

**SIGMA-ALDRICH****SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

Version 3.0 Revision Date 01.01.2009

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

Product name : Menadione

Product Number : M5625

Brand : Sigma

Company : Sigma-Aldrich (Shanghai) Trading Co.,Ltd  
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**2. HAZARDS IDENTIFICATION****Risk advice to man and the environment**

Harmful if swallowed. Irritating to eyes, respiratory system and skin.

**Other hazards which do not result in classification**

Possible Sensitizer

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Synonyms : 2-Methyl-1,4-naphthoquinone  
Vitamin K3

Formula : C<sub>11</sub>H<sub>8</sub>O<sub>2</sub>

Molecular Weight : 172,18 g/mol

CAS-No.	EC-No.	Index-No.	Classification	Concentration
<b>menadione</b>				
58-27-5	200-372-6	-	Xn, R22 - R36/37/38	-

**4. FIRST AID MEASURES****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled**

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**5. FIRE-FIGHTING MEASURES****Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for fire-fighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

**Environmental precautions**

Do not let product enter drains.

**Methods for cleaning up**

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

**7. HANDLING AND STORAGE****Handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

**Storage**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Light sensitive.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Personal protective equipment****Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

**Eye protection**

Safety glasses

**Skin and body protection**

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

Form                      crystalline

**Safety data**

pH	no data available
Melting point	105 - 107 °C
Boiling point	no data available
Flash point	no data available
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Water solubility	no data available

**10. STABILITY AND REACTIVITY****Storage stability**

Stable under recommended storage conditions.

**Materials to avoid**

Strong oxidizing agents

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.

**11. TOXICOLOGICAL INFORMATION****Acute toxicity**

LD50 Oral - rat - 500 mg/kg

LD50 Intraperitoneal - rat - 75 mg/kg

LD50 Intraperitoneal - mouse - 50 mg/kg

LD50 Subcutaneous - mouse - 138 mg/kg

**Irritation and corrosion**

no data available

**Sensitisation**

May produce an allergic reaction.

**Chronic exposure**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Potential Health Effects**

<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin irritation.
<b>Eyes</b>	Causes eye irritation.
<b>Ingestion</b>	Harmful if swallowed.
<b>Target Organs</b>	Kidney, Liver, Blood,

**Additional Information**

RTECS: QL9100000

**12. ECOLOGICAL INFORMATION****Elimination information (persistence and degradability)**

**Ecotoxicity effects****Further information on ecology****13. DISPOSAL CONSIDERATIONS****Product**

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

**14. TRANSPORT INFORMATION****ADR/RID**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

**15. REGULATORY INFORMATION****Labelling according to EC Directives****Hazard symbols**

Xn

Harmful

**R-phrases**

R22

Harmful if swallowed.

R36/37/38

Irritating to eyes, respiratory system and skin.

**S-phrases**

S26

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36

Wear suitable protective clothing.

**16. OTHER INFORMATION****Further information**

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