# Safety Data Sheet

# Irgarol-$d_9$ (*tert*-butyl-$d_9$)

## Section 1. Chemical product and company identifications

**Product code:** D-7147
**Chemical formula:** $C_{11}H_{10}D_9N_5S$
**CAS:** 1189926-01-9
**CAS (unlabelled):** 28159-98-0
**Synonyms:** 2-*tert*-Butylamino-4-cyclopropylamino-6-methylthio-1,3,5-triazine, Cybutrine

**Supplier / Manufacturer:**

**C/D/N Isotopes Inc.**
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**In case of emergency:**

**TOXYSCAN HOTLINE: 1-855-780-0599**

## Section 2. Hazards identifications

**Physical state:** Solid
**Warning:** May cause an allergic skin reaction.
**Routes of entry:** Inhalation, skin and eyes

**GHS (Globally Harmonized System of Classification and Labelling of Chemicals):**

**GHS Classification:** - Skin sensitisation (Category 1)

**GHS Label elements:** - Pictograms:

- Signal word: Warning

**Hazards statement:** - H317 May cause an allergic skin reaction.

**Precautionary statement:** - P281 Use personal protective equipment as required.

## Section 3. Composition and information on ingredients

| Name | CAS | Concentration % |
|---|---|---|
| Irgarol-$d_9$ | 1189926-01-9 | > 98 |

## Section 4. First aid measures

**Eye contact:** Flush eyes with water as a precaution.
**Skin contact:** Wash off with soap and plenty of water. Consult a physician.
**Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
**Ingestion:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
**General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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## Section 5. Firefighting measures

**Flammability of the product:** Not flammable or combustible.
**Lower explosion limit:** No data available.
**Upper explosion limit:** No data available.
**Auto-ignition temperature:** No data available.
**Flash point:** No data available.
**Products of combustion:** Hazardous decomposition products formed under fire conditions: Carbon oxides, nitrogen oxides, sulphur oxides.
**Firefighting media and instructions:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
**Special protective equipment for firefighters:** Wear self-contained breathing apparatus for firefighting if necessary.

## Section 6. Accidental release measures

**Personal precautions:** Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
**Methods for cleaning up:** Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

## Section 7. Handling and storage

**Handling:** Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
**Storage:** Store at room temperature. Adequate ventilation.

## Section 8. Exposure Controls, Personal Protections

**Engineering controls:** Use mechanical exhaust or laboratory fumehood to avoid exposure.
**Eyes:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
**Respiratory:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US).
**Hands:** Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
**Skin/body:** Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

## Section 9. Physical and chemical properties (unlabelled)

**Molecular weight:** 253.37 g/mol
**Physical status:** Solid
**Color:** White to off-white
**Odour:** No data available
**Density:** No data available
**Melting point:** 128 °C (262 °F)
**Boiling point:** No data available
**Vapour pressure:** No data available
**Vapour density:** No data available
**Partition coefficient (octanol/water):** log Pow: 3.9
**Water solubility:** No data available

## Section 10. Stability and reactivity

**Stability and reactivity:** Stable under recommended storage conditions.
**Incompatibility:** No data available.
**Products of combustion:** Hazardous decomposition products formed under fire conditions: Carbon oxides, nitrogen oxides, sulphur oxides.
**Reactivity conditions:** No data available.

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## Section 11. Toxicological information (unlabelled)

**Toxicological data:** Irgarol

**Information on ingredients:**

| Name | CAS | $LD_{50}$ | $LC_{50}$ |
|---|---|---|---|
| Irgarol | 28159-98-0 | No data available | No data available |

**Potential acute effects**

- **Eyes:** May cause eye irritation.
- **Skin:** May be harmful if absorbed through skin. May cause skin irritation.
- **Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.
- **Ingestion:** May be harmful if swallowed.

**Potential chronic effects**

- **Carcinogenic effects:** IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
  **Mutagenic effects:** No data available.
- **Teratogenic effects:** No data available.
- **Medical conditions aggravated by overexposure:** No data available.

## Section 12. Ecological information

**Ecological data:**

| Name | Results | Species | Period |
|---|---|---|---|
| Irgarol | 0.7 mg/l LC50 | Oncorhynchus mykiss | 96 h |
| | 5.3 mg/l EC50 | Daphnia magna | 48 h |
| | 0.002 mg/l EC50 | Desmodesmus subspicatus | 72 h |

**Effects on environment:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
**Mobility:** No data available.
**Environmental precautions:** No data available.
**Persistence and degradability:** No data available.
**Bioaccumulative potential:** No data available.

## Section 13. Disposal considerations

**Waste disposal:** Offer surplus and non-recyclable solutions to a licensed disposal company.

## Section 14. Transportation information

**Classification DOT/IMDG/IATA label:**

**Shipping name:** Not dangerous goods
**UN number:** None
**Class:** None
**Packaging group:** None

**Additional information:** None

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## Section 15. Regulatory information

**UNITED STATES:**
**NFPA classification**

Health: 3
Flammable: 0
Reactivity: 0
Specials conditions: None

**Legend: 4: Severe, 3: High, 2: Moderate, 1: Slightly, 0: Not hazardous**

**U.S. Federal regulations:**

**TSCA 8(b) inventory:** Irgarol
**SARA 302/304/311/312 extremely hazardous substances:** Not Listed
**SARA 302/304 emergency planning and notification:** Not Listed
**SARA 302/304/311/312 hazardous chemicals:** Not Listed
**SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard:** Not Listed
**CWA (Clean Water Act) 307:** Not Listed
**CWA (Clean Water Act) 311:** Not Listed
**CAA (Clean Air Act) 112 accidental release prevention:** Not Listed
**CAA (Clean Air Act) 112 regulated flammable substances:** Not Listed
**CAA (Clean Air Act) 112 regulated toxic substances:** Not Listed

**State regulations:**

**DEA List I Chemicals (Precursor Chemicals):** Not Listed
**DEA List II Chemicals (Essential Chemicals):** Not Listed
**Substances in Massachusetts:** Not Listed
**Dangerous substances in New Jersey:** Not Listed
**New York – Dangerous substances with acute effects:** Not Listed
**Dangerous substances in Pennsylvania – right to know:** Not Listed

**WHMIS (Canada):**

D2B - Toxic material causing other toxic effects

## Section 16. Additional information

**References:**


- ANSI Z400.1, MSDS Standard, 2001.
- Manufacturer's Material Safety Data Sheet.
- 29CFR Part1910.1200 OSHA MSDS Requirements.
- 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG. -Canada
- Gazette Part II, Vol. 122, No. 2 Registration SOR/88-64 31 December, 1987 Hazardous Products Act "Ingredient Disclosure List".
- Federal act on the controlled products
- Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2002.
- Toxicological repertory, HSC.
- Material safety data sheet from the components.


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**Elaborated by:** **Toxyscan Inc., 1-866-780-0599**
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