

## 1. Identification

|   |   |                 |
|---|---|-----------------|
| <b>Product identifier</b>                                     | <b>2,4-Diaminotoluene</b>                                 |                 |
| <b>Other means of identification</b>                          |   |                 |
| Item  | N-10534   |                 |
| <b>Recommended use</b>  | For Laboratory Use Only                                   |                 |
| <b>Recommended restrictions</b>                               | None known.   |                 |
| <b>Manufacturer/Importer/Supplier/Distributor information</b> |   |                 |
| <b>Manufacturer</b>   |   |                 |
| <b>Company name</b>   | Chem Service, Inc.  |                 |
| <b>Address</b>  | 660 Tower Lane<br>West Chester, PA 19380<br>United States |                 |
| <b>Telephone</b>  | Toll Free   | 800-452-9994    |
|   | Direct  | 610-692-3026    |
| <b>Website</b>  | www.chemservice.com                                       |                 |
| <b>E-mail</b>   | info@chemservice.com                                      |                 |
| <b>Emergency phone number</b>                                 | Chemtrec US   | 800-424-9300    |
|   | Chemtrec outside US                                       | +1 703-527-3887 |

## 2. Hazard(s) identification

|                              |  |             |
|------------------------------|--|-------------|
| <b>Physical hazards</b>      | Not classified.  |             |
| <b>Health hazards</b>        | Acute toxicity, oral                                   | Category 3  |
|                              | Acute toxicity, dermal                                 | Category 3  |
|                              | Serious eye damage/eye irritation                      | Category 2A |
|                              | Sensitization, skin                                    | Category 1  |
|                              | Germ cell mutagenicity                                 | Category 2  |
|                              | Carcinogenicity  | Category 1  |
|                              | Reproductive toxicity                                  | Category 2  |
|                              | Specific target organ toxicity, repeated exposure      | Category 2  |
| <b>Environmental hazards</b> | Hazardous to the aquatic environment, acute hazard     | Category 2  |
|                              | Hazardous to the aquatic environment, long-term hazard | Category 2  |
| <b>OSHA defined hazards</b>  | Not classified.  |             |

### Label elements



|                                |   |
|--------------------------------|---|
| <b>Signal word</b>             | Danger  |
| <b>Hazard statement</b>        | Toxic if swallowed. Toxic in contact with skin. May cause an allergic skin reaction. Causes serious eye irritation. Suspected of causing genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.             |
| <b>Precautionary statement</b> |   |
| <b>Prevention</b>              | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. |

|  |   |
|--|---|
| <b>Response</b>                                  | If swallowed: Immediately call a poison center/doctor. If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. Specific treatment (see this label). Rinse mouth. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off immediately all contaminated clothing and wash it before reuse. Collect spillage. |
| <b>Storage</b>                                   | Store locked up.  |
| <b>Disposal</b>                                  | Dispose of contents/container in accordance with local/regional/national/international regulations.   |
| <b>Hazard(s) not otherwise classified (HNOC)</b> | None known.   |
| <b>Supplemental information</b>                  | Not applicable.   |

### 3. Composition/information on ingredients

#### Substances

| Chemical name      | Common name and synonyms | CAS number | %   |
|--------------------|--------------------------|------------|-----|
| 2,4-Diaminotoluene |                          | 95-80-7    | 100 |

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

|   |  |
|---|--|
| <b>Inhalation</b>   | Move to fresh air. Call a physician if symptoms develop or persist.  |
| <b>Skin contact</b>   | Remove contaminated clothing immediately and wash skin with soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.  |
| <b>Eye contact</b>  | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.  |
| <b>Ingestion</b>  | Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. |
| <b>Most important symptoms/effects, acute and delayed</b>                     | Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.  |
| <b>Indication of immediate medical attention and special treatment needed</b> | Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.  |
| <b>General information</b>  | Take off immediately all contaminated clothing. IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.   |

### 5. Fire-fighting measures

|  |   |
|--|---|
| <b>Suitable extinguishing media</b>                                  | Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).                      |
| <b>Unsuitable extinguishing media</b>                                | Do not use water jet as an extinguisher, as this will spread the fire.                        |
| <b>Specific hazards arising from the chemical</b>                    | During fire, gases hazardous to health may be formed.   |
| <b>Special protective equipment and precautions for firefighters</b> | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| <b>Fire-fighting equipment/instructions</b>                          | Use water spray to cool unopened containers.  |
| <b>Specific methods</b>  | Use standard firefighting procedures and consider the hazards of other involved materials.    |
| <b>General fire hazards</b>  | No unusual fire or explosion hazards noted.   |

### 6. Accidental release measures

|  |  |
|--|--|
| <b>Personal precautions, protective equipment and emergency procedures</b> | Immediately evacuate personnel to safe areas. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
| <b>Methods and materials for containment and cleaning up</b>               | This product is miscible in water. Stop the flow of material, if this is without risk. Collect spillage. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.   |

**Environmental precautions** Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

**Precautions for safe handling** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not taste or swallow. Avoid contact with skin. Avoid contact with eyes. Avoid contact during pregnancy/while nursing. Avoid prolonged exposure. Avoid contact with clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Avoid release to the environment. Do not empty into drains.

**Conditions for safe storage, including any incompatibilities** Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. Workplace Environmental Exposure Level (WEEL) Guides

| Material                         | Type | Value                    |
|----------------------------------|------|--------------------------|
| 2,4-Diaminotoluene (CAS 95-80-7) | TWA  | 0.025 mg/m3<br>0.005 ppm |

**Biological limit values** No biological exposure limits noted for the ingredient(s).

### Exposure guidelines

#### US - Minnesota Haz Subs: Skin designation applies

2,4-Diaminotoluene (CAS 95-80-7) Skin designation applies.

#### US WEEL Guides: Skin designation

2,4-Diaminotoluene (CAS 95-80-7) Can be absorbed through the skin.

**Appropriate engineering controls** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

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

**Eye/face protection** Wear eye/face protection. Wear safety glasses with side shields (or goggles).

#### Skin protection

**Hand protection** Wear appropriate chemical resistant gloves.

**Other** Wear appropriate chemical resistant clothing.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

## 9. Physical and chemical properties

### Appearance

**Physical state** Solid.

**Form** Solid. Crystalline Solid

**Color** Gray

**Odor** Not available.

**Odor threshold** Not available.

**pH** Not available.

**Melting point/freezing point** 210.2 °F (99 °C)

**Initial boiling point and boiling range** 557.6 °F (292 °C)

**Flash point** Not available.

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not available.

**Upper/lower flammability or explosive limits**

|                                       |                |
|---------------------------------------|----------------|
| <b>Flammability limit - lower (%)</b> | Not available. |
| <b>Flammability limit - upper (%)</b> | Not available. |
| <b>Explosive limit - lower (%)</b>    | Not available. |
| <b>Explosive limit - upper (%)</b>    | Not available. |

**Vapor pressure** 0 kPa at 25 °C

**Vapor density** Not available.

**Relative density** Not available.

**Solubility(ies)**

**Solubility (water)** Soluble

**Partition coefficient (n-octanol/water)** 0.3

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**Viscosity** Not available.

**Other information**

**Molecular formula** C7-H10-N2

**Molecular weight** 122.17 g/mol

**Percent volatile** 0 %

**VOC (Weight %)** 0 %

**10. Stability and reactivity**

**Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability** Material is stable under normal conditions.

**Possibility of hazardous reactions** Hazardous polymerization does not occur.

**Conditions to avoid** Contact with incompatible materials.

**Incompatible materials** Strong oxidizing agents.

**Hazardous decomposition products** No hazardous decomposition products are known.

**11. Toxicological information****Information on likely routes of exposure**

**Ingestion** Toxic if swallowed.

**Inhalation** Prolonged inhalation may be harmful.

**Skin contact** Toxic in contact with skin. May cause an allergic skin reaction.

**Eye contact** Causes serious eye irritation.

**Symptoms related to the physical, chemical and toxicological characteristics** Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Dermatitis. Rash.

**Information on toxicological effects**

**Acute toxicity** Toxic if swallowed. Toxic in contact with skin. May cause an allergic skin reaction.

| <b>Product</b>                   | <b>Species</b> | <b>Test Results</b> |
|----------------------------------|----------------|---------------------|
| 2,4-Diaminotoluene (CAS 95-80-7) |                |                     |
| <b>Acute</b>                     |                |                     |
| <i>Dermal</i>                    |                |                     |
| LD50                             | Rat            | 463 mg/kg           |
| <i>Oral</i>                      |                |                     |
| LD50                             | Rat            | 73 mg/kg            |
| LDL0                             | Rat            | 500 mg/kg           |
| <i>Other</i>                     |                |                     |
| LD50                             | Rat            | 147 mg/kg           |

| Product | Species | Test Results |
|---------|---------|--------------|
| TDL0    | Rat     | 280 mg/kg    |

\* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation** Causes serious eye irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not available.

**Skin sensitization** May cause an allergic skin reaction.

**Germ cell mutagenicity** Suspected of causing genetic defects.

**Carcinogenicity** May cause cancer.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

2,4-Diaminotoluene (CAS 95-80-7) 2B Possibly carcinogenic to humans.

**US. National Toxicology Program (NTP) Report on Carcinogens**

2,4-Diaminotoluene (CAS 95-80-7) Reasonably Anticipated to be a Human Carcinogen.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Reproductive toxicity** Suspected of damaging fertility or the unborn child.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** May cause damage to organs through prolonged or repeated exposure.

**Aspiration hazard** Not available.

**Chronic effects** Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. May cause damage to organs through prolonged or repeated exposure.

**12. Ecological information**

**Ecotoxicity** Toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

| Product                          | Species | Test Results  |
|----------------------------------|---------|---|
| 2,4-Diaminotoluene (CAS 95-80-7) |         |   |
| <b>Aquatic</b>                   |         |   |
| Crustacea                        | EC50    | Water flea (Daphnia magna) 1.6 mg/l, 48 hours                 |
| Fish                             | LC50    | Medaka, high-eyes (Oryzias latipes) 797 - 1040 mg/l, 96 hours |

\* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential** Not available.

**Partition coefficient n-octanol / water (log Kow)**

0.337

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

**13. Disposal considerations**

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**US RCRA Hazardous Waste U List: Reference**

2,4-Diaminotoluene (CAS 95-80-7) U221

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging**

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

**14. Transport information****DOT**

|                                     |   |
|-------------------------------------|---|
| <b>UN number</b>                    | UN1709  |
| <b>UN proper shipping name</b>      | 2,4-Toluylenediamine, solid or 2,4-Toluenediamine, solid                |
| <b>Transport hazard class(es)</b>   |   |
| <b>Class</b>                        | 6.1(PGIII)  |
| <b>Subsidiary risk</b>              | -   |
| <b>Label(s)</b>                     | 6.1   |
| <b>Packing group</b>                | III   |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling. |
| <b>Special provisions</b>           | IB8, IP3, T1, TP33  |
| <b>Packaging exceptions</b>         | 153   |
| <b>Packaging non bulk</b>           | 213   |
| <b>Packaging bulk</b>               | 240   |

**IATA**

|                                     |   |
|-------------------------------------|---|
| <b>UN number</b>                    | UN1709  |
| <b>UN proper shipping name</b>      | 2,4-Toluylenediamine, solid   |
| <b>Transport hazard class(es)</b>   |   |
| <b>Class</b>                        | 6.1(PGIII)  |
| <b>Subsidiary risk</b>              | -   |
| <b>Packing group</b>                | III   |
| <b>Environmental hazards</b>        | No.   |
| <b>ERG Code</b>                     | 6L  |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling. |
| <b>Other information</b>            |   |
| <b>Passenger and cargo aircraft</b> | Allowed.  |
| <b>Cargo aircraft only</b>          | Allowed.  |

**IMDG**

|                                     |   |
|-------------------------------------|---|
| <b>UN number</b>                    | UN1709  |
| <b>UN proper shipping name</b>      | 2,4-TOLUYLENEDIAMINE, SOLID   |
| <b>Transport hazard class(es)</b>   |   |
| <b>Class</b>                        | 6.1(PGIII)  |
| <b>Subsidiary risk</b>              | -   |
| <b>Packing group</b>                | III   |
| <b>Environmental hazards</b>        |   |
| <b>Marine pollutant</b>             | No.   |
| <b>EmS</b>                          | F-A, S-A  |
| <b>Special precautions for user</b> | Read safety instructions, SDS and emergency procedures before handling. |

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

**DOT**



## 15. Regulatory information

### US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

#### CERCLA Hazardous Substance List (40 CFR 302.4)

2,4-Diaminotoluene (CAS 95-80-7) Listed.

#### SARA 304 Emergency release notification

Not regulated.

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### Hazard categories

Immediate Hazard - Yes  
 Delayed Hazard - Yes  
 Fire Hazard - No  
 Pressure Hazard - No  
 Reactivity Hazard - No

#### SARA 302 Extremely hazardous substance

Not listed.

#### SARA 311/312 Hazardous chemical

Yes

#### SARA 313 (TRI reporting)

| Chemical name      | CAS number | % by wt. |
|--------------------|------------|----------|
| 2,4-Diaminotoluene | 95-80-7    | 100      |

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

2,4-Diaminotoluene (CAS 95-80-7)

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

#### Safe Drinking Water Act (SDWA)

Not regulated.

### US state regulations

#### US. Massachusetts RTK - Substance List

2,4-Diaminotoluene (CAS 95-80-7)

#### US. New Jersey Worker and Community Right-to-Know Act

2,4-Diaminotoluene (CAS 95-80-7) 500 LBS

#### US. Pennsylvania RTK - Hazardous Substances

2,4-Diaminotoluene (CAS 95-80-7)

#### US. Rhode Island RTK

2,4-Diaminotoluene (CAS 95-80-7)

#### US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

#### US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

2,4-Diaminotoluene (CAS 95-80-7) Listed: January 1, 1988

### International Inventories

| Country(s) or region | Inventory name                                     | On inventory (yes/no)* |
|----------------------|--|------------------------|
| Australia            | Australian Inventory of Chemical Substances (AICS) | Yes                    |
| Canada               | Domestic Substances List (DSL)                     | Yes                    |

| Country(s) or region        | Inventory name   | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| Canada                      | Non-Domestic Substances List (NDSL)                                    | Yes                    |
| China                       | Inventory of Existing Chemical Substances in China (IECSC)             | Yes                    |
| Europe                      | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes                    |
| Europe                      | European List of Notified Chemical Substances (ELINCS)                 | No                     |
| Japan                       | Inventory of Existing and New Chemical Substances (ENCS)               | Yes                    |
| Korea                       | Existing Chemicals List (ECL)  | Yes                    |
| New Zealand                 | New Zealand Inventory  | Yes                    |
| Philippines                 | Philippine Inventory of Chemicals and Chemical Substances (PICCS)      | Yes                    |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory                          | Yes                    |

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)  
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

**Issue date** 07-11-2014  
**Version #** 01  
**NFPA ratings** Health: 2  
Flammability: 0  
Instability: 0

**Disclaimer** The above information is believed to be correct on the date it was last revised and must not be considered all inclusive. The information has been obtained only by a search of available literature and is only a guide for handling the chemicals. OSHA regulations require that if other hazards become evident, an upgraded SDS must be made available to the employee within three months. RESPONSIBILITY for updates lies with the employer and not with CHEM SERVICE, Inc.

Persons not specifically and properly trained should not handle this chemical or its container. This product is furnished FOR LABORATORY USE ONLY! Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticide products, food additives or as household chemicals.

This Safety Data Sheet (SDS) is intended only for use with Chem Service, Inc. products and should not be relied on for use with materials from any other supplier even if the chemical name(s) on the product are identical! Whenever using an SDS for a solution or mixture the user should refer to the SDS for every component of the solution or mixture. Chem Service warrants that this SDS is based upon the most current information available to Chem Service at the time it was last revised. THIS WARRANTY IS EXCLUSIVE, AND CHEM SERVICE, INC. MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. This SDS is provided gratis and CHEM SERVICE, INC. SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR CONTINGENT DAMAGES.

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