

Section 1. Product and Company Identification

**Product Name** DMDM Hydantoin  
**CAS Number** 6440-58-0

**Parchem - fine & specialty chemicals**  
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Section 2. Hazards Identification

**Classification of the substance or mixture**

**Classification of the Substance or Mixture according to Regulation (EC) 1272/2008**

Skin Sens. 1, H317

Carc. 1B, H350

**GHS Label Elements**

**Pictograms:**



**Signal word:** DANGER

**Hazard and precautionary statements**

**Hazard Statements**

H317 - May cause an allergic skin reaction.

H350 - May cause cancer.

**Precautionary Statements**

**Prevention**

P201 - Obtain special instructions before use.

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.

P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing

**Response**

P308 + P313 - IF exposed or concerned: Get medical attention.

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention.



**Other Hazards:** None known

Section 3. Composition / Information on Ingredients

**Common Name** DMDM Hydantoin  
**Synonym(s)** 1,3-Dihydroxymethyl-5, 5-dimethylhydantoin  
**CAS Number** 6440-58-0

COMPONENT	CAS NUMBER	CONCENTRATION
DMDM Hydrantoin	6440-58-0	54 – 56%
Water	7732-18-5	44 – 46%
Formaldehyde	50-00-0	< 2%

Section 4. First Aid Measures

**Description of First-Aid Measures**

**Eye contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

**Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

**Skin contact:** Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion:** Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Protection of First Aiders:** No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.



### Most important Symptoms and Effects

#### Potential acute health effects

**Eye contact:** No known significant effects or critical hazards

**Inhalation:** No known significant effects or critical hazards

**Skin contact:** May cause an allergic skin reaction

**Ingestion:** No known significant effects or critical hazards

#### Over-exposure signs/symptoms

**Eye contact:** No specific data

**Inhalation:** No specific data

**Skin contact:** Adverse symptoms may include irritation or redness

**Ingestion:** No specific data

#### Indication of any immediate Medical Attention and special Treatment needed

**Notes to physician:** In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

### Section 5. Firefighting Measures

**Flash Point:** > 200°F

**Extinguishing Media:** Use dry chemical, CO<sub>2</sub>, alcohol-resistant foam or water spray (fog). Use an extinguishing agent suitable for the surrounding fire.

**Special Firefighting Procedures:** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special Firefighting Equipment:** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

#### Special Hazards arising from the Substance or Mixture

**Hazards from the substance mixture:** Hazardous decomposition may occur.

**Hazardous thermal decomposition products:** Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides

### Section 6. Accidental Release Measures

**Personal precautions, Protective Equipment, and Emergency Procedures: For non-emergency personnel:** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.



**For emergency responders:** If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental Precautions:** Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and Material for Containment and Cleaning Up

**Small spill:** Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material, and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill:** Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

### Reference to other Sections

Section 8: Exposure control/personal protection.  
Section 13: Waste treatment.

## Section 7. Handling and Storage

**Precautions for Safe Handling:** Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on General Hygiene:** Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for Safe Storage, including any Incompatibilities** Storage temperature: >15°C (>59°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure Controls / Personal Protection

**Control Parameters**

**Occupational exposure limits**

Product/Ingredient name	Exposure limit values
Formaldehyde	EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 2.5 mg/m <sup>3</sup> 15 minutes. STEL: 2 ppm 15 minutes. TWA: 2 ppm 8 hours. TWA: 2.5 mg/m <sup>3</sup> 8 hours.

**Recommended monitoring procedures:** If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required

**Appropriate Engineering Controls:** If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Personal Protective Equipment**

**Hygiene measures:** Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection:** Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**Hand protection:** Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection:** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection:** Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection:** Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Environmental exposure controls:** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters, or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

#### Section 9. Physical and Chemical Properties

##### Information on basic Physical and Chemical Properties

**Appearance:** Clear Liquid

**pH:** 6.5 - 7.5

**Odor:** Odorless

**Percent Volatile (by weight):** 45

**Solubility:** Soluble in water

**Specific Gravity:** 1.152 @ 25°C

**Solubility:** Easily soluble in the following materials: cold water and hot water.

#### Section 10. Stability and Reactivity

**Chemical Stability:** Stable

**Incompatible Materials:** Reactive or incompatible with the following materials: strong acids, strong alkalis, oxidizing materials.

**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, nitrogen oxides.

**Possibility of Hazardous Reactions:** Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to Avoid:** Due to gaseous decomposition products, overpressure can occur in tightly sealed containers. Keep away from heat, sparks and flame.

#### Section 11. Toxicological Information

##### Potential Acute Health Effects

**Eye contact:** No known significant effects or critical hazards

**Inhalation:** No known significant effects or critical hazards

**Skin contact:** May cause an allergic skin reaction

**Ingestion:** No known significant effects or critical hazards

### Symptoms related to Physical, Chemical, and Toxicological Characteristics

**Eye contact:** No specific data

**Inhalation:** No specific data

**Skin contact:** Adverse symptoms may include irritation or redness

**Ingestion:** No specific data

### Section 12. Ecological Information

**Information on Ecological Effects:** No information available

### Section 13. Disposal Considerations

**Waste Treatment Methods:** Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

### Section 14. Transport Information

**ADR/RID:** Not regulated.

**ADN:** Not regulated.

**IMDG:** Not regulated.

**IATA:** Not regulated

### Section 15. Regulatory Information

#### Safety, Health, and Environmental Regulations/legislation Specific for the Substance or Mixture

EU Regulation (EC) No. 1907/2006 (REACH)

#### Annex XIV - List of substances subject to authorization

**Annex XIV Substances of very high concern:** None of the components are listed

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles: Restricted to professional users

#### Other EU Regulations

**Ingredient:** Formaldehyde

**Carcinogenic Effects:** Carc. 1B, H350

**Mutagenic Effects:** Muta. 2, H341

**Fertility Effects:** -

#### International Lists

##### National Inventory

**Australia:** All components are listed or exempted.

**Canada:** All components are listed or exempted.

**China:** All components are listed or exempted.

**Japan:** All components are listed or exempted.





**Republic of Korea:** All components are listed or exempted.

**Malaysia:** Not determined.

**New Zealand:** All components are listed or exempted.

**Philippines:** All components are listed or exempted.

**Taiwan:** All components are listed or exempted.

**United States:** All components are listed or exempted.

**Chemical Safety Assessment** This product contains substances for which Chemical Safety Assessments are still required.

Section 16. Other Information

**Disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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