

According to the UN GHS revision 8

Creation Date: April 24, 2026

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## 1. IDENTIFICATION

### 1.1 GHS Product identifier

**Product name:** N-Isopropyl-N-Phenyl-1,4-Phenylenediamin

**Catalog Number:** T9036

**CAS Number:** 101-72-4

### 1.2 Other means of identification

**Other names:** -

### 1.3 Recommended use of the chemical and restrictions on use

**Identified uses:** no data available

### 1.4 Supplier's details

**Company:** Targetmol Chemicals Inc.

**Address:** 34 Washington Street, Wellesley Hills, Massachusetts 02481 USA

**Tel/Fax:** (781) 999-4286

### 1.5 Emergency phone number

**Emergency phone number:** 781-999-4286

**Service hours:** Monday to Friday, 9am-5pm (Standard timezone: UTC/GMT -5 hours).

## 2. HAZARD IDENTIFICATION

### 2.1 Classification of the substance or mixture

Acute toxicity, oral Category 4 (H302)

Serious eye damage/eye irritation Category 2A (H319)

Specific target organ toxicity, repeated exposure Category 1 (H372)

Hazardous to the aquatic environment, long-term hazard Category 1 (H410)

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s):**



**Signal word:** Danger

**Hazard statement(s):**

H302 - Harmful if swallowed

H319 - Causes serious eye irritation

H372 - Causes damage to organs through prolonged or repeated exposure

H410 - Very toxic to aquatic life with long lasting effects

**Precautionary statement(s):**

**Prevention:**

P260 - Do not breathe dust/fume/gas/mist/vapours/spray.

P264 - Wash hands thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing/eye protection/face protection

**Response:**

P301+P312+P330 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Rinse mouth.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing.

P314 - Get medical advice/attention if you feel unwell.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P391 - Collect spillage

**Storage:** no data available

**Disposal:** P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

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

no data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number
N-Isopropyl-N-Phenyl-1,4-Phenylenediamin	-	101-72-4	202-969-7

## 4. FIRST-AID MEASURES

### 4.1 Description of necessary first-aid measures

#### General advice

Dark gray to black flakes

#### If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

#### Following skin contact

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

#### Following eye contact

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

#### Following ingestion

Rinse mouth.

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

Absorption, Distribution and Excretion Urinary excretion of N-isopropyl-N'-phenyl-p-phenylenediamine (101724) (IPPD) was analyzed in 16 press operators exposed to this compound in a rubber curing workshop. A total of 22 urine samples were collected from each worker at the beginning and end of each work day over a 2 week period. ... Rapid excretion of IPPD occurred during the working day, with mean levels of IPPD in urine samples collected before and after shifts of 19.55 and 83.57 micrograms per liter (microg/l), respectively. A total of 4.4 percent of before and 28.7 percent of after shift samples showed no detectable IPPD. A second slow component of excretion was observed during the week, with mean concentrations in before shift samples rising from 10.8 to 25.8 microg/l between the beginning and end of the week. In a skin absorption experiment, with one of the authors as subject, one hand was immersed in water containing IPPD for 90 minutes. IPPD levels in the urine were measured at 0, 3, 5, and 10.5 hours after exposure, and were found to be 0, 100, 350, and 570 ug/l, respectively. The excretion rate ceased 7 days after exposure. It was concluded that the kinetics of excretion of IPPD in workers exposed daily to this compound has two different components, an initially rapid one followed by a slow one, and that there are three different components of excretion kinetics after skin absorption with half times of 3, 7, and 24 hours.

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

**SYMPTOMS:** Symptoms of exposure to this compound may include contact dermatitis and occupational eczema. It may be irritating to the eyes, skin and respiratory system. **ACUTE/CHRONIC HAZARDS:** This compound may cause skin, eye and respiratory system irritation. When heated to decomposition this compound emits toxic fumes. (NTP, 1992)

## 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

Fires involving this material can be controlled with a dry chemical, carbon dioxide or Halon extinguisher. A water spray may also be used. (NTP, 1992)

### 5.2 Specific hazards arising from the chemical

This chemical is combustible. (NTP, 1992)

### 5.3 Special protective actions for fire-fighters

Use water spray, powder.

## 6. ACCIDENTAL RELEASE MEASURES

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

Personal protection: chemical protection suit. Do NOT let this chemical enter the environment. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to l°Cal regulations.

### 6.2 Environmental precautions

Personal protection: chemical protection suit. Do NOT let this chemical enter the environment. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to l°Cal regulations.

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

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

NO open flames. Closed system, dust explosion-proof electrical equipment and lighting. Prevent deposition of dust. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

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

Well closed.

Powder: -20°C for 3 years | In solvent: -80°C for 1 year

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Occupational Exposure limit values

MAK: (inhalable fraction): 2 mg/m<sup>3</sup>; peak limitation category: II(1); sensitization of skin (SH); pregnancy risk group: C

#### Biological limit values

no data available

### 8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

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

#### Eye/face protection

Wear safety goggles or face shield.

#### Skin protection

Protective gloves. Protective clothing.

#### Respiratory protection

Use ventilation (not if powder), l°Cal exhaust or breathing protection.

#### Thermal hazards

no data available

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid
Color	no data available
Odour	no data available
Melting point/freezing point	72-76°C
Boiling point or initial boiling point and boiling range	161°C
Flammability	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.
Lower and upper explosion limit/flammability limit	no data available
Flash point	230.9°C
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	DMSO: 2.27 mg/mL (10.03 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
N-octanol-water partition coefficient	no data available
Vapour pressure	0.00343 mm Hg at 194° F (NTP, 1992)
Density and/or relative density	1.086 g/cm <sup>3</sup>
Relative vapour density	no data available
Particle characteristics	no data available

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

no data available

### 10.3 Possibility of hazardous reactions

Dust explosion possible if in powder or granular form, mixed with air.N-ISOPROPYL-N'-PHENYL-P-PHENYLENEDIAMINE reacts with oxidizing agents (NTP, 1992). Neutralizes acids in exothermic reactions to form salts plus water. May be incompatible with is<sup>o</sup>Cyanates, halogenated organics, peroxides, phenols (acidic), epoxides, anhydrides, and acid halides. Flammable gaseous hydrogen may be generated in combination with strong reducing agents, such as hydrides.

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

no data available

### 10.6 Hazardous decomposition products

no data available

## 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**

The substance is irritating to the eyes and skin.

### **STOT-repeated exposure**

Repeated or prolonged contact may cause skin sensitization.

### **Aspiration hazard**

No indication can be given about the rate at which a harmful concentration of this substance in the air is reached on evaporation at 20°C.

## **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**

no data available

### **12.4 Mobility in soil**

Using a structure estimation method based on molecular connectivity indices(1), the K<sup>oc</sup> for 4-(iso-propylamino)diphenylamine can be estimated to be 1.3X10<sup>4</sup>(SRC). According to a classification scheme(2), this estimated K<sup>oc</sup> value suggests that 4-(iso-propylamino)diphenylamine is expected to be immobile in soil(SRC). The estimated pK<sub>a</sub> of 4-(iso-propylamino)diphenylamine is 5.1(3), indicating that this compound will exist only slightly in the cation form and cations generally adsorb to organic carbon and clay more strongly than their neutral counterparts.

### **12.5 Other adverse effects**

no data available

## **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**

## A DRUG SCREENING EXPERT

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.

### 14. TRANSPORT INFORMATION

#### 14.1 UN Number

no data available

#### 14.2 UN Proper Shipping Name

no data available

#### 14.3 Transport hazard class(es)

no data available

#### 14.4 Packing group, if applicable

no data available

#### 14.5 Environmental hazards

no data available

#### 14.6 Special precautions for user

no data available

#### 14.7 Transport in bulk according to IMO instruments

no data available

### 15. REGULATORY INFORMATION

#### 15.1 Safety, health and environmental regulations specific for the product in question

European Inventory of Existing Commercial Chemical Substances (EINECS)	Listed.
EC Inventory	Listed.
United States Toxic Substances Control Act (TSCA) Inventory	Listed.
China Catalog of Hazardous chemicals 2015	Not Listed.
New Zealand Inventory of Chemicals (NZI <sup>o</sup> C)	Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Listed.
Vietnam National Chemical Inventory	Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)	Listed.
Korea Existing Chemicals List (KECL)	Listed.

### 16. OTHER INFORMATION

#### Information on revision

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#### Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

### References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home> HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.html> IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/eChemPortal> - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_l°Cale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_l°Cale=en) CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simpleChemIDplus>, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp> ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg> Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp> ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### Other Information

no data available

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