

Issuing Date: 1-Jan-2013

Revision Date: 1-May-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 Atlas Match

Supplier Address 1801 S. Airport Circle
Eules, TX 76040

Supplier Phone Number Phone: 817-354-7474

Supplier Email custserv@atlasmatch.com

Emergency telephone number 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable solids	Category 2
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GHS Label elements, including precautionary statements

Emergency Overview

Signal Word	Warning
Hazard Statements Flammable solids	
	
Appearance: Book match	Physical State: Solid
	Odor: 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-%
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 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

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

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.
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

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

ICAO

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

RID

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

ADR

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

ADN

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

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



16. OTHER INFORMATION

NEPA	Health Hazards 1	Flammability 4	Instability 2	Physical & Chemical Hazards
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HMS	Health Hazards 1	Flammability 4	Physical Hazard 2	Personal Protection X
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Prepared byAtlas Match
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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