

Safety data sheet
according to 190 7/2006/EC, Article 31

Printing date 29.06.2011

Revision: 29.06.2011

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Common name :DMDM Hydantoin**
- **Chemical name : 1,3-Bis (hydroxymethyl)-5,5-dimethylimidazolidine-2,4-dione/1,3-di methylol-5,5-dimethyl hydantoin**
- **CAS Number:**
6440-58-0
- **EC number:**
229-222-8
- **Registration number 1 7-2119431809-32-0000(Pre-registration number)**
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation**
 - *Used as preservative in a broad number of household and industrial cleaners to prevent spoilage from microorganisms.
 - *Used as a cosmetic preservative.
 - *Used as a antimicrobial and for the preservation of personal care formulations.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
- **Prakash Chemicals International Pvt. Ltd.**
Prakash House, , C/40-Krishna Industrial Estate, Opp. BIDC, Gorwa, Vadodara - 390016, Gujarat, India.
Tel.: +91 265 3926049| | www.pciplindia.com
- **E-mail: anuj@prakashchemicals.com**

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008:-Self Classified**



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Xi; Irritant

R36/38: Irritating to eyes and skin.

Xi; Sensitising

R43: May cause sensitisation by skin contact.

- **Information concerning particular hazards for human and environment: Not applicable.**

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.

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- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
- **Precautionary statements**
P261 Avoid breathing fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see on this label).
P362 Take off contaminated clothing and wash before reuse.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Other hazards**
- **Results of PB T and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
6440-58-0 1,3-Bis (hydroxymethyl)-5,5-dimethylimidazolidine-2,4-dione
- **Identification number(s)**
- **EC number:** 229-222-8
- **Additional information:**
Molecular Formula: - C7H12N2O4
Molecular Weight: - 188.18 g/mol
Composition: - ~ 55%

4 First aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**
Remove to fresh air. If not breathing, clear airway and start artificial respiration. If victim is having trouble breathing, administer oxygen or artificial respiration as needed. Get immediate medical attention.
- **After skin contact:** Wash with soap and water. If irritation develops, seek medical attention
- **After eye contact:** Flush with water for 15 minutes, if irritation develops, seek medical attention
- **After swallowing:**
If swallowed, give 3–4 glasses of water but do not induce vomiting. If vomiting does occur, give fluids again. Get medical attention to determine whether vomiting or evacuation of stomach is necessary. Do not give anything by mouth to an unconscious or convulsing person.

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• **Information for doctor:** Treat symptomatically.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Water, Foam, Dry chemical or Carbon Dioxide
- **Special hazards arising from the substance or mixture**
Products of combustion are toxic. At high Temperatures, this will release formaldehyde.
- **Advice for firefighters**
Must wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. Cool Fire-Exposed containers with water spray.
- **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Use proper personal protective equipment
- **Environmental precautions:** Do not allow product to reach sewage system or any water course.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Keep receptacles tightly sealed.
- **Conditions for safe storage, including any incompatibilities** Store in a warm warehouse.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Avoid storing below 60° F to prevent crystallization
- **Information about storage in one common storage facility:**
Store away from strong acids, alkali or oxidizing agents.
- **Further information about storage conditions:** Protect from frost.
- **Specific end use(s)**
*Used as preservative in a broad number of household and industrial cleaners to prevent spoilage from microorganisms.
*Used as a cosmetic preservative.
*Used as an antimicrobial and for the preservation of personal care formulations.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:**
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.

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•Exposure controls

•Personal protective equipment:

•General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

•Respiratory protection:

In process where mists or vapors may be generated, a NIOSH/MSHA jointly approved respirator is advised in the absence of proper environmental controls.



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

•Material of gloves Rubber or neoprene gloves

•Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

•Eye protection:



Tightly sealed goggles

• Body protection: Long sleeves, coveralls or other appropriate clothing

9 Physical and chemical properties

• Information on basic physical and chemical properties

• General Information

• Appearance:

Form: Liquid
Colour: White
Odour: Characteristic

• pH-value: 6.5 – 7.5

• Change in condition

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: Undetermined.

• Flash point: Not applicable.

• Flammability (solid, gaseous): Product is not flammable.

• Danger of explosion: Product does not present an explosion hazard.

• Density at 20°C: 1.15 g/cm³

• Solubility in / Miscibility with water: Soluble.

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- **Other information** *Specific Gravity: 1.16 @ ~55%*

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** *No dangerous reactions known.*
- **Incompatible materials:** *Avoid contact with strong oxidizing agents.*
- **Hazardous decomposition products:** *Hazards Polymerization: Will not occur*

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

| | | |
|------|------|------------------------------------|
| Oral | LDLo | 1320mg/kg(intraperitoneal) (mouse) |
| | LD50 | 2gm/kg (rat) |
| | LDLo | 3gm/kg (mouse) |

- **Primary irritant effect:**
- **on the skin:** *Irritant to skin and mucous membranes.*
- **on the eye:** *Irritating effect.*
- **Sensitization:** *Sensitization possible through skin contact.*
- **Acute effects (acute toxicity, irritation and corrosivity)**
Irritation test result:-
Species:- rabbit ; result:-Mild irritation to skin
Species:-rabbit : result:- Mild irritation to eye
- **Sensitisation**
Sensatization: -
test type:- Patch test
Species:- human
test duration:- 1 week
result:- out of 12 ; 4 become sensatized
- **Repeated dose toxicity** *No data available*
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)** *Genetic Toxicity:Negative*

12 Ecological information

- **Toxicity**
- **Acquatic toxicity:** *No further relevant information available.*
- **Persistence and degradability** *No further relevant information available.*
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** *The substance in non-bioaccumulative.*
- **Mobility in soil** *Soil DT 50 > 30 days: ND*
- **Additional ecological information:**
- **General notes:** *Do not allow product to reach ground water, water course or sewage system.*
- **Results of PBT and vPvB assessment**
- **PBT:** *Not applicable.*

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- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Un cleaned packaging:**
- **Recommendation:**
Dispose of in compliance with all federal, state and local laws and regulations. Incineration is the preferred method

14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICA O/IA TA Class:** -
- **UN "Model Regulation":** -
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Labelling according to Regulation (EC) No 1272/2008**
- **Hazard pictograms** Please refer section 2
- **Signal word** Warning
- **Hazard statements** Please refer section 2
- **Precautionary statements** Please refer section 2
- **National regulations:**
- **Other regulations, limitations and prohibitive regulations**
- **Substances of very high concern (SVHC) according to REACH, Article 57** The substance is not listed as SVHC.
- **Chemical safety assessment:**
A Chemical Safety Assessment has not been carried out and shall be available at the time of REACH registration.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Product safety department.

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•Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IA TA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

•Sources**HSDB Data**

<http://toxnet.nlm.nih.gov/cgi-bin/sis/search/f?/.temp/~f8mqSP:1:FULL>

CCR Data

<http://webnet.oecd.org/ccrweb/ChemicalDetails.aspx?ChemicalID=9B6E7538-0F2E-44A0-834C-ADA773921B73>

HSNO Data

<http://www.ermanz.govt.nz/search-databases/Pages/ccid-details.aspx?SubstanceID=1921>

Chem ID Plus Lite

<http://chem.sis.nlm.nih.gov/chemidplus/ProxyServlet?objectHandle=Search&actionHandle=getAll3DMViewFiles&nextPage=jsp%2Fcommon%2FChemFull.jsp%3FcalledFrom%3Dlite&chemid=0006440580&formatType=3D>

ACToR Data

<http://actor.epa.gov/actor/GenericChemicalPdfServlet?casrn=6440-58-0>

Parchem Data

<http://www.parchem.com/chemical-supplier-distributor/Dimethylol-Dimethyl-Hydantoin-001661.aspx>

Jeen MSDS

<http://www.scancom.net/Product/MSDS/MSDS%20JEECIDE%20DMDM%20HYDANTOIN%20%20Mackstat.pdf>

Personal Formulator MSDS

<http://www.bpilabs.com/msds/DMDM%20Hydantoin.pdf>

Santa Cruz biotech

<http://datasheets.scbt.com/sc-351996.pdf>

•* Data compared to the previous version altered.

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Section 3: Composition/Information on ingredients

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Section 5: Fire-fighting measures

Section 6: Accidental Release measures

Section 7: Handling and storage.

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