1. Product and Company Identification

Company

BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Registrrant:

2. Hazards Identification

Emergency overview

Signal word: CAUTION: !
Colour: white to slightly yellow
Appearance: powder
State of matter: solid
Odour: characteristic
Health: This product causes eye irritation and may cause skin sensitization insensitive individuals. EPA signal word; CAUTION.

Physical/Chemical hazards: Refer to MSDS Section 7 for Dust Explosion information.

Potential health effects

Primary routes of entry:

Ingestion, Skin, Inhalation, Eyes

Potential environmental effects

This product is toxic to fish and invertebrates. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or public waters unless in accordance with an NPDES permit. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS Number</th>
<th>Content (Weight)</th>
<th>Hazardous</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'(1,1-dimethylethyl)-6-(methylthio)-</td>
<td>28159-98-0</td>
<td>96.0 - 99.0 %</td>
<td>Y</td>
</tr>
</tbody>
</table>

This material is classified as hazardous under OSHA regulations.
4. First-aid Measures

**Inhalation:**
Remove to fresh air, if not breathing give artificial respiration. If breathing is difficult, give oxygen and get immediate medical attention.

**Skin:**
If clothing is contaminated, remove and launder before reuse.
After contact with skin, wash immediately with plenty of water and soap.
Get medical attention if irritation occurs.

**Eyes:**
Immediately flush the eye(s) with lukewarm, gently flowing water for 15 minutes or until the chemical is removed. Get immediate medical attention if irritation persists.

**Ingestion:**
Do not induce vomiting. If vomiting occurs naturally, have casualty lean forward to reduce the risk of aspiration. Seek medical attention immediately.

**Notes to physician:**
May aggravate pre-existing allergies or eczema.

5. Fire-fighting Measures

**Suitable extinguishing media:**
carbon dioxide, dry powder, foam, water spray

**Hazardous combustion products:**
Burning may produce toxic combustion products.

**Hazards during fire-fighting:**
Standard procedure for chemical fires.
The product can form an explosive dust/air mixture. For further information, see Section 7 Explosion Hazards.

**Protective equipment for fire-fighting:**
Wear self-contained breathing apparatus and chemical-protective clothing.

6. Accidental Release Measures

**Cleanup:**
Sweep up and shovel into suitable containers for disposal.
Avoid raising dust.
Wear suitable protective equipment.
Should not be released into the environment.

**Further information:**
This pesticide is toxic to fish and aquatic invertebrates. Do not discharge effluent containing this active ingredient into lakes, streams, ponds, estuaries, oceans or public waters unless in accordance with an NPDES permit. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your state water board or Regional Office of the EPA.
7. Handling and Storage

Handling

General advice:
As with all industrial chemicals, use good industrial practices when handling. Avoid eye, skin, and clothing contact. Do not inhale. Do not taste or swallow. Use only with adequate ventilation.

Protection against fire and explosion:
Combustible powder. - Avoid creating dusty conditions. - Grounding is required when emptying into a conductive container. - When flammable solvents are present, the container must be inerted or the system otherwise designed to prevent or contain an explosion. Seek expert advice. In addition, for products packaged in fused-lined (coated) fiber drums, fiber drums with conductive liners, steel drums, steel pails, and Type "C" FIBC (bulk bags), or other conductive the following instructions also apply: - Always ground this package before emptying. The user is responsible for designing the system to handle solid and ensuring proper training of employees in the system's use.

Storage

General advice:
Keep container tightly closed in a dry, cool and well-ventilated place.

> for industrial use only <

8. Exposure Controls and Personal Protection

Exposure Guidelines

<table>
<thead>
<tr>
<th>Component</th>
<th>CI EL</th>
<th>8h TWA: 1 mg/m³ (Inhalable)</th>
<th>Skin sensitization observed in animal study</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N’-(1,1-dimethylethyl)-6-(methylthio)- (28159-98-0) DUST</td>
<td>ACGIH</td>
<td>TWA: 10 mg/m³  Inhalable particles</td>
<td>TWA: 3 mg/m³  Respirable particles</td>
</tr>
<tr>
<td>OS HA</td>
<td></td>
<td>TWA: 5 mg/m³  Respirable fraction</td>
<td>TWA: 15 mg/m³  Total dust</td>
</tr>
</tbody>
</table>

Engineering Controls:
Work in well ventilated areas. Do not breathe dust.

Personal protective equipment

Respiratory protection:
Wear a NIOSH-certified respirator as necessary.

Eye protection:
Wear safety goggles (chemical goggles) if there is potential for airborne dust exposures.

Body protection:
Wear chemical resistant gloves and protective clothing.

General safety and hygiene measures:
There are no OSHA or ACGIH exposure guidelines available for component(s) in this product.
9. Physical and Chemical Properties

- Colour: white to slightly yellow
- Form: powder
- State of matter: solid
- Odour: characteristic
- pH value: Not tested
- Evaporation rate: Not tested
- Flammability: not highly flammable (Directive 92/69/EEC, A.10)
- Flash point: Not applicable
- Melting point: 128.4 - 133 °C (OECD 102/EC A.1)
- Boiling point: 347.3 - 375.0 °C (99.7 kPa) (OECD 103/EC A.2) Decomposes
- Density: 1.11 g/cm³ (20 °C) (OECD 109/EC A.3)
- Vapour density: Not applicable
- Partitioning coefficient n-octanol/water (log Pow): 3.1 (25 °C) (OECD 117/EC A.8)
- % Volatiles: not determined
- Solubility in water: 9.0 mg/l (20 °C)
- Solubility in other solvents: 50.58 g/l Methanol (20 °C)
- 2.04 g/l n-Hexane (20 °C)
- Autoignition: Not tested
- Decomposition temperature: > 200 °C

10. Stability and Reactivity

- Stability: Stable
- Conditions to avoid: Avoid electro-static discharge.
  Avoid sources of ignition.
- Substances to avoid: strong acids, strong bases, strong oxidizing agents
- Possibility of Hazardous Reactions: No hazardous reactions known.
- Hazardous decomposition products: No decomposition expected under normal storage conditions.

11. Toxicological Information

- Acute oral toxicity:
  LD50 / oral / rat: > 5,000 mg/kg
  * Note: Data based on component information.

- Acute inhalation toxicity:
  by inhalation / rat: > 4.1 mg/l
  There were no deaths and the only macroscopic finding upon autopsy were small dark red foci on the surface of the lungs of some animals; these foci disappeared after the lungs had been inflated with
Acute dermal toxicity:
LD50 / dermal / rat: > 2,000 mg/kg
* Note: Data based on component information.

Skin irritation:
(Rabbits) Not an irritant. (based on known component information)

Eye irritation:
(Rabbits) Mild eye irritant. (based on known component information)

Skin Sensitization:
(Guinea pig) Maximization test: SENSITIZER. (30-40% positive)

Subchronic Toxicity:
21-Day Repeated Dose Dermal Toxicity in Rats: The test animals were treated dermally on the shaved back skin for 6 hours per day on a 5 day per week basis for 21 days. The dose levels were 0, 10, 100 and 1,000 mg/kg/day. No erythema or edema reactions were observed, nor were any signs of systemic toxicity noted; therefore, the no observable effect level (NOEL) is > 1,000 mg/kg.

90-Day Subchronic Oral Toxicity in Rats: The test substance was administered in the diet at doses of 0, 20, 150, and 1,000 ppm, equivalent to 0, 1.1, 9.7, and 62.5 mg/kg/day for 3 months, with some of the control and high-dose animals being held for a 4-week recovery period. Slight adverse effects were found only in the high-dose animals. Except for persisting relative liver weights in females, all animals recovered during the 4-week recovery period. The NOEL was 9.7 mg/kg/day.

Chronic toxicity:
not determined

Genetic toxicity:
Ames Test: negative
Micronucleus Assay: Negative.
(V79 Cells)
Chromosomal Aberration Assay: Negative
(Rat Hepatocytes)
DNA repair test: negative

Carcinogenicity:
None of the components in this product at concentrations greater than 0.1% are listed by IARC; NTP, OSHA or ACGIH as a carcinogen.

Developmental toxicity/teratogenicity:
(Rats)
During a teratology study with rats, 300 mg/kg was shown not to be toxic to developing fetuses, and not found to cause birth defects.

12. Ecological Information

Toxicity to fish:
Lepomis macrochirus/96 h/LC50: 2.9 mg/l (OECD 203/EC C.1)
Brachydanio rerio/96 h/LC50: 4 mg/l (OECD 203/EC C.1)
Oncorhynchus mykiss/96 h/LC50: 0.86 mg/l (OECD 203/EC C.1)

Toxicity to aquatic invertebrates:
Daphnia magna/48 h/EC50: 2.4 mg/l  (OECD 202/EC C.2)
Oyster embryo-larvae, (48 hours) EC50 3.2 ppm

Toxicity to aquatic plants:
Navicula sp./120 h/EC50: 0.000096 mg/l  (OECD 201/EC C. 3)
Scenedesmus sp./72 h/EC50: 0.0024 mg/l  (OECD 201/EC C. 3)

Toxicity to microorganisms:
activated sludge/3 h/EC50:  > 1,000 mg/l  (OECD 209)

Other terrestrial non-mammals:
Bobwhite quail, LC50: 5620 mg/Kg |par Bobwhite quail, LD50: 2250 mg/Kg|par Mallard duck, LC50: 5620 mg/Kg

Information on 1,3,5-Triazine-2,4-diamine, N-cyclopropyl-N'-(1,1-dimethylethyl)-6-(methylthio):-

Biodegradation:
Test method: OECD 301B
Evaluation: Not biodegradable.

Chemical oxygen demand (COD):
1.32 mg/g

Biochemical oxygen demand (BOD):
< 0.2 mg/g

Bioaccumulation:
OECD 305
Lepomis macrochirus
Bioconcentration factor: 160
OECD 305
Cyprinodon variegatus
Bioconcentration factor: 250

Add. remarks environm. fate & pathway:
Do not discharge product uncontrolled into the environment.

13. Disposal Considerations

Waste disposal of substance:
Dispose of in accordance with national, state and local regulations.

14. Transport Information

U.S. Department of Transportation

The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

Road transport:
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S.
Technical name: (CYCLPROPYL-(1,1-DIMETET)-6-(METTHIO)-)1,3,5-TRIAZ-2,4-DIAM)
Hazard class: 9
UN/ID-number: UN 3077  
Label: 9  
Packing Group: III  
Marine pollutant: YES  
Emergency response guidebook information: 171  
Special shipping information: Single packages greater than or equal to 880 lbs or 119 gallons are regulated.

**Air transport:**

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S.  
Technical name: (CYCLPROPYL-(1,1-DIMETET)-6-(METTHIO)-1,3,5-TRIAZ-2,4-DIAM)  
Hazard class: 9  
UN/ID-number: UN 3077  
Label: 9  
Packing Group: III  
Marine pollutant: YES  
Special shipping information: Single packages greater than or equal to 880 lbs or 119 gallons are regulated.

**International Air Transport Association (IATA)**

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
Technical name: (2-T-BUTYLAMINO-4-CYCLOPROPYLAMINO-6-METHYLTHIO TRIAZINE)  
Hazard class: 9  
UN/ID-number: UN 3077  
Label: 9MI  
Packing Group: III

**International Maritime Dangerous Goods Code (IMDG)**

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
Technical name: (2-T-BUTYLAMINO-4-CYCLOPROPYLAMINO-6-METHYLTHIO TRIAZINE)  
Hazard class: 9  
UN/ID-number: UN 3077  
Label: 9  
Packing Group: III  
Marine pollutant: YES

**15. Regulatory Information**

**US: Toxic Substances Control Act (TSCA):**  
One or more components in this product is regulated by FIFRA

**United States - Regulations**

**SARA Section 311/312 Hazard Communication Standard:**

Acute Health: Y  
Fire: N  
Chronic Health: N  
Reactivity: N  
Sudden release of pressure: N

**SARA Section 313 Toxic Chemical List:**

No components listed.

**OSHA hazard category:**

This material is classified as hazardous under OSHA regulations.

**Toxic Substances Control Act (TSCA) Significant New Use Rule (SNUR):**

This product is not subject to a Significant New Use Rule (SNUR).
Irgarol® 1051

Toxic Substances Control Act (TSCA) Section 5(e) Consent Orders:
This product is not subject to a Section 5(e) Consent Order.

Toxic Substances Control Act (TSCA) Section 5(f):
This product is not subject to a Section 5(f)/6(a) rule.

Toxic Substances Control Act (TSCA) Section 12(b) Export Notification:
No components listed.

Clean Air Act - Hazardous Air Pollutants (HAP):
This product does not contain any Hazardous Air Pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

Clean Air Act 602 - Ozone Depleting Substances (ODS):
This product neither contains, nor was manufactured with, a Class I or Class II ozone depleting substance (ODS), as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App. A+B).

Clean Water Act - Priority Pollutants (PP):
This product does not contain any priority pollutants listed under the U.S. Clean Water Act Section 307(2)(1) Priority Pollutant List (40 CFR 401.15).

Pennsylvania Right to Know:
This product does not contain any components that are subject to the Pennsylvania Right-To-Know disclosure requirement.

California Proposition 65 - Chemicals Known to the State to Cause Cancer:
No components listed.

California Proposition 65 - Chemicals Known to the State to Cause Reproductive Toxicity:
No components listed.

International Regulations

Chemical Weapons Convention:
This product does not contain any component(s) listed under the Chemical Weapons Convention Schedule of Chemicals.

16. Other Information

Irgarol® 1051 is a registered trademark of BASF Corporation or BASF SE

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Due to the merger of CIBA and BASF Group all Material Safety Data Sheets have been reassessed on the basis of consolidated information. This may have resulted in changes of the Material Safety Data Sheets. In case you have questions concerning such changes please contact us at the address mentioned in Section I.

END OF DATA SHEET