Material Safety Data Sheet
Menadione (Vitamin K3) MSDS

1. SUBSTANCE IDENTIFICATION

1.1. Product Name: Menadione
1.2. Description: Menadione is a fat-soluble vitamin manufactured through chemical synthesis.
1.3. Chemical Formula: C11H8O2
1.4. Molecular weight: 172.18
1.5. CAS #: 58-27-5
1.6. EINECS #: 200-372-6
1.7. Manufactured by: Foodchem International Corporation, Shanghai China.
1.9. Usage: In food as nutritional supplements

2. Composition

2.1. Menadione: >98%
2.2. Hazardous impurities: SODIUM BISULFITE (%) ≤ 5.0, TEST METHOD IODIMETRY, WATER (%) ≤ 13.0, TEST METHOD KARL FISHER

3. Physical/Chemical Characteristics

3.1. Physical State: Powder
3.2. Appearance: Yellowish crystalline powder
3.3. Odor: Slight
3.4. pH: Not available
3.5. Melting point/range: 105-107 °C
3.6. Boiling point: 304.5 °C @ 760mmHg
3.7. Bulk density: 1.225g/cm3

4. Stability/Reactivity

4.1. Chemical Stability: Stable under normal temperatures and pressures
4.2. Shelf Life: 24 months period
4.3. Hazardous decomposition: carbon oxides (CO, CO2).
4.4. Hazardous polymerization: Will not occur
4.5. Incompatible with: Not available

5. Handling/Storage

5.1. Storage: Store in a cool and dry place and Keep away from strong light and heat.
5.2. Handling precaution: Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. In case of insufficient ventilation, wear suitable respiratory equipment.

6. Exposure Control

6.1. Engineering Controls: Safety shower and eye bath. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations below their respective threshold limit value.
6.2. Respiratory protection: NIOSH/MSHA or European Standard EN 149 approved respirator
6.3. Eye Protection: Protective eyeglasses or chemical safety goggles
6.4. Skin Protection: Wear appropriate protective gloves and clothes to minimize skin contact.
6.5. Other: Consult professionals if Menadione need to be handled under some special conditions.
7. Hazards Identification

- **7.1. Hazardous overview:** Menadione is extremely hazardous in case of skin contact (irritant), of ingestion. Very hazardous in case of eye contact (irritant), of inhalation.

- **7.2. Contact with eyes:** May cause eye irritation.

- **7.3. Contact with skin:** May cause skin irritation.

- **7.4. Ingestion:** May irritate the tissues of the mouth, esophagus, and other tissues of the digestive system.

- **7.5. Inhalation:** May cause irritation to the respiratory tract and gastrointestinal system.

- **7.6. Other:** Not applicable

8. First Aid Measures

- **8.1. Contact with eyes:** Flush immediately with plenty of water for 15 minutes and seek medical advice.

- **8.2. Contact with skin:** After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap.

- **8.3. Ingestion:** Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested.

- **8.4. Inhalation:** Remove from exposure, move to fresh air and seek medical advice immediately.

9. Fire and Explosion Data

- **9.1. General information:** May be combustible at high temperature.

- **9.2. Flash point:**

- **9.3. Ignition control:** Not applicable

- **9.4. Dust control:** Keep the handling area with adequate ventilation.

- **9.5. Extinguishing Media:** Water spray, dry chemical or carbon dioxide

- **9.6. Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container.

10. Transport Information

- **10.1. No special requirements and no restrictions on transportation by land, sea or air.

11. Ecological Information

- **11.1. Menadione is fully biodegradable and the products of degradation are as toxic as the original product.

12. Other Information

- **12.1. This Safety Data Sheet of Menadione is based upon a limited review of Foodchem International Corporation files and standard Toxicological handbooks. We make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Foodchem International Corporation be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, however arising, even if Foodchem International Corporation has been advised of the possibility of such damages.

Website: http://www.foodchemadditives.com

E-Mail: inquiry@foodchem.cn

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