# SAFETY DATA SHEET

**Revision Date** 25-May-2017 **Revision Number** 2

## 1. Identification

**Product Name** **1,3-Dibromo-5,5-dimethylhydantoin**

**Cat No. :** **AC169540000; AC169540025; AC169540250; AC169545000**

**Synonyms** 1,3-Dibromo-5,5-dimethyl-2,4-imidazolidinedione; DDH

**Recommended Use** Laboratory chemicals.
**Uses advised against** Not for food, drug, pesticide or biocidal product use

**Details of the supplier of the safety data sheet**

**Company**
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

**Emergency Telephone Number**
For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
**CHEMTREC** Tel. No.**US:**001-800-424-9300 / **Europe:**001-703-527-3887

## 2. Hazard(s) identification

**Classification**
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|---|---|
| Oxidizing solids | Category 2 |
| Acute oral toxicity | Category 4 |
| Skin Corrosion/irritation | Category 1 B |
| Serious Eye Damage/Eye Irritation | Category 1 |

**Label Elements**

**Signal Word**
Danger

**Hazard Statements**
May intensify fire; oxidizer
Harmful if swallowed
Causes severe skin burns and eye damage



**Precautionary Statements**
**Prevention**
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep/Store away from clothing/ other combustible materials
Take any precaution to avoid mixing with combustibles
**Response**
Immediately call a POISON CENTER or doctor/physician
**Inhalation**
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
**Skin**
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
**Eyes**
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
**Ingestion**
Rinse mouth
Do NOT induce vomiting
**Fire**
In case of fire: Use CO2, dry chemical, or foam for extinction
**Storage**
Store locked up
**Disposal**
Dispose of contents/container to an approved waste disposal plant
**Hazards not otherwise classified (HNOC)**
Very toxic to aquatic life

## 3. Composition / information on ingredients

| Component | CAS-No | Weight % |
|---|---|---|
| 2,4-Imidazolidinedione, 1,3-dibromo-5,5-dimethyl- | 77-48-5 | 98 |

## 4. First-aid measures

**Eye Contact** Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

**Skin Contact** Immediate medical attention is required. Wash off immediately with plenty of water for at least 15 minutes.

**Inhalation** Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required.

**Ingestion** Do not induce vomiting. Call a physician immediately.

**Most important symptoms/effects** Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

**Notes to Physician** Treat symptomatically

## 5. Fire-fighting measures

**Suitable Extinguishing Media** Carbon dioxide ($CO_2$). Dry chemical. Chemical foam.

**Unsuitable Extinguishing Media** No information available

**Flash Point** 155 °C / 311 °F

**Method -** No information available

**Autoignition Temperature** No information available

**Explosion Limits**

**Upper** No data available

**Lower** No data available

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

**Specific Hazards Arising from the Chemical**

Oxidizer: Contact with combustible/organic material may cause fire. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

**Hazardous Combustion Products**

Nitrogen oxides (NOx) Carbon monoxide (CO) Carbon dioxide ($CO_2$) Hydrogen halides Bromine

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

| Health | Flammability | Instability | Physical hazards |
|---|---|---|---|
| 3 | 0 | 0 | OX |

## 6. Accidental release measures

**Personal Precautions** Ensure adequate ventilation. Use personal protective equipment.

**Environmental Precautions** See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

**Methods for Containment and Clean Up** Sweep up or vacuum up spillage and collect in suitable container for disposal.

## 7. Handling and storage

**Handling** Do not breathe dust. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Use only in area provided with appropriate exhaust ventilation.

**Storage** Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Do not store near combustible materials. Corrosives area.

## 8. Exposure controls / personal protection

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limitsestablished by the region specific regulatory bodies.

**Engineering Measures** Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment**

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

| | |
|---|---|
| **Physical State** | Powder Solid |
| **Appearance** | Light cream |
| **Odor** | Odorless |
| **Odor Threshold** | No information available |
| **pH** | No information available |
| **Melting Point/Range** | 187 - 191 °C / 368.6 - 375.8 °F |
| **Boiling Point/Range** | No information available - 376 - 708.8 |
| **Flash Point** | 155 °C / 311 °F |
| **Evaporation Rate** | No information available |
| **Flammability (solid,gas)** | No information available |
| **Flammability or explosive limits** | |
| **Upper** | No data available |
| **Lower** | No data available |
| **Vapor Pressure** | No information available |
| **Vapor Density** | No information available |
| **Specific Gravity** | No information available |
| **Solubility** | No information available |
| **Partition coefficient; n-octanol/water** | No data available |
| **Autoignition Temperature** | No information available |
| **Decomposition Temperature** | > 190°C |
| **Viscosity** | No information available |
| **Molecular Formula** | C5 H6 Br2 N2 O2 |
| **Molecular Weight** | 285.91 |

## 10. Stability and reactivity

**Reactive Hazard** Yes

**Stability** Stable under normal conditions. Moisture sensitive.

**Conditions to Avoid** Exposure to light. Incompatible products. Exposure to moist air or water. Combustible material.

**Incompatible Materials** Strong oxidizing agents, Strong acids, Strong bases, Alcohols, Strong reducing agents

**Hazardous Decomposition Products** Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide ($CO_2$), Hydrogen halides, Bromine

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

**Acute Toxicity**

**Product Information** No acute toxicity information is available for this product

**Component Information**

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|
| 2,4-Imidazolidinedione, 1,3-dibromo-5,5-dimethyl- | LD50 = 250 mg/kg ( Rat ) | Not listed | Not listed |

**Toxicologically Synergistic Products** No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation** No information available

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component | CAS-No | IARC | NTP | ACGIH | OSHA | Mexico |
|---|---|---|---|---|---|---|
| 2,4-Imidazolidinedione, 1,3-dibromo-5,5-dimethyl- | 77-48-5 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known
**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects,both acute and delayed** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

## 12. Ecological information

**Ecotoxicity**
Do not empty into drains.

**Persistence and Degradability** No information available

**Bioaccumulation/ Accumulation** No information available.

**Mobility** No information available.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT**
- **UN-No** UN1479
- **Hazard Class** 5.1
- **Packing Group** II

**TDG**
- **UN-No** UN1479

**Hazard Class** 5.1
**Packing Group** II

**IATA**
**UN-No** 3085
**Proper Shipping Name** OXIDIZING SOLID, CORROSIVE, N.O.S.*
**Hazard Class** 5.1
**Subsidiary Hazard Class** 8
**Packing Group** II

**IMDG/IMO**
**UN-No** 3085
**Proper Shipping Name** OXIDIZING SOLID, CORROSIVE, N.O.S.
**Hazard Class** 5.1
**Subsidiary Hazard Class** 8
**Packing Group** II

## 15. Regulatory information

**International Inventories**

| Component | TSCA | DSL | NDSL | EINECS | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,4-Imidazolidinedione, 1,3-dibromo-5,5-dimethyl- | X | X | - | 201-030-9 | - | | X | X | X | X | - |

**Legend:**
**X - Listed**
**E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.**
**F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.**
**N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.**
**P - Indicates a commenced PMN substance**
**R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.**
**S - Indicates a substance that is identified in a proposed or final Significant New Use Rule**
**T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.**
**XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).**
**Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.**
**Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.**

**U.S. Federal Regulations**

**TSCA 12(b)** Not applicable

**SARA 313** Not applicable

**SARA 311/312 Hazard Categories**
**Acute Health Hazard** Yes
**Chronic Health Hazard** No
**Fire Hazard** No
**Sudden Release of Pressure Hazard** No
**Reactive Hazard** Yes

**CWA (Clean Water Act)** Not applicable

**Clean Air Act** Not applicable

**OSHA** Occupational Safety and Health Administration
Not applicable

**CERCLA**
Not applicable

**California Proposition 65** This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations** Not applicable

**U.S. Department of Transportation**

| | |
|---|---|
| Reportable Quantity (RQ): | N |
| DOT Marine Pollutant | N |
| DOT Severe Marine Pollutant | N |

**U.S. Department of Homeland Security**
This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

## 16. Other information

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**Revision Date** 25-May-2017
**Print Date** 25-May-2017
**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Disclaimer**
**The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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 process, unless specified in the text**

**End of SDS**