

SAFETY DATA SHEET

1.1. Product : Woodstick safety matches

2. 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 . 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 hazards associated with matches arise from the fact they are readily combustible and misuse may result in burns or uncontrolled fires.

3. Composition and ingredients

Stick: Aspen stick impregnated with ammonium phosphate and paraffin wax.

Head: A mixture of potassium chlorate with animal glue or gelatine with inert materials to moderate combustion , and minor amounts of red amorphous phosphorus and colorants.

	CAS no.	Concentration
Potassium chlorate	3811-04-9	40-70%
Red amorphous phosphorus	7723-14-0	< 2%

Box: the side (s) coated with a composition containing amorphous phosphorus

Book: stripe on folder coated with a composition containing amorphous phosphorus

4. First aid measures

Unless large quantities of matches are ingested (>10 matches per kilogram 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 packaging then remove all potential ignition sources, 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 1.2 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

8.1 Control parameters

In accordance with the Regulation of the Minister of Labor and Social Policy of June 6, 2014 (Journal of Laws of 2014, item 817) on the highest permissible concentrations and intensities of factors harmful to health in the work environment - not specified.

8.2 Exposure controls

Applied technical control measures

Storage rooms and workplaces must be ventilated to keep the concentration of vapours in the air below their limit values.

Individual protection measures

Eye and face protection: Not really required

Skin protection : Not really required

Respiratory protection : It is not required under normal operating conditions.

The personal protective equipment used should meet the requirements of the regulation on the essential requirements for personal protective equipment (Journal of Laws No. 259, item 2173 of 2005) Environmental exposure control Do not discharge into drains or the environment.

General safety and hygiene instructions: Follow good personal hygiene practices.

9. Physical and chemical properties

Appearance : boxes containing wooden sticks carrying an ignition tip. Odour : Low, woody smell
Flammability : Matches are flammable and may ignite when temperature exceeds 180°C Solubility :
Approximately 10 mg of each match is soluble in water.

10. Stability and reactivity

Stability: The product is stable under all ambient conditions and long shelf-life (> 5 years).

Conditions to avoid: Avoid sources of heat , radiation , sparks. The product is sensitive to excessive moisture

11. Toxicological information Most of the components of matches are inert non hazardous materials. The hazardous materials 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 = 15000 mg/kg body weight.

12. Ecological information

Our safety matches contain no toxic heavy metals and they do not emit sulphur dioxide when burned. The matches have very limited impact on the environment as made from 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/EEC and this sheet is provided as a convenience to our customers.

16. Other information

These data are based on current knowledge and experience. The purpose of this Safety Data Sheet is only to describe the product.