

## MATERIAL SAFETY DATA SHEET

### 1. Identification

#### 1.1 GHS Product identifier

**Product name** Dipicrylamine  
Code D 2348

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### 2. Hazard identification

#### 2.1 Classification of the substance or mixture

Explosives, Division 1.1  
Acute toxicity - Oral, Category 2  
Acute toxicity - Dermal, Category 1  
Acute toxicity - Inhalation, Category 2  
Specific target organ toxicity – repeated exposure, Category 2  
Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 2

#### 2.2 GHS label elements, including precautionary statements

##### Pictogram(s)



**Signal word** Danger

**Hazard statement(s)** H201 Explosive; mass explosion hazard  
H300 Fatal if swallowed  
H310 Fatal in contact with skin  
H330 Fatal if inhaled  
H373 May cause damage to organs through prolonged or repeated exposure  
H411 Toxic to aquatic life with long lasting effects

##### Precautionary statement(s)

**Prevention** P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P230 Keep wetted with ...  
P234 Keep only in original packaging.  
P240 Ground and bond container and receiving equipment.  
P250 Do not subject to grinding/shock/friction/....  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P264 Wash ... thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.

<b>Response</b>	<p>P262 Do not get in eyes, on skin, or on clothing.</p> <p>P260 Do not breathe dust/fume/gas/mist/vapours/spray.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P284 [In case of inadequate ventilation] wear respiratory protection.</p> <p>P273 Avoid release to the environment.</p> <p>P370+P372+P380+P373 In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.</p> <p>P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/...</p> <p>P321 Specific treatment (see ... on this label).</p> <p>P330 Rinse mouth.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water/...</p> <p>P310 Immediately call a POISON CENTER/doctor/...</p> <p>P361+P364 Take off immediately all contaminated clothing and wash it before reuse.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P320 Specific treatment is urgent (see ... on this label).</p> <p>P314 Get medical advice/attention if you feel unwell.</p>
<b>Storage</b>	<p>P391 Collect spillage.</p> <p>P401 Store in accordance with...</p> <p>P405 Store locked up.</p> <p>P403+P233 Store in a well-ventilated place. Keep container tightly closed.</p>
<b>Disposal</b>	<p>P501 Dispose of contents/container to ...</p>

### 2.3 Other hazards which do not result in classification

none

## 3. Composition/information on ingredients

### 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
2,4,6-trinitro-N-(2,4,6-trinitrophenyl)aniline	2,4,6-trinitro-N-(2,4,6-trinitrophenyl)aniline	131-73-7	none	100%

## 4. First-aid measures

### 4.1 Description of necessary first-aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2 Most important symptoms/effects, acute and delayed

Except from ERG Guide 112 [Explosives\* - Division 1.1, 1.2, 1.3 or 1.5]: Fire may produce irritating, corrosive and/or toxic gases. (ERG, 2016)

#### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

/SRP:/ Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR if necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on the left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. /Organic bases/Amines and related compounds/

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#### 5. Fire-fighting measures

##### 5.1 Extinguishing media

###### Suitable extinguishing media

If material on fire or involved in fire: Dangerously explosive. Do not fight fires in a cargo of explosives. Evacuate area and let burn.

##### 5.2 Specific hazards arising from the chemical

Excerpt from ERG Guide 112 [Explosives\* - Division 1.1, 1.2, 1.3 or 1.5]: MAY EXPLODE AND THROW FRAGMENTS 1600 METERS (1 MILE) OR MORE IF FIRE REACHES CARGO. For information on "Compatibility Group" letters, refer to Glossary section. (ERG, 2016)

##### 5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

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#### 6. Accidental release measures

##### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

##### 6.2 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.

##### 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal. Sweep up and shovel. Keep in suitable, closed containers for disposal.

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#### 7. Handling and storage

##### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

##### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

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#### 8. Exposure controls/personal protection

##### 8.1 Control parameters

###### Occupational Exposure limit values

no data available

###### Biological limit values

no data available

##### 8.2 Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

##### 8.3 Individual protection measures, such as personal protective equipment (PPE)

###### Eye/face protection

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

###### Skin protection

Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

###### Respiratory protection

Wear dust mask when handling large quantities.

###### Thermal hazards

no data available

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#### 9. Physical and chemical properties

**Physical state** light yellow to beige or light brown crystalline

**Colour** Pale yellow prisms from acetic acid

<b>Odour</b>	no data available
<b>Melting point/ freezing point</b>	240-241oC
<b>Boiling point or initial boiling point and boiling range</b>	532.5oC at 760mmHg
<b>Flammability</b>	no data available
<b>Lower and upper explosion limit / flammability limit</b>	no data available
<b>Flash point</b>	275.9oC
<b>Auto-ignition temperature</b>	no data available
<b>Decomposition temperature</b>	no data available
<b>pH</b>	no data available
<b>Kinematic viscosity</b>	no data available
<b>Solubility</b>	Soluble in alkalis, glacial acetic acid; insoluble in acetone, alcohol, ether
<b>Partition coefficient n-octanol/water (log value)</b>	log Kow = 3.35 (est)
<b>Vapour pressure</b>	6.34X10 <sup>-14</sup> mm Hg at 25°C (est)
<b>Density and/or relative density</b>	1.938g/cm <sup>3</sup>
<b>Relative vapour density</b>	no data available
<b>Particle characteristics</b>	no data available

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## 10. Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

... Extremely stable ...

### 10.3 Possibility of hazardous reactions

Flammable by spontaneous chemical reaction; practically all nitrates are powerful oxidizing agents. /Nitrates/DIPICRYLAMINE is an oxidizing agents. If mixed with reducing agents, including hydrides, sulfides and nitrides may begin a vigorous reaction that culminates in a detonation. May explode in the presence of a base such as sodium hydroxide or potassium hydroxide even in the presence of water or organic solvents. The explosive tendencies of aromatic nitro compounds are increased by the presence of multiple nitro groups.

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

no data available

### 10.6 Hazardous decomposition products

When heated to decomposition it emits toxic fumes of /nitroxides/. /Nitrates/

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## 11. Toxicological information

### Acute toxicity

- Oral: no data available
- Inhalation: no data available
- Dermal: no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### Carcinogenicity

no data available

### Reproductive toxicity

no data available

### STOT-single exposure

no data available

### STOT-repeated exposure

no data available

### Aspiration hazard

no data available

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## 12. Ecological information

### 12.1 Toxicity

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

An estimated BCF of 76 was calculated in fish for 2,2',4,4',6,6'-hexanitrodiphenylamine(SRC), using an estimated log Kow of 3.4(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is moderate(SRC), provided the compound is not metabolized by the organism(SRC).

### 12.4 Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc of 2,2',4,4',6,6'-hexanitrodiphenylamine can be estimated to be  $1.1 \times 10^6$ (SRC). According to a classification scheme(2), this estimated Koc value suggests that 2,2',4,4',6,6'-hexanitrodiphenylamine is expected to be immobile in soil.

### 12.5 Other adverse effects

no data available

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## 13. Disposal considerations

### 13.1 Disposal methods

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

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**14. Transport information****14.1 UN Number**

ADR/RID: UN0079                      IMDG: UN0079                      IATA: UN0079

**14.2 UN Proper Shipping Name**

ADR/RID: HEXANITRODIPHENYLAMINE (DIPICRYLAMINE; HEXYL)?

IMDG: HEXANITRODIPHENYLAMINE (DIPICRYLAMINE; HEXYL)?

IATA: HEXANITRODIPHENYLAMINE (DIPICRYLAMINE; HEXYL)?

**14.3 Transport hazard class(es)**

ADR/RID: 1.1                              IMDG: 1.1                              IATA: 1.1

**14.4 Packing group, if applicable**

ADR/RID: unknown                      IMDG: unknown                      IATA: unknown

**14.5 Environmental hazards**

ADR/RID: yes                              IMDG: yes                              IATA: yes

**14.6 Special precautions for user**

no data available

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

no data available

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**15. Regulatory information****15.1 Safety, health and environmental regulations specific for the product in question**

<b>Chemical name</b>	<b>Common names and synonyms</b>	<b>CAS number</b>	<b>EC number</b>
2,4,6-trinitro-N-(2,4,6-trinitrophenyl)aniline	2,4,6-trinitro-N-(2,4,6-trinitrophenyl)aniline	131-73-7	none
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Listed.
<b>EC Inventory</b>			Listed.
<b>United States Toxic Substances Control Act (TSCA) Inventory</b>			Listed.
<b>China Catalog of Hazardous chemicals 2015</b>			Listed.
<b>New Zealand Inventory of Chemicals (NZIoC)</b>			Not Listed.
<b>Philippines Inventory of Chemicals and Chemical Substances (PICCS)</b>			Not Listed.
<b>Vietnam National Chemical Inventory</b>			Not Listed.
<b>Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)</b>			Not Listed.

#### 16. OTHER INFORMATION

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product.