</b>	III
<b>Description</b>	UN1944, MATCHES, SAFETY, 4.1, III

### MEX

<b>UN-No.</b>	UN1944
<b>Proper Shipping Name</b>	Matches, safety
<b>Hazard Class</b>	4.1
<b>Packing Group</b>	III
<b>Description</b>	UN1944 Matches, safety, 4.1, III

### ICAO

<b>UN-No.</b>	UN1944
<b>Proper Shipping Name</b>	Matches, safety
<b>Hazard Class</b>	4.1
<b>Packing Group</b>	iii
<b>Description</b>	UN1944, Matches, safety, 4.1, III

**IATA**

<b>UN-No.</b>	UN1944
<b>Proper Shipping Name</b>	MATCHES, SAFETY
<b>Hazard Class</b>	4.1
<b>Packing Group</b>	iii
<b>Description</b>	UN1944, MATCHES, SAFETY, 4.1, III

**IMDG/IMO**

<b>UN-No.</b>	UN1944
<b>Proper Shipping Name</b>	MATCHES, SAFETY
<b>Hazard Class</b>	4.1
<b>Packing Group</b>	iii
<b>EmS No.</b>	F-A, S-1
<b>Description</b>	UN1944, MATCHES, SAFETY, 4.1, III

**RID**

<b>UN-No.</b>	UN1944
<b>Proper Shipping Name</b>	Matches, safety
<b>Hazard Class</b>	4.1
<b>Packing Group</b>	III
<b>Classification code</b>	F1
<b>Description</b>	UN1944 Matches, safety, 4.1, III

**ADR**

<b>UN-No.</b>	UN1944
<b>Proper Shipping Name</b>	Matches, safety
<b>Hazard Class</b>	4.1
<b>Packing Group</b>	III
<b>Classification code</b>	F1
<b>Description</b>	UN1944 Matches, safety, 4.1, III

**ADN**

<b>UN-No.</b>	UN1944
<b>Proper Shipping Name</b>	Matches, safety
<b>Hazard Class</b>	4.1
<b>Packing Group</b>	III
<b>Classification code</b>	F1
<b>Special Provisions</b>	293
<b>Description</b>	UN1944 Matches, safety, 4.1, III
<b>Hazard Labels</b>	4.1
<b>Limited Quantity</b>	LQ9

**NOTE:** According to 49 CFR 173.186 (c) Safety matches and wax "Vesta" matches must be tightly packed in securely closed inner packagings to prevent accidental ignition under conditions normally incident to transportation, and further packed in outer fiberboard, wooden, or other equivalent outer packagings. These matches in outer packagings not exceeding 23 kg (50 pounds) gross weight are not subject to any other requirement (except marking) of this subchapter. These matches may be packed in the same outer packagings with materials not subject to this subchapter.



**14. REGULATORY INFORMATION**

**International Inventories**

TSCA Complies  
 DSL all components are listed either on the DSL or NDSL.

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List.

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	No
<b>Chronic Health Hazard</b>	No
<b>Fire Hazard</b>	Yes
<b>Sudden release of pressure hazard</b>	No
<b>Reactive Hazard</b>	No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

Chemical Name	NJ	MA	PA	RI	IL
Potassium chlorate 3811-04-9	X	X	X		
Sulfur 7704-34-9	X	X	X		

**International Regulations**

**Canada**  
**WHMIS Hazard Class**  
 B4 - Flammable solid



<b>16. OTHER INFORMATION</b>
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<b>NEPA</b>	Health Hazards 1	Flammability 4	Instability 2	Physical & Chemical Hazards
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<b>HMIS</b>	Health Hazards 1	Flammability 4	Physical Hazard 2	Personal Protection X
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<b>Prepared by</b>	Royal Oak Enterprises 1 Royal Oak Ave Roswell GA 30076	SCH
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<b>Issuing Date</b>	12/5/2018
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<b>Revision Date</b>	1/3/2018
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<b>Revision Note</b>	Updated contact information
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**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.

**End of Safety Data Sheet**