

# SAFETY DATA SHEET

**Preparation Date:** No data available

**Revision Date:** 05/22/2015

**Revision Number:** G1

**Product identifier**

**Product code:** T2401  
**Product Name:** N,N,N,N-TETRAMETHYL-P-PHENYLENEDIAMINE DIHYDROCHLORIDE

**Other means of identification**

**Synonyms:** N,N,N',N'-Tetramethyl-para-phenylenediamine dihydrochloride  
Wurster's reagent dihydrochloride  
1,4-Benzenediamine, N,N,N',N'-tetramethyl-, dihydrochloride  
1,4-Benzenediamine, N1,N1,N4,N4-tetramethyl-, hydrochloride (1:2)  
p-Phenylenediamine, N,N,N',N'-tetramethyl-, dihydrochloride (8Cl)  
**CAS #:** 637-01-4  
**RTECS #** Not available  
**CI#:** Not available

**Recommended use of the chemical and restrictions on use**

**Recommended use:** No information available.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemicals and Laboratory Products, Inc.  
14422 South San Pedro St.  
Gardena, CA 90248  
(310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>

**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Martin LaBenz (West Coast)  
**Contact Person:** Ibad Tirmiz (East Coast)

## 2. HAZARDS IDENTIFICATION

**Classification**

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

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity (single exposure)	Category 3

**Label elements**

**Product code:** T2401

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**Warning****Hazard statements**

Causes skin irritation  
Causes serious eye irritation  
May cause respiratory irritation

**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Not available

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Wear protective gloves  
Wear eye/face protection

**Precautionary Statements - Response**

Specific treatment (see .? on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of soap and water

If skin irritation occurs: Get medical advice/attention

Take off contaminated clothing and wash before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep container tightly closed  
Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Components	CAS-No.	Weight %	Trade Secret
N,N,N',N'-Tetramethyl-p-phenylenediamine Dihydrochloride 637-01-4	637-01-4	100	*

**4. FIRST AID MEASURES**

Product code: T2401

Product name: N,N,N,N-  
TETRAMETHYL-P-  
PHENYLENEDIAMINE  
DIHYDROCHLORIDE

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## 4. FIRST AID MEASURES

### First aid measures

#### **General Advice:**

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126).

#### **Skin Contact:**

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention. If skin irritation persists, call a physician.

#### **Eye Contact:**

Flush eye with water for 15 minutes. Get medical attention.

#### **Inhalation:**

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

#### **Ingestion:**

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

### **Most important symptoms and effects, both acute and delayed**

#### **Symptoms**

Causes serious eye irritation. Causes skin irritation. May cause irritation of respiratory tract.

### **Indication of any immediate medical attention and special treatment needed**

#### **Notes to Physician:**

Treat symptomatically

### **Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

## 5. FIRE-FIGHTING MEASURES

### **Extinguishing Media**

#### **Suitable Extinguishing Media:**

Dry chemical. Carbon dioxide (CO<sub>2</sub>). Water spray. Foam.

#### **Unsuitable Extinguishing Media:**

No information available.

### **Specific hazards arising from the chemical**

#### **Hazardous Combustion Products:**

Carbon oxides, Nitrogen oxides

#### **Specific hazards:**

May be combustible at high temperatures  
May be ignited by heat, sparks or flames

### **Special Protective Actions for Firefighters**

#### **Specific Methods:**

No information available.

#### **Special Protective Equipment for Firefighters:**

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

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions:** Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Ensure adequate ventilation. Evacuate personnel to safe areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak. Remove all sources of ignition.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so. Cover with plastic sheet to prevent spreading.

**Methods for cleaning up** Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### **Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials. Remove all sources of ignition. All equipment used when handling the product must be grounded.

#### **Safe Handling Advice:**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapours/dust. Avoid dust formation. Do not ingest. Do not smoke. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

#### **Technical Measures/Storage Conditions:**

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Store at room temperature in the original container. Store away from incompatible materials.

#### **Incompatible Materials:**

Oxidizing agents. Alkalis.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

### **National occupational exposure limits**

#### **United States**

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
N,N,N',N'-Tetramethyl-p-phenylenediamine Dihydrochloride - 637-01-4	None	None	None	None

#### **Canada**

Components	Alberta	British Columbia	Ontario	Quebec
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N,N,N',N'-Tetramethyl-p-phenylenediamine Dihydrochloride - 637-01-4	None	None	None	None
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**Australia and Mexico**

Components	Australia	Mexico
N,N,N',N'-Tetramethyl-p-phenylenediamine Dihydrochloride 637-01-4	None	None

**Appropriate engineering controls**

**Engineering measures to reduce exposure:**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Individual protection measures, such as personal protective equipment**

**Personal Protective Equipment**

- Eye protection:** Safety glasses with side-shields.
- Skin and body protection:** Long sleeved clothing. apron. Gloves.
- Respiratory protection:** Wear respirator with dust filter..
- Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Solid.	<b>Appearance:</b> Crystals. Powder.	<b>Color:</b> White. Yellow.
<b>Odor:</b> Faint.	<b>Taste</b> No information available	<b>Molecular/Formula weight:</b> 237.17
<b>Formula:</b> C10H16N2-2HCl	<b>Flash point (°C):</b> No data available	<b>Flashpoint (°C/°F):</b> No information available.
<b>Flash Point Tested according to:</b> Not available	<b>Lower Explosion Limit (%):</b> No information available	<b>Upper Explosion Limit (%):</b> No information available
<b>Autoignition Temperature (°C/°F):</b> No information available	<b>pH:</b> 1.5-2.5	<b>Melting point/range(°C/°F):</b> 222-224°C/ 432-435°F
<b>Boiling point/range(°C/°F):</b> No information available	<b>Decomposition temperature(°C/°F):</b> No information available	<b>Bulk density:</b> No information available
<b>Specific gravity:</b> No information available	<b>Density (g/cm3):</b> 0.25	<b>Vapor pressure @ 20°C (kPa):</b> No information available
<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> No information available	<b>VOC content (g/L):</b> No information available
<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> No information available	<b>Viscosity:</b> No information available
<b>Miscibility:</b> No information available	<b>Solubility:</b> Easily soluble in hot water Soluble in cold water	

## 10. STABILITY AND REACTIVITY

### Reactivity

Reactive with oxidizing agents  
Reactive with alkalis

### Chemical stability

**Stability:** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Heat. Ignition sources. Incompatible materials.

**Incompatible Materials:** Oxidizing agents. Alkalis.

**Hazardous decomposition products:** Carbon oxides. Nitrogen oxides (NOx). Hydrogen chloride.

### Other Information

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

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PHENYLENEDIAMINE  
DIHYDROCHLORIDE

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## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Principal Routes of Exposure:

Skin. Eyes. Inhalation. Ingestion.

### Acute Toxicity

#### Component Information

*N,N,N',N'*-Tetramethyl-*p*-phenylenediamine Dihydrochloride - 637-01-4

**LD50/oral/rat** = No information available

**LD50/oral/mouse** = No information available

**LD50/dermal/rat** = No information available

**LD50/dermal/rabbit** = No information available

**LC50/inhalation/rat** = No information available

**LC50/inhalation/mouse** = No information available

**Other LD50 or LC50 information** = No information available

#### Product Information

**LD50/oral/rat =**

**VALUE- Acute Tox Oral** = No information available

**LD50/oral/mouse =**

**Value - Acute Tox Oral** = No information available

**LD50/dermal/rabbit**

**VALUE-Acute Tox Dermal** = No information available

**LD50/dermal/rat**

**VALUE -Acute Tox Dermal** = No information available

**LC50/inhalation/rat**

**VALUE-Vapor** = No information available

**VALUE-Gas** = No information available

**VALUE-Dust/Mist** = No information available

**LC50/Inhalation/mouse**

**VALUE-Vapor** = No information available

**VALUE - Gas** = No information available

**VALUE - Dust/Mist** = No information available

### Symptoms

#### **Skin Contact:**

Causes skin irritation. Skin contact may result in redness, pain, inflammation, itching, scaling.

#### **Eye Contact:**

Causes serious eye irritation. Eye contact may result in redness or pain.

#### **Inhalation Ingestion**

May cause respiratory tract irritation.  
Harmful if swallowed.

#### **Aspiration hazard**

No information available

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

**Chronic Toxicity** No information available

**Sensitization:** No information available

**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic

Components	ACGIH - Carcinogens	IARC	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
N,N,N',N'-Tetramethyl-p-phenylenediamine Dihydrochloride	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available

**Developmental Effects:** No information available

**Teratogenic Effects:** No information available

**Specific Target Organ Toxicity**

**STOT - single exposure** No information available

**STOT - repeated exposure** No information available

**Target Organs:** No information available

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ecotoxicity effects:** No data available.

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available

**Mobility:** No information available

**13. DISPOSAL CONSIDERATIONS**

**Disposal Methods**

**Waste from residues / unused products:**

Waste must be disposed of in accordance with Federal, State and Local regulation.



**Contaminated packaging:**

Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
N,N,N',N'-Tetramethyl-p-phenylenediamine Dihydrochloride	None	None	None	None

**14. TRANSPORT INFORMATION****DOT**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** None  
**ERG No:** No information available  
**Marine Pollutant:** No data available  
**DOT RQ (lbs):** No information available

**TDG (Canada)**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available

**ADR**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Packing Group:** No information available  
**Subsidiary Risk:** No information available  
**Classification Code:** No information available  
**Description:** No information available  
**CEFIC Tremcard No:** No information available

**IMO / IMDG**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available  
**IMDG Page:** No information available  
**Marine Pollutant:** No information available  
**MFAG:** No information available  
**Maximum Quantity:** No information available

**RID**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available

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## 14. TRANSPORT INFORMATION

**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Classification Code:** No information available  
**Description:** No information available

### ICAO

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available

### IATA

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available

## 15. REGULATORY INFORMATION

### International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>N,N,N',N'</i> -Tetramethyl- <i>p</i> -phenylenediamine Dihydrochloride	Present	Not present	Present	Not present	Present	Present	Present 211-274-8

### U.S. Regulations

#### California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

##### Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

##### Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
<i>N,N,N',N'</i> -Tetramethyl- <i>p</i> -phenylenediamine Dihydrochloride	Not Listed	Not Listed	Not Listed	Not Listed

### CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
<i>N,N,N',N'</i> -Tetramethyl- <i>p</i> -phenylenediamine Dihydrochloride	None	None	None	None	None

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 TETRAMETHYL-P-  
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**U.S. TSCA**

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
<i>N,N,N',N'</i> -Tetramethyl- <i>p</i> -phenylenediamine Dihydrochloride	Not Applicable	Not Applicable

**Canada****WHMIS hazard class:**

Non-controlled

**N,N,N',N'-Tetramethyl-p-phenylenediamine Dihydrochloride**

Uncontrolled product according to WHMIS classification criteria

**Canada Controlled Products Regulation:**

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

**Inventory**

Components	Canada (DSL)	Canada (NDSL)
<i>N,N,N',N'</i> -Tetramethyl- <i>p</i> -phenylenediamine Dihydrochloride	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
<i>N,N,N',N'</i> -Tetramethyl- <i>p</i> -phenylenediamine Dihydrochloride	Not listed	Not listed

**EU Classification****R-phrase(s)**

not determined (not applicable)

**S -phrase(s)**

none

Components	Classification	Concentration Limits:	Safety Phrases
<i>N,N,N',N'</i> -Tetramethyl- <i>p</i> -phenylenediamine Dihydrochloride		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

**Indication of danger:**

None.

## 16. OTHER INFORMATION

**Revision Date:** 05/22/2015  
**Prepared by:** Sonia Owen

**Disclaimer:** All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**