

## 1. Material Identification

**Product Name** : 2,6-Dinitrotoluene

**Catalog Number** : io-2276

**CAS Number** : 606-20-2

**Identified uses** : Laboratory chemicals, manufacture of chemical compounds

**Company** : IonZ

>> R&D Use only

## 2. Hazards Identification

### GHS Classification:

Flammable liquid ( category 2 )

Acute toxicity, oral (Category 3)

Acute toxicity, dermal (Category 3)

Acute toxicity, inhalation (Category 3)

Specific target organ toxicity, single exposure (Category 1)

### Pictogram(s)



### GHS Hazard Statements

>> H301 (98.61%): Toxic if swallowed [Danger Acute toxicity, oral]

>> H311 (98.61%): Toxic in contact with skin [Danger Acute toxicity, dermal]

>> H331 (98.61%): Toxic if inhaled [Danger Acute toxicity, inhalation]

>> H341 (98.61%): Suspected of causing genetic defects [Warning Germ cell mutagenicity]

>> H350 (98.61%): May cause cancer [Danger Carcinogenicity]

>> H361 (98.61%): Suspected of damaging fertility or the unborn child [Warning Reproductive toxicity]

>> H373 (100%): May causes damage to organs through prolonged or repeated exposure [Warning Specific target organ toxicity, repeated exposure]

>> H412 (98.61%): Harmful to aquatic life with long lasting effects [Hazardous to the aquatic environment, long-term hazard]

### Precautionary Statement Codes

>> P203, P260, P261, P262, P264, P270, P271, P273, P280, P301+P316, P302+P352, P304+P340, P316, P318, P319, P321, P330, P361+P364, P403+P233, P405, and P501

### NFPA 704 Diamond



### NFPA Health Rating

>> 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

### NFPA Fire Rating

- >> 1 – Materials that must be preheated before ignition can occur. Materials require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur.

#### **NFPA Instability Rating**

- >> 3 – Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction but that require a strong initiating source or must be heated under confinement before initiation.

#### **Health Hazards:**

- >> INHALATION, INGESTION OR SKIN ABSORPTION: Headache, weakness, nausea or dizziness, cyanosis, drowsiness, shortness of breath and collapse. Can burn eyes and skin. (USCG, 1999)
- >> Special Hazards of Combustion Products: Emits toxic fumes of oxides of nitrogen
- >> Behavior in Fire: May explode when exposed to heat or flame. (USCG, 1999)
- >> Combustible. Gives off irritating or toxic fumes (or gases) in a fire. Finely dispersed particles form explosive mixtures in air. Risk of explosion on contact with many substances.

### **3. Composition/Information On Ingredients**

**Chemical name** : 2,6-Dinitrotoluene

**CAS Number** : 606-20-2

**Molecular Formula** : C<sub>7</sub>H<sub>6</sub>N<sub>2</sub>O<sub>4</sub>

**Molecular Weight** : 182.1300 g/mol

### **4. First Aid Measures**

#### **First Aid:**

- >> EYES: First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.
- >> SKIN: IMMEDIATELY flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water. IMMEDIATELY call a hospital or poison control center even if no symptoms (such as redness or irritation) develop. IMMEDIATELY transport the victim to a hospital for treatment after washing the affected areas.
- >> INHALATION: IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. If symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop, call a physician and be prepared to transport the victim to a hospital. Provide proper respiratory protection to rescuers entering an unknown atmosphere. Whenever possible, Self-Contained Breathing Apparatus (SCBA) should be used; if not available, use a level of protection greater than or equal to that advised under Protective Clothing.
- >> INGESTION: DO NOT INDUCE VOMITING. Corrosive chemicals will destroy the membranes of the mouth, throat, and esophagus and, in addition, have a high risk of being aspirated into the victim's lungs during vomiting which increases the medical problems. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. IMMEDIATELY transport the victim to a hospital. If the victim is convulsing or unconscious, do not give anything by mouth, ensure that the victim's airway is open and lay the victim on his/her side with the head lower than the body. DO NOT INDUCE VOMITING. Transport the victim IMMEDIATELY to a hospital. (NTP, 1992)

#### **First Aid Measures**

##### **Inhalation First Aid**

- >> Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.

##### **Skin First Aid**

- >> Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention .

##### **Eye First Aid**

- >> First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

#### **Ingestion First Aid**

- >> Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention .

## **5. Fire Fighting Measures**

- >> Fire Extinguishing Agents: Water, Carbon dioxide, dry chemical (USCG, 1999)
- >> Use water spray, powder, foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water. Combat fire from a sheltered position.

## **6. Accidental Release Measures**

### **Isolation and Evacuation:**

Isolation and evacuation measures to take when a large amount of this chemical is accidentally released in an emergency.

- >> Excerpt from ERG Guide 152 [Substances – Toxic (Combustible)]:
- >> IMMEDIATE PRECAUTIONARY MEASURE: Isolate spill or leak area in all directions for at least 50 meters (150 feet) for liquids and at least 25 meters (75 feet) for solids.
- >> SPILL: Increase the immediate precautionary measure distance, in the downwind direction, as necessary.
- >> FIRE: If tank, rail tank car or highway tank is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. (ERG, 2024)

### **Spillage Disposal:**

Methods for containment and safety measures to protect workers dealing with a spillage of this chemical.

- >> Consult an expert! Personal protection: chemical protection suit including self-contained breathing apparatus. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

## **7. Handling And Storage**

### **Safe Storage:**

- >> Fireproof. Separated from strong bases, food and feedstuffs, oxidants and strong reducing agents. Well closed. Keep in a well-ventilated room.

### **Storage Conditions:**

- >> Storage temperature: Ambient

## **8. Exposure Control/ Personal Protection**

- >> 8 hr Time Weighted Avg (TWA): 0.2 mg/cu m, skin. /Dinitrotoluene/

### **Inhalation Risk:**

- >> A harmful concentration of airborne particles can be reached quickly when dispersed, especially if powdered.

### **Effects of Short Term Exposure:**

- >> The substance may cause effects on the blood. This may result in the formation of methaemoglobin. The effects may be delayed. Medical observation is indicated.

### Effects of Long Term Exposure:

- >> The substance may have effects on the blood. This may result in the formation of methaemoglobin. This substance is possibly carcinogenic to humans. Animal tests show that this substance possibly causes toxicity to human reproduction or development.

### Fire Prevention

- >> NO open flames. Closed system, dust explosion-proof electrical equipment and lighting. Prevent deposition of dust.

### Exposure Prevention

- >> PREVENT DISPERSION OF DUST! AVOID ALL CONTACT! AVOID EXPOSURE OF (PREGNANT) WOMEN!

### Inhalation Prevention

- >> Use local exhaust or breathing protection.

### Skin Prevention

- >> Protective gloves. Protective clothing.

### Eye Prevention

- >> Wear face shield.

### Ingestion Prevention

- >> Do not eat, drink, or smoke during work. Wash hands before eating.

## 9. Physical And Chemical Properties

### Molecular Weight:

- >> 182.13

### Exact Mass:

- >> 182.03275668

### Physical Description:

- >> 2,6-dinitrotoluene appears as yellow to red solid or heated liquid with a slight odor. Solidifies in cool water. Solid and liquid sink in water. (USCG, 1999)
- >> YELLOW OR BROWN-TO-RED CRYSTALS WITH CHARACTERISTIC ODOUR.

### Color/Form:

- >> Yellow rhombic crystals

### Odor:

- >> Slight odor

### Boiling Point:

- >> Decomposes (NTP, 1992)

### Melting Point:

- >> 151 °F (NTP, 1992)
- >> 66 °C

### Flash Point:

- >> 404 °F (NTP, 1992)
- >> 207 °C c.c.

### Solubility:

- >> less than 1 mg/mL at 64 °F (NTP, 1992)
- >> Solubility in water: very poor

### Density:

>> 1.283 at 231.8 °F (USCG, 1999) – Denser than water; will sink

>> Relative density (water = 1): 1.283 (liquid)

#### **Vapor Density:**

>> 6.28 (NTP, 1992) – Heavier than air; will sink (Relative to Air)

>> Relative vapor density (air = 1): 6.28

#### **Vapor Pressure:**

>> 0.018 mmHg at 68 °F (NTP, 1992)

>> Vapor pressure, Pa at 20 °C: 2.4

#### **LogP:**

>> log Kow = 2.10

>> 2.05

#### **Decomposition:**

>> When heated to decomposition it emits toxic fumes of /nitrogen oxides/.

>> 285 °C

#### **Heat of Combustion:**

>> -8099 Btu/lb = -4499 cal/g = -188.3x10(+5) J/kg

#### **Refractive Index:**

>> Index of Refraction: 1.479

#### **Dissociation Constants:**

>> pKa = 1.80

## **10. Stability And Reactivity**

>> Mixes slowly with water. Insoluble in water.

>> Explosive

>> Strong Oxidizing Agent

## **11. Toxicological Information**

#### **Toxicity Summary:**

>> Dinitrotoluene may cause conversion of oxyhemoglobin to methemoglobin via oxidation of iron(II) to iron(III) by its metabolites. High levels of methemoglobin are removed by catabolism, leading to the development of anemia. Some metabolites of dinitrotoluene are also transported back from the bile to the liver, where the amine group is N-hydroxylated by cytochrome P-450 to form an unstable sulfate conjugate. The sulfate conjugate is degraded into carbonium or nitrenium ions. These ions covalently bind to hepatic macromolecules (DNA, RNA), leading to mutations and subsequently liver tumors. They also bind to DNA of the lung and the intestine. (L276)

#### **Evidence for Carcinogenicity:**

Evidence that this chemical does or may cause cancer. The information here is collected from various sources by the Hazardous Substances Data Bank (HSDB).

>> Evaluation: There is inadequate evidence in humans for the carcinogenicity of ... 2,6-dinitrotoluene. There is sufficient evidence in experimental animals for the carcinogenicity of ... 2,6-dinitrotoluene. Overall evaluation: ... 2,6-Dinitrotoluene /is/ possibly carcinogenic to humans (Group 2B).

#### **Carcinogen Classification:**

This section provides the International Agency for Research on Cancer (IARC) Carcinogenic Classification and related monograph links. In the IARC Carcinogenic classification, chemicals are categorized into four groups: Group 1 (carcinogenic to humans), Group 2A (probably carcinogenic to humans), Group 2B (possibly carcinogenic to humans), and Group 3 (not classifiable as to its carcinogenicity to humans).

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**IARC Carcinogenic Agent**

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- >> 2,6-Dinitrotoluene

**IARC Carcinogenic Classes**

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- >> Group 2B: Possibly carcinogenic to humans

**IARC Monographs**

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- >> Volume 65: (1996) Printing Processes and Printing Inks, Carbon Black and Some Nitro Compounds
- >> 2B, possibly carcinogenic to humans. (L135)

**Health Effects:**

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- >> 2,6-Dinitrotoluene poisoning may cause methemoglobinemia, anemia, leukopenia, and liver necrosis. Liver injury may be more common than cyanosis. (L276)

**Exposure Routes:**

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- >> The substance can be absorbed into the body by inhalation, through the skin and by ingestion.
- >> Dermal (T44) ; eye contact (T44) ; inhalation (T44) ; oral (T44)

**Inhalation Exposure**

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- >> Blue lips, fingernails and skin. Headache. Dizziness. Nausea. Confusion. Convulsions. Unconsciousness.

**Skin Exposure**

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- >> MAY BE ABSORBED! See Inhalation.

**Ingestion Exposure**

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- >> See Inhalation.
- >> Symptoms of 2,4-dinitrotoluene poisoning include blue lips or finger nails, blue skin, vertigo, fatigue, dizziness, weakness, nausea, vomiting, dyspnea, arthralgia, insomnia, tremor, paralysis, unconsciousness, chest pain, shortness of breath, palpitation, anorexia, and loss of weight. (T45, L940)

**Adverse Effects:**

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An adverse effect is an undesired harmful effect resulting from a medical treatment or other intervention.

- >> Occupational hepatotoxin – Secondary hepatotoxins: the potential for toxic effect in the occupational setting is based on cases of poisoning by human ingestion or animal experimentation.
- >> Methemoglobinemia – The presence of increased methemoglobin in the blood; the compound is classified as secondary toxic effect
- >> Reproductive Toxin – A chemical that is toxic to the reproductive system, including defects in the progeny and injury to male or female reproductive function. Reproductive toxicity includes developmental effects. See Guidelines for Reproductive Toxicity Risk Assessment.
- >> IARC Carcinogen – Class 3: Chemicals are not classifiable by the International Agency for Research on Cancer.
- >> ACGIH Carcinogen – Confirmed Animal.

**Toxicity Data:**

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- >> LC50 (rat) = 240 mg/m<sup>3</sup>/6hr

**Minimum Risk Level:**

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The minimal risk level (MRL) is an estimate of the amount of a chemical a person can eat, drink, or breathe each day without a detectable risk to health

- >> Intermediate Oral: 0.004 mg/kg/day (Dog) (511)

**Treatment:**

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Treatment when exposed to toxin

- >> Following oral exposure, immediately dilute with 4 to 8 ounces (120 to 240 mL) of water or milk (not to exceed 4 ounces/120 mL in a child). Administer charcoal as a slurry. Gastric lavage and oxygen administration is recommended. Following inhalation exposure, move patient to fresh air. Monitor for respiratory distress. If cough or difficulty breathing develops, evaluate for respiratory tract irritation, bronchitis, or pneumonitis. Administer oxygen and assist ventilation as required. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Following eyes exposure, irrigate exposed eyes with copious amounts of room temperature water for at least 15 minutes. Following dermal exposure, remove contaminated clothing and wash exposed area thoroughly with soap and water, and administer a benzodiazepine IV in case of irritation. In all those cases, a physician may need to examine the area if irritation or pain persists. (T36)

**Interactions:**

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>> The influence of diets varying in pectin content on intestinal microfloral metabolic capacity of rats has been investigated as a possible mechanism for the alteration of toxicity of 2,6-DNT produced by these diets. Male F-344 rats were fed a purified diet (AIN-76A), AIN-76A plus 5% or 10% citrus pectin, or either of 2 cereal-based diets that vary in pectin content, NIH-07 or Purina Chow 5002. After 28 days, rats were given tritium-labeled 2,6-DNT (10 or 75 mg/kg per os) and killed 12 hr later. Total hepatic macromolecular covalent binding was determined by exhaustive extraction. The macromolecular covalent binding of 2,6-DNT was independent of diet at 10 mg/kg. At 75 mg/kg, macromolecular covalent binding was increased 40% by feeding 5% pectin in the purified diet and 90% by feeding 10% pectin in the purified diet. Animals fed Purina 5002 and NIH-07 had 135 and 150% higher macromolecular covalent binding, respectively, than animals fed the purified diet alone and significantly greater macromolecular covalent binding than animals fed the pectin supplemented diets. Elevated (2 to 3-fold) beta-glucuronidase and nitroreductase activities, microfloral enzymes proposed to be involved in the activation of 2,6-DNT to toxicant, were found in the cecal contents of animals fed the pectin-containing diets which correlated with a 2 to 3-fold increase in total number of cecal anaerobes.

#### Antidote and Emergency Treatment:

>> In case of ingestion, induction of emesis is not recommended because of the potential for central nervous system depression. Gastric lavage and administration of activated charcoal may be considered soon after ingestion, provided airways are protected. /Dinitrotoluene/

#### Human Toxicity Excerpts:

>> /ALTERNATIVE and IN VITRO TESTS/ ... This research was therefore designed targeting the liver to assess the cellular and molecular responses of human liver carcinoma cells following exposure to 2,4-DNT and 2,6-DNT. Cytotoxicity was evaluated using the MTT assay. Upon 48 hrs of exposure, LC50 values of 245 +/- 14.724 ug/mL, and 300 +/- 5.92 ug/mL were recorded for 2,6-DNT and 2,4-DNT respectively, indicating that both DNTs are moderately toxic, and 2,6-DNT is slightly more toxic to HepG2 cells than 2,4-DNT. A dose response relationship was recorded with respect to the cytotoxicity of both DNTs. Western blot analysis resulted in a significant expression ( $p < 0.05$ ) of the 70-kDa heat shock protein in 2,6-DNT-treated cells compared to the control cells and at the 200 ug/mL dose for 2,4-DNT. A statistically significant expression in c-fos was also observed at the 200 and 250 ug/mL treatment level for 2,4- and 2,6-DNT, respectively. However, no statistically significant expression of this protooncogene-related protein was observed at the doses of 0, 100, or 300 ug/mL or within the dose range of 0-200 ug/mL for 2,6-DNT. The 45-kDa growth arrest and damage protein was significantly expressed at the dose range of 200 - 250 ug/mL for 2,6-DNT and at the dose range of 200 - 400 ug/mL for 2,4-DNT. Expression of 153-kDa growth arrest and DNA damage protein was significant at the 100, 200, and 250 ug/mL doses for 2,6-DNT and at the 200 ug/mL dose for 2,4-DNT. Overall, these results indicate the potential of DNTs to induce cytotoxic, proteotoxic (HSP70), and genotoxic (GADD45/153) effects, as well as oxidative stress and pro-inflammatory reactions (c-fos).

#### Non-Human Toxicity Excerpts:

>> /LABORATORY ANIMALS: Acute Exposure/ Toxic dose Dog oral 4 mg/kg; Toxic effects: Inhibition of muscular coordination in the hind legs; Rigidity in extension of the hind legs; Decreased appetite; Weight loss.

#### Non-Human Toxicity Values:

>> LD50 Rat oral 177 mg/kg

#### TSCA Test Submissions:

Under the Toxic Substances Control Act (TSCA), EPA has broad authority to issue regulations designed to require manufacturers (including importers) or processors to test chemical substances and mixtures for health and environmental effects. This section provides information on test reports submitted for this chemical under TSCA.

>> 2,6-Dinitrotoluene (2,6-DNT, CAS # 606-20-2) was evaluated for acute inhalation toxicity in Fischer 344 rats (5/sex/group) administered single nose-only exposures to measured aerosol (atomized 2,6-DNT in acetone/PEG 200) concentrations of 0, 0.196, 0.473, and 0.694 mg/L in air for 6 hours. A maximal vapor concentration of 0.026 mg/L 2,6-DNT was previously found to produce no mortality and no clinical signs of toxicity in 5 each male and female rats. Rats exposed to the higher concentrations also exhibited no untoward effects during exposures; however, during 14-day post-exposure observation, exposures to 2,6-DNT aerosol were associated with signs of toxicity including labored respiration, ataxia, brown staining about snout and jaws, lethargy, and death. Reductions in food consumption and bodyweight gains were dose-dependent. Increased mortality was consistent with LC50's of 0.24 and 0.66 mg/L for male and female rats, respectively, or a combined LC50 of 0.43 mg/L (95% confidence limits of 0.23 - 0.63 mg/L), as determined by the log probit method of Miller and Tainter. Gross necropsy revealed increased organ/bodyweight ratios and congestion of lungs and instances of darkened livers in the study decedents only; no macroscopic abnormalities were identified in the study survivors. Periodic sampling during the initial 7 days of 14-day observation failed to reveal any significant increase of methemoglobinuria in 2,6-DNT exposed rats.

#### Populations at Special Risk:

>> Those individuals with blood or liver disorders may be at increased risk from exposure to 2,4-DNT. /2,4-Dinitrotoluene/



## 12. Ecological Information

### Resident Soil (mg/kg)

>> 3.60e-01

### Industrial Soil (mg/kg)

>> 1.50e+00

### Tapwater (ug/L)

>> 4.90e-02

### MCL (ug/L)

>> 5.00e+00

### Risk-based SSL (mg/kg)

>> 6.7e-05

### Oral Slope Factor (mg/kg-day)-1

>> 1.50e+00

### Chronic Oral Reference Dose (mg/kg-day)

>> 3.00e-04

### Volatile

>> Volatile

### Mutagen

>> Mutagen

### Fraction of Contaminant Absorbed in Gastrointestinal Tract

>> 1

### Fraction of Contaminant Absorbed Dermal from Soil

>> 0.099

### Sediment/Soil Concentrations:

Concentrations of this compound in sediment/soil.

>> SEDIMENT: 2,6-Dinitrotoluene was detected in 1.0% of 518 streambed sediment samples collected from 20 major river basins across the US between 1992-1995 at levels of <50 to 93 ug/kg dry wt(1).

### Fish/Seafood Concentrations:

Concentrations of this compound in fish or seafood.

>> No 2,6-dinitrotoluene was found in 22 composite fish samples taken from selected Great Lakes harbors and tributaries(1).

### Animal Concentrations:

Concentrations of this compound in animals.

>> 2,6-Dinitrotoluene concentrations of 17.4 to 536.5 g/kg dry wt were detected in the birds eggs collected from the Lake Baikal region (Selenga River estuary, Russia)(1).[Table#4288]

## 13. Disposal Considerations

### Spillage Disposal

>> Consult an expert! Personal protection: chemical protection suit including self-contained breathing apparatus. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

### Disposal Methods



- >> SRP: Wastewater from contaminant suppression, cleaning of protective clothing/equipment, or contaminated sites should be contained and evaluated for subject chemical or decomposition product concentrations. Concentrations shall be lower than applicable environmental discharge or disposal criteria. Alternatively, pretreatment and/or discharge to a permitted wastewater treatment facility is acceptable only after review by the governing authority and assurance that "pass through" violations will not occur. Due consideration shall be given to remediation worker exposure (inhalation, dermal and ingestion) as well as fate during treatment, transfer and disposal. If it is not practicable to manage the chemical in this fashion, it must be evaluated in accordance with EPA 40 CFR Part 261, specifically Subpart B, in order to determine the appropriate local, state and federal requirements for disposal.
- >> Generators of waste (equal to or greater than 100 kg/mo) containing this contaminant, EPA hazardous waste number U106, must conform with USEPA regulations in storage, transportation, treatment and disposal of waste.[
- >> A potential candidate for rotary kiln incineration at a temperature range of 820 to 1,600 °C and residence times of seconds for liquids and gases, and hours for solids. A potential candidate for fluidized bed incineration at a temperature range of 450 to 980 °C and residence times of seconds for liquids and gases, and longer for solids.
- >> 1) BY MAKING PACKAGES OF DINITROTOLUENE IN PAPER OR OTHER FLAMMABLE MATERIAL & BURNING IN SUITABLE COMBUSTION CHAMBER WHICH ALLOWS BURNING IN UNCONFINED CONDITION & IS EQUIPPED WITH APPROPRIATE EFFLUENT GAS CLEANING DEVICE. 2) BY DISSOLVING IN FUEL OIL & ATOMIZING IN SUITABLE COMBUSTION CHAMBER EQUIPPED WITH APPROPRIATE EFFLUENT GAS CLEANING DEVICE. /DINITROTOLUENE/
- >> For more Disposal Methods (Complete) data for 2,6-DINITROTOLUENE (10 total), please visit the HSDB record page.

## 14. Transport Information

### DOT

2,6-Dinitrotoluene

6.1

UN Pack Group: II

Reportable Quantity of 100 lb or 45

### IATA

2,6-Dinitrotoluene

6.1,

UN Pack Group: II

## 15. Regulatory Information

### Clean Water Act Requirements:

The Clean Water Act (CWA) of 1972 establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. Under CWA, the U.S. Environmental Protection Agency (EPA) developed the Toxic Pollutant List (40 CFR Part 401.15) and the Priority Pollutant List (40 CFR Part 423, Appendix A). These lists are to be used by EPA and States to develop the Effluent Guidelines regulations and ensure water quality criteria and standards.

- >> 2,6-Dinitrotoluene is designated as a hazardous substance under section 311(b)(2)(A) of the Federal Water Pollution Control Act and further regulated by the Clean Water Act Amendments of 1977 and 1978. These regulations apply to discharges of this substance. This designation includes any isomers and hydrates, as well as any solutions and mixtures containing this substance.

### Regulatory Information

#### The Australian Inventory of Industrial Chemicals

- >> Chemical: Benzene, 2-methyl-1,3-dinitro-

## 16. Other Information

### Toxic Combustion Products:

Toxic products (e.g., gases and vapors) produced from the combustion of this chemical.

>> Gives off irritating or toxic fumes (or gases) in a fire.

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**Other Safety Information**

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**Chemical Assessment**

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>> IMAP assessments – Benzene, 2-methyl-1,3-dinitro-: Human health tier II assessment

"The information provided is believed to be accurate but is not comprehensive and should be used as a reference. It reflects our current knowledge and is intended for safety guidance related to the product. This document does not constitute a warranty of the product's properties. Ionz is not responsible for any damages resulting from handling or contact with the product incorrectly."