

SAFETY DATA SHEET

1.1. Product:

Woodstick safety matches

1.2. Identification and Company:

Europe Match GmbH
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1.3. In emergency telephone:

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2. Composition and ingredients:

Stick: Aspen or poplar stick impregnated with ammonium phosphate and paraffin wax.
Head: A mixture of potassium chlorate with animal glue (technical gelatine) together with inert materials to moderate combustion, and minor amounts of red amorphous phosphorus and colorants.

	<i>CAS-No.</i>	<i>Concentration</i>	
	Potassium chlorate	3811-04-9	40-70%
	Red amorphous phosphorus	7723-14-0	<2%
Box:	The side panel(s) are coated with a special composition containing amorphous phosphorus.		
Book:	Stripe on the folder is coated with a special composition containing amorphous phosphorus.		

3. Hazard Identification:

Safety matches pose few hazards in normal use. Safety matches will not ignite, in normal circumstances, unless they are rubbed on the specially prepared striking surface provided on the box or book. In exceptional circumstances, such as severe impact or heavy striking on a smooth, non-thermally conducting surface, safety matches can ignite. Matches do not ignite when heated unless the temperature exceeds 180°C.

The main hazard associated with matches arises because they are readily combustible and misuse may result in burns or uncontrolled fires.

4. First aid measures:

Unless large quantities of matches are ingested (>10 matches per kilo of body weight) there is little risk to health following ingestion. If more than this quantity is ingested seek medical attention.

Burns resulting from mishandling should be treated as normal burns. Place injured part under running cold water for 10 minutes. Do not break blisters or remove loose skin. Do not apply ointments or lotions. Dress area with clean, non-fluffy, sterile material. If in doubt seek medical attention.

5. Firefighting measures:

Water is the most effective extinguishant for match fires. Match fires produce much smoke containing small quantities of acidic gases such as phosphorus oxides. In large conflagrations involving matches breathing apparatus should be used.

6. Accidental release measures:

If significant quantities of matches are released by breakage of the packaging then remove all sources of ignition, salvage any undamaged product and wet the remaining product before clearing up.

7. Handling and storage:

In storage, matches give off no toxic or flammable gases. Matches do not spontaneously catch fire although fires can occur if the product is mishandled. Matches should be stored in a cool dry place away from potential sources of ignition and other highly flammable materials. They should not be stacked higher than 4.5 metres above the ground. Adequate space around the product should be left to minimise the chances of impact damage from, for example, manoeuvring fork lift trucks.

It should be noted that any ignition of matches in intact closed boxes, displays and cases invariably self extinguishes because there is insufficient oxygen in the closed packaging. Only when the case or packaging bursts open is there any danger of sustained combustion taking place.

8. Exposure controls/personal protection:

No special measures are required when handling matches.

9. Physical and chemical properties:

Appearance -	Boxes or books containing wooden sticks carrying an ignition tip.
Odour -	Low, woody smell.
Flammability -	Matches are flammable and may ignite at temperatures in excess of 180 °C.
Solubility -	Approximately 10 mg of each match is soluble in water.

10. Stability and reactivity:

Matches are perfectly stable under all ambient conditions and they have a long shelf life. If they become wet and subsequently dry out the burning characteristics of the product may be adversely affected.

11. Toxicological information::

Most of the constituents of matches are inert non hazardous materials. The hazardous materials present are potassium chlorate and red amorphous phosphorus.

The lowest lethal dose in humans for potassium chlorate is quoted as LDLo = 429 mg/kg body weight (Registry of Toxic Effects of Chemical Substances, published by National Institute for Occupational Safety and Health, US).NB. Each match head contains approximately 10 mg of potassium chlorate.

Red amorphous phosphorus is widely regarded as being non toxic. Hoechst, a leading supplier of this material quote LD50 oral – rat = 15.000 mg/kg body weight.

12. Ecological information:

Europe Match safety matches contain no toxic heavy metals and they do not emit sulphur dioxide when burned. They have very limited impact on the environment being made of mostly natural raw materials. Potassium chlorate is a herbicide but on combustion this is converted into the ecologically harmless compound potassium chloride. Used matches and boxes biodegrade rapidly in the environment.

13. Disposal considerations:

Large quantities of matches can be safely disposed of to landfill at an approved site or by controlled combustion at an approved incinerator.

14. Transport information:

Matches represent a minimal hazard during transport. The UN number for safety matches is 1944 and the classification is 4.1 Flammable solid.

15. Regulatory information:

Matches are classified as articles and do not require labelling for supply. Articles are not required to have safety data sheets in accordance with the Directive 91/155/ECC and this sheet is provided as a convenience to our customers.

16. Other information:

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is only to describe the product. The data does not signify any warranty with regard to the products' properties.