

SAFETY DATA SHEET

Issuing Date: 1-Jan-2008

Revision Date: 5-5-2015

Revision No.: 0

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

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

2. HAZARDS IDENTIFICATION

Classification

| | |
|------------------|------------|
| Flammable solids | Category 2 |
|------------------|------------|

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

| Chemical Name | CAS No. | Weight-% |
|---------------------------|-----------|----------|
| Match: | | |
| Sulfur | 7704-34-9 | 0.4% |
| Potassium chlorate | 3811-04-9 | 4% |
| Striker Strip: | | |
| 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, CO2, 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**

| | |
|----------------------------|---|
| 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

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

D001

California Hazardous Waste Codes

181

14. transport information**DOT****UN-No.**

UN1944

Proper Shipping Name

matches, safety

Hazard Class

4.1

Packing Group

III

Description

UN1944, MATCHES, SAFETY, 4.1, III

Emergency Response**Guide Number**

133

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

TDG

| | |
|-----------------------------|-----------------------------------|
| UN-No. | UN1944 |
| Proper Shipping Name | MATCHES, SAFETY |
| Hazard Class | 4.1 |
| Packing Group | III |
| Description | UN1944, MATCHES, SAFETY, 4.1, III |

MEX

| | |
|-----------------------------|----------------------------------|
| UN-No. | UN1944 |
| Proper Shipping Name | Matches, safety |
| Hazard Class | 4.1 |
| Packing Group | III |
| Description | UN1944 Matches, safety, 4.1, III |

IATA

| | |
|-----------------------------|-----------------------------------|
| UN-No. | UN1944 |
| Proper Shipping Name | MATCHES, SAFETY |
| Hazard Class | 4.1 |
| Packing Group | iii |
| Description | UN1944, MATCHES, SAFETY, 4.1, III |

IMDG/IMO

| | |
|-----------------------------|-----------------------------------|
| UN-No. | UN1944 |
| Proper Shipping Name | MATCHES, SAFETY |
| Hazard Class | 4.1 |
| Packing Group | iii |
| EmS No. | F-A, S-1 |
| Description | 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

| | |
|--|-----|
| Acute Health Hazard | No |
| Chronic Health Hazard | No |
| Fire Hazard | Yes |
| Sudden release of pressure hazard | No |
| Reactive Hazard | 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



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|------------------------------|
| 16. OTHER INFORMATION |
|------------------------------|

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|-------------|------------------|----------------|---------------|-----------------------------|
| NEPA | Health Hazards 1 | Flammability 4 | Instability 2 | Physical & Chemical Hazards |
|-------------|------------------|----------------|---------------|-----------------------------|

| | | | | |
|------------|------------------|----------------|-------------------|-----------------------|
| HMS | Health Hazards 1 | Flammability 4 | Physical Hazard 2 | Personal Protection X |
|------------|------------------|----------------|-------------------|-----------------------|

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|--------------------|---|
| Prepared by | D.D. Bean & Sons Co. P.O. Box 348 Jaffrey, NH 03452 |
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| Issuing Date | 01/1/2008 |
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| Revision Date | 5/5/2015 |
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| Revision Note | SDS format |
|----------------------|------------|

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