

# SAFETY DATA SHEET

Issuing Date: 30-Mar-2017

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Revision No.: 2

## 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 Book Matches, Matchbooks, Safety 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 D.D. Bean & Sons Co

Supplier Address 207 Peterborough Street  
Jaffrey, NH 03452

Supplier Phone Number Phone:800-326-8311

Supplier Email [info@ddbean.com](mailto:info@ddbean.com)

Emergency telephone number INFOTRAC 1-800-535-5053 or 1-352-323-3500

## 2. HAZARDS IDENTIFICATION

### Classification

Flammable solids
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Category 2
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### GHS Label elements, including precautionary statements for consumer products: NONE

OSHA 29 CFR 1910.1200 (b)(5) This section does not require labeling of the following chemicals: (b)(5)(v) Any consumer product or hazardous substance as those terms are defined in the Consumer Product Safety Act (15 U.S.C. 2051 et seq.) and Federal Hazardous Substances Act (15 U.S.C. 1261 et seq.) respectively, when subject to a consumer product safety standard or labeling requirement of those Acts, or regulations issued under those Acts by the Consumer Product Safety Commission;.

The Federal Hazardous Substances Act is implemented per CPSC 16 CFR 1500. And 16 CFR 1500.83 *Exemptions for small packages, minor hazards, and special circumstances*. 16 CFR 1500.83(a)(2) Common matches, including book matches, wooden matches, and so-called "safety" matches are exempt from labeling requirements of section 2(p)(1) of the act (repeated in §1500.3(b)(14)(i)) insofar as they apply to the product being considered hazardous because of being an "extremely flammable solid" or "flammable solid" as defined in §1500.3(c)(6)(v) and (vi).

Safety matches are regulated as a consumer product by the Consumer Products Safety Commission, 16 CFR 1202, *Safety Standard for Matchbooks*. This standard requires the following labeling and marking:

16 CFR § 1202.6 Marking. (a) The manufacturer's or private labeler's name and city or a symbol which will identify the name and city shall appear on the matchbook. In addition, every private labeler must label the matchbook with a code which enables it to identify, if requested, the manufacturer of the product. (b) Boxes or cartons in which two or more caddies are shipped shall be marked "For safety, store in a cool, dry place."

#### **Precautionary Statements - Storage**

Store in a cool, dry place

#### **Precautionary Statements - Disposal**

None

#### **Hazards not otherwise classified (HNOC)**

Smoke from fire may be irritating to lungs and eyes.

#### **Unknown Toxicity**

None known

#### **Other Information**

Safety matches are a consumer product and regulated by the U.S. Consumer Products Safety Commission. Labeling/marketing requirements are outlined in 16 CFR 1202, *Safety Standard for Matches*.

Safety matches are shipped under DOT regulations, 49 CFR 173.186(c) and are marked per that regulation.

#### **Interactions with Other Chemicals**

No information available

### **3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Chemical Name</b>	<b>CAS No.</b>	<b>Weight-%</b>
<b>Match:</b>		
Sulfur	7704-34-9	0.4%
Potassium chlorate	3811-04-9	4%
<b>Striker Strip:</b>		
Amorphous Red Phosphorous	7723-14-0	<1.0 %

### **4. FIRST AID MEASURES**

#### **First aid measures**

**Burns:** Treat all thermal burns with appropriate first aid measures for degree of burn

**Respiratory Distress:** Remove to fresh air and seek medical attention for smoke inhalation

**Eyes:** Flush with fresh water for 15 minutes and seek medical attention.

**Ingestion:** While potassium chlorate is classified as a harmful substance, the quantity present in a single match is very low (typically 8 mg in a single match). With an LD50 of 1870 mg/kg of body weight, death may occur after ingestion of around

106 matches/pound of  
body weight, i.e. over  
2,125 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

**5. FIRE-FIGHTING MEASURES****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

**6. 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.

**7. 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** For safety, store in a cool, dry place, away from heat, open flames or sparks, or flammable materials.

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

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Guidelines

No special measures are required when handling matches.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical and Chemical Properties

Physical State	Solid	Odor	None
Appearance	Matches	Odor Threshold	no information available
Color	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

## 10. STABILITY AND REACTIVITY

### Reactivity

Stable under normal ambient conditions. They may 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

**11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

<b>Product Information</b>	Product does not present an acute toxicity hazard based on known or supplied information
<b>Inhalation</b>	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Harmful by inhalation. (based on components).
<b>Eye Contact</b>	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.
<b>Skin Contact</b>	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.
<b>Ingestion</b>	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**

<b>Sensitization</b>	No information available
<b>Mutagenic Effects</b>	No information available
<b>Carcinogenicity</b>	Contains no ingredient listed as a carcinogen
<b>Reproductive Toxicity</b>	No information available
<b>STOT - single exposure</b>	No information available
<b>STOT - repeated exposure</b>	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

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

The environmental impact of this product has not been fully investigated. 88% of product is recycled paper.

**Persistence and Degradability**

No information available

**Bioaccumulation**

No information available

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS****Waste treatment methods****Disposal methods**

Should not be released into the environment. Dispose of contents/containers in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Used matchbooks may be recycled as paperboard.

**Contaminated Packaging**

Dispose of contents/containers in accordance with local regulations

**US EPA Waste Number****California Hazardous Waste Codes****14. 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

Packaging exception 49 CFR 173.186(c) allows for no placards.

**TDG**

<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

**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

**15. 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**

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

**International Regulations**

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



**16. OTHER INFORMATION**

<b><u>NEPA</u></b>	Health Hazards 1	Flammability 4	Instability 2	Physical & Chemical Hazards
<b><u>HMS</u></b>	Health Hazards 1	Flammability 4	Physical Hazard 2	Personal Protection X

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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**