

Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalaremprikiat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250

Factory - 188/3, Moo 8, Tambon Bangpu Mai, Amphoe Muang Samut Prakan, Samutprakan, Thailand 10280

Mobile - Thai : 0804531391, English: 0839415475, E-mail – contact@polymeradd.co.th



SAFETY DATA SHEET (SDS)

Product: Micronised 5,5-Dimethylhydantoin

Trade Name / Grade: DH-128

SECTION 1 – Identification

Field	Information
Product Name	5,5-Dimethylhydantoin
Synonym	DMH ; 1,3-Dimethylol-5,5-dimethylhydantoin
CAS Number	77-71-4
Relevant Identified Uses	Intermediate for biocides, coatings, adhesives, resins, and R&D applications
Uses Advised Against	Not intended for pharmaceutical or food use unless specifically tested and qualified
Supplier	Polymer Add (Thailand) Co., Ltd
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SECTION 2 – Hazards Identification

Field	Description
Eye Irritation Cat. 2 (H319)	Causes serious eye irritation
Skin Irritation Cat. 2 (H315)	Causes skin irritation
STOT SE Cat. 3 (H335) –	May cause respiratory irritation
Classification (GHS / CLP)	–
Signal Word:	⚠ Warning
Pictogram	Exclamation Mark (GHS07)

Precautionary Statements:

P261	Avoid breathing dust
P264	Wash hands after handling
P280	Wear protective gloves / eye protection
P305 + P351 + P338 If in eyes	Rinse cautiously with water for several minutes
P302 + P352 If on skin	Wash with soap and water.

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SECTION 3 – Composition / Information on Ingredients

Substance	CAS No.	EC No.	% (w/w)	Classification
5,5-Dimethylhydantoin	77-71-4	201-052-9	≥ 99 %	Eye Irrit. 2; Skin Irrit. 2; STOT SE 3

Impurities / Additives: None intentionally added (micronised grade only).

SECTION 4 – First Aid Measures

- **Inhalation:** Remove to fresh air. If symptoms persist, seek medical attention.
- **Skin:** Wash thoroughly with soap and water. Remove contaminated clothing.
- **Eyes:** Flush gently with water for 15 minutes; obtain medical attention.
- **Ingestion:** Rinse mouth with water; do not induce vomiting; get medical help.

SECTION 5 – Fire-Fighting Measures

Suitable Extinguishing Media: Water spray, foam, CO₂, dry chemical.

Hazards from Combustion: CO, CO₂, NO_x.

Protective Equipment: Self-contained breathing apparatus and full protective clothing.

SECTION 6 – Accidental Release Measures

Avoid dust generation. Collect spilled material by vacuum or sweep and transfer to labelled container. Ensure adequate ventilation. Avoid discharge to drains or surface water.

SECTION 7 – Handling and Storage

- Handle in a dry, well-ventilated area with dust control.
- Avoid inhalation of fine powder. Use antistatic measures.
- Store below 35 °C in sealed original container under < 50 % RH.
- Keep away from oxidising agents and strong acids.

SECTION 8 – Exposure Controls / Personal Protection

Occupational Exposure Limits: No OEL established for DMH.

Engineering Controls: Local exhaust ventilation for dust control.

Personal Protective Equipment:

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- **Respiratory:** P2/N95 particulate filter mask during micronised handling.
- **Skin:** Protective gloves (nitrile or PVC).
- **Eyes:** Safety goggles with side shields.
- **Clothing:** Lab coat / coverall.

SECTION 9 – Physical and Chemical Properties

Property	Typical Value
Appearance	White crystalline micronised powder
Odour	Odourless or faint
pH (1 % solution)	6.0 – 8.0
Melting Point	175 – 179 °C
Solubility in Water	7 – 10 g/100 mL @ 25 °C
Density (bulk)	0.35 – 0.50 g/cm ³
Particle Size (D ₅₀)	6 – 8 µm
Flammability	Non-flammable
Vapour Pressure	Negligible
Partition Coeff. (log Kow)	< 1 (estimated)

SECTION 10 – Stability and Reactivity

Stability: Stable under recommended conditions.

Incompatible Materials: Strong oxidising agents, strong acids / bases.

Hazardous Decomposition: CO, CO₂, NO_x under fire conditions.

SECTION 11 – Toxicological Information

- **Acute Toxicity (oral, rat):** LD₅₀ > 2000 mg/kg
- **Skin/Eye Irritation:** Mild to moderate irritant (dust contact)
- **Sensitisation:** Not sensitising
- **Mutagenicity / Carcinogenicity:** No evidence of mutagenic effects
- **Chronic Effects:** Prolonged dust exposure may cause respiratory irritation.

SECTION 12 – Ecological Information

- **Aquatic Toxicity:** No data; expected low toxicity.
- **Persistence / Degradability:** Readily biodegradable in aqueous systems.

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- **Bioaccumulation:** Low potential.
- **Mobility:** Moderate solubility in water.
- **PBT/vPvB:** Not classified.

SECTION 13 – Disposal Considerations

Dispose in accordance with local regulations. Classified as non-hazardous solid waste (EU Directive 2008/98/EC).

Avoid release to environment.

SECTION 14 – Transport Information

UN Number: Not applicable **UN Proper Shipping Name:** Non-regulated solid

ADR/RID/IMDG/IATA Class: Not classified

Packing Group: – **Marine Pollutant:** No

SECTION 15 – Regulatory Information

- **EU REACH (EC 1907/2006):** Pre-registered / compliant
- **CLP (EC 1272/2008):** Irritant classification applies
- **OSHA HazCom (US):** Hazardous chemical – irritant
- **RoHS / WEEE:** Complies with heavy-metal restrictions
- **FDA:** Not GRAS; not for food contact applications

SECTION 16 – Other Information

5,5-Dimethylhydantoin (CAS 77-71-4)

- **SDS Version:** 1.0 / 2025
- **Date of Preparation:** July 2025
- **Reason for Issue:** First SDS issued for micronized industrial grade

Abbreviations:

CAS – Chemical Abstracts Service

CLP – Classification, Labelling and Packaging

REACH – Registration, Evaluation, Authorisation and Restriction of Chemicals

LD₅₀ – Median Lethal Dose

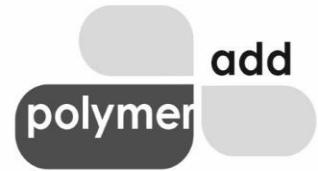
EC₅₀ – Half Maximal Effective Concentration

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Disclaimer:

This SDS is provided for safe handling, storage, and transport of the material. It does not constitute a product specification. Polymer Add (Thailand) Co., Ltd assumes no responsibility for misuse or handling outside of recommended use. Final responsibility remains with the user.

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