

DMDM Hydantoin

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 /
March 26, 2012 / Rules and Regulation

Revision Date: 31-Dec-2024
Supersedes: 21-Sep-2023

1 PRODUCT & COMPANY IDENTIFICATION

Product Name: DMDM Hydantoin
Synonyms: No data available
INCI Name: DMDM Hydantoin, Water
CAS Number: 6440-58-0, 7732-18-5
Formula: No data available
Product Form: Liquid
Product Use: Cosmetic use

Distributor: MakingCosmetics Inc.
Address: 10800 231st Way NE
Redmond, WA 98053 (USA)
Phone / Fax: 425-292-9502 / 425-292-9601
Web: www.makingcosmetics.com

Emergency Telephone Number: 1-800-424-9300 (Chemtrec)

2 HAZARDS IDENTIFICATION

Classification:

Acute Toxicity - Oral: Category 3.
Acute Toxicity - Dermal: Category 3.
Acute Toxicity - Inhalation: Category 3.
Acute Toxicity - Oral: Category 4.
Carcinogenicity: Category 1B.
Serious Eye Damage/Eye Irritation: Category 1.
Germ Cell Mutagenicity: Category 1B.
Skin Corrosion: Category 1B.
Skin Sensitization: Category 1.
Specific target organ toxicity - Single Exposure: Category 3.
DANGER!

Signal Word:

Hazard Pictograms:



Hazard Statements:

H301: Toxic if swallowed.
H302: Harmful if swallowed.
H311: Toxic in contact with skin.
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H331: Toxic if inhaled.
H335: May cause respiratory irritation.
H341: Suspected of causing genetic defects.
H350: May cause cancer.

Precautionary Statements:

P201: Obtain special instructions before use.
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P362: Take off contaminated clothing and wash before reuse.
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P308 + P313: IF exposed or concerned: Get medical advice/attention.

Potential Health Hazards:

Eyes: Causes serious eye damage.
Inhalation: May cause respiratory irritation.
Skin: Toxic in contact with skin.
Ingestion: Toxic if swallowed.

NFPA Ratings (704):

Health	1	Slight
Flammability	0	Minimal
Reactivity	0	Minimal
Specific Hazard	N/A	

3 COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS No.</u>	<u>Weight %</u>	<u>Molecular Weight</u>
DMDM Hydantoin	6440-58-0	54 - 56%	Not Available
Water	7732-18-5	44 - 46%	Not Available
Formaldehyde	50-00-0	<2%	Not Available

4 FIRST AID MEASURES

Eyes:	Severe irritant. 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 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:	May cause allergic skin reaction. Adverse symptoms may include irritation and redness. 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. Clean shoes thoroughly before reuse.
Ingestion:	Do Not Induce Vomiting. Never give anything by mouth to an unconscious person. 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. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. 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.

5 FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:	May be combustible at high temperatures. Use appropriate media (dry chemical, CO ₂ , Alcohol-resistant foam, water spray (fog)) for surrounding environment and adjacent fire. Do NOT use a water jet.
Special protective equipment & precautions for firefighters:	Wear self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode and full protective clothing, including eye protection and boots. Clothing conforming to European standard EN 469 will provide a basic level of protection of chemical incidents.
Flash Points:	No data available.
Specific hazards arising from the chemical:	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. See also Stability and reactivity section.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment & emergency procedures:	Do not attempt to clean up the leak without personal protective equipment. See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions:	Avoid liquid release into sewers/public water/environment. Notify environmental authorities in case of leak.
Methods and material for containment and cleaning up:	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. Contaminated absorbent material may pose the same hazard as the spilt product. Do not try to clean up the leak without proper protective equipment. Dispose of absorbed material in accordance with the regulations or of via a licensed waste disposal contractor

7 HANDLING & STORAGE

Precautions for safe handling:	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. Empty containers retain product residue and can be hazardous. Do not reuse container. Use good personal hygiene practice. See section 8 for recommendations on the use of personal protective equipment.
Conditions for safe storage, incl. any incompatibilities:	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 for incompatibilities) 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. Keep in the original container or an approved alternative made from a compatible material. Store above 34°F (1°C).

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

<u>Component</u>	<u>Exposure Limits</u>	<u>Basis</u>	<u>Country</u>
DMDM Hydantoin	2.5 mg/m ³ (15 minutes)	STEL (15 minutes)	United Kingdom (8/2018)
	2 ppm (15 minutes)	STEL (15 minutes)	United Kingdom (8/2018)
	2 ppm	TWA	United Kingdom (8/2018)
	2.5 mg/m ³	TWA	Europe (6/2019)
	0.6 ppm	STEL (15 minutes)	Europe (6/2019)
	0.74 mg/m ³	STEL (15 minutes)	Europe (6/2019)
	0.62 ppm	TWA	Europe (6/2019)
	0.5 mg/m ³	TWA	Europe (6/2019)

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

Personal Protection:

Eyes:	Wear safety glasses with side protection shields in accordance with EN 166.
Inhalation:	Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. A combination filtering device (DIN EN 14387), Filter type, A-P3 is recommended.
Body:	Wear chemical resistant, impervious gloves complying with an approved standard at all times. Recommended gloves tested to E374 standards. Protective clothing 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:	Use good personal hygiene practices. If user operations generate dust, fumes, gas, vapor, or mists, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash all contaminated clothing before reusing. Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid	Vapor Pressure:	1.06 x 10E-9 mm Hg
Odor:	Odorless	Vapor Density:	No data available
Odor Threshold:	No data available	Evaporation Rate:	No data available
Color:	Colorless	Flammability:	No data available
Molecular Weight:	No data available	Upper/lower Explosive Limit:	No data available
pH:	6.5 - 7.5	Flash Point:	No data available
Boiling Point:	No data available	Specific Gravity at 25°C:	1.15 - 1.16 g/cm ³
Melting/Freezing Point:	No data available	Water Solubility:	No data available
Relative Density:	No data available	Auto-Ignition Temperature:	No data available
Partition Coefficient:	-2.37	Decomposition Temperature:	No data available
Viscosity:	No data available	Explosive Limits:	No specific fire or explosion

Oxidizing Properties:	No data available	Metal Corrosion:	hazard No data available
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10 STABILITY AND REACTIVITY

Reactivity:	No data available.
Chemical Stability:	Stable.
Hazardous Polymerization:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to Avoid:	Keep away from direct sunlight.
Incompatible Materials:	Avoid contact with strong acids, strong alkalis, and oxidizing materials.
Hazardous Decomposition Products:	No data available.
Possible Hazardous Reactions:	No data available.

11 TOXICOLOGICAL INFORMATION

Acute Toxicity:	No data available.
Skin:	Formaldehyde: Visible necrosis (OECD 404) 1,3-bis(hydroxymethyl)-5,5-dimethylimidazolidine2,4-dione: Skin - Non-irritating to skin. [EPA OPP 81-5] May cause an allergic skin reaction.
Eyes:	Formaldehyde: Severe irritant 1,3-bis(hydroxymethyl)-5,5-dimethylimidazolidine2,4-dione: Non-irritating to eyes. [EPA OPP 81-4].
Inhalation:	Vapors: 303 mg/L (DMDM Hydantoin) 3 mg/L (formaldehyde) Formaldehyde Category 3 - Respiratory tract irritation. Gases (ppmV): Formaldehyde Category 3: Respiratory tract irritation. Dusts & Mists: Formaldehyde Category 3: Respiratory tract irritation.
Ingestion:	No data available.
Dermal LD50 (mg/kg bodyweight):	Dermal LD50 (mg/kg bodyweight): 27,272.7 mg/kg (DMDM Hydantoin) >20000 mg/kg (rat) (1,3-bis(hydroxymethyl)-5,5-dimethylimidazolidine2,4-dione) 270 mg/kg (rabbit) (formaldehyde).
Oral LD50 (mg/kg bodyweight):	2196.7 mg/kg (DMDM Hydantoin) 1572 mg/kg (rat) (1,3-bis(hydroxymethyl)-5,5-dimethylimidazolidine2,4-dione) 100 mg/kg (rat) (formaldehyde).
Carcinogenicity:	May cause cancer. Risk of cancer depends on duration and level of exposure.
Teratogenicity:	No data available.
Germ Cell Mutagenicity:	No data available.
Embryotoxicity:	No data available.
Specific Target Organ Toxicity:	No data available.
Reproductive Toxicity:	No data available.
Sensitization:	No data available.

12 ECOLOGICAL INFORMATION

Ecotoxicity:	No data available.
Aquatic Vertebrate:	No data available.
Aquatic Invertebrate:	No data available.
Terrestrial:	No data available.
Persistence and Degradability:	Readily biodegradable.
Bioaccumulative Potential:	Log Pow: -2.37 (low potential).
Mobility in Soil:	No data available.
PBT and vPvB Assessment:	No data available.
Other Adverse Effects:	No known significant effects or critical hazards.

13 DISPOSAL CONSIDERATIONS

Waste Residues:	Follow all federal, state, and local regulations for non-hazardous waste disposal. Empty containers should be recycled or disposed of through an approved waste management facility. Disposal methods identified are for the product as sold. Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies, if necessary, before disposing of waste product.
Product Containers:	Empty containers should be recycled or disposed of through an approved waste management facility. Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies, if necessary, before disposing of waste product container.

The information in section 13 is for the product as shipped. Use and/or alterations to the product may change the characteristics of the material and alter the waste classification and proper disposal methods

14 TRANSPORT INFORMATION

DOT (Dept. of Transportation, USA):	Non-regulated.
TDG (Transportation of Dangerous Goods, Canada):	No data available.
IMDG (International Maritime Dangerous Goods):	Not regulated. Not a marine pollutant.
IATA (International Air Transport Association):	Not regulated.
ICAO (International Civil Aviation Organization):	No data available.

15 REGULATORY INFORMATION

TSCA Registered:	Yes.
TSCA 5(a) SNUR:	No.
Canada (DSL):	All components are listed or exempted.
EU Classification:	Restricted to professional users (Annex XVII). None of the components are listed on Annex CIV.
China Inventory List:	All components are listed or exempted.
Australia (AICS):	All components are listed or exempted.
Japan (ENCS):	No data available.
Philippines (PICCS):	All components are listed or exempted.
Korean Inventory List:	Unknown.
California Prop. 65:	WARNING: This product can expose you to chemicals including formaldehyde, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov
New Zealand (NZIoC):	No data available

16 OTHER INFORMATION

Revision Date:	31-Dec-2024
Compliance:	This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200
Disclaimer:	This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. Such information is to be the best of the company's knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee of any kind, express or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. It is the user's responsibility to satisfy himself as to the suitability & completeness of such information for his own particular use.