


# SAFETY DATA SHEET

## O-PHENYLENEDIAMINE

### SECTION 1: Identification of the substance/mixture and of the company/undertaking Trade name:

<b>1.1 Product identifier:</b>	
<b>CAS Number:</b>	95-54-5
<b>EC number:</b>	202-430-6
<b>1.2 SYNONYMS:</b>	<ul style="list-style-type: none"> <li>• 1,2-Diaminobenzene</li> <li>• 2-Aminoaniline</li> <li>• 1,2-Benzenediamine</li> <li>• Ortho-phenylenediamine</li> </ul>

### SECTION 2: Hazards identification:

<b>2.1 Classification of the substance or mixture:</b>	Classification according to Regulation (EC) No 1272/2008 The substance is classified according to the CLP regulation.
<b>2.2 Label elements:</b>	<p>Labelling according to Regulation (EC) No 1272/2008</p> <p>Acute toxicity, oral (Category 3)</p> <p>Acute toxicity, inhalation (Category 4)</p> <p>Acute toxicity, Dermal (Category 4)</p> <p>Eye irritation, (Category 2)</p> <p>Skin sensitization, (Category 1)</p> <p>Germ cell mutagenicity, (Category 2)</p> <p>Carcinogenicity, (Category 2)</p> <p>Short-term (acute) aquatic hazard, (Category 1)</p> <p>Long-term (chronic) aquatic hazard, (Category 1)</p>
<b>Hazard Pictograms:</b>	
<b>Signal Word:</b>	Danger

<b>Hazard statements:</b>	<p><b>H301:</b> Toxic if swallowed.</p> <p><b>H312 + H332:</b> Harmful in contact with skin or if inhaled.</p> <p><b>H317:</b> May cause an allergic skin reaction.</p> <p><b>H319:</b> Causes serious eye irritation.</p> <p><b>H341:</b> Suspected of causing genetic defects.</p> <p><b>H351:</b> Suspected of causing cancer.</p> <p><b>H410:</b> Very toxic to aquatic life with long lasting effects</p>
<b>Precautionary Statements:</b>	<p><b>P273:</b> Avoid release to the environment.</p> <p><b>P280:</b> Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p><b>P301 + P310:</b> IF SWALLOWED: Immediately call a POISON CENTER/ doctor.</p> <p><b>P302 + P352 + P312:</b> IF ON SKIN: Wash with plenty of water.Call a POISON CENTER/ doctor if you feel unwell.</p> <p><b>P304 + P340 + P312:</b> IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.</p> <p><b>P305 + P351 + P338:</b> IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p><b>P405:</b> Store locked up.</p> <p><b>P501:</b> Dispose of contents/ container to an approved waste disposal plant.</p>
<b>2.3 Other hazards:</b>	
<b>Inhalation:</b>	<p>can cause respiratory irritation, coughing, and shortness of breath, and prolonged exposure may lead</p>

	to more serious health effects such as lung damage.
<b>Ingestion:</b>	can cause nausea, vomiting, abdominal pain, and in severe cases, damage to the gastrointestinal tract and other internal organs.
<b>Skin Contact:</b>	can cause irritation, redness, and allergic reactions, and prolonged exposure may lead to dermatitis or more severe skin damage.
<b>Eye contact:</b>	can cause severe irritation, redness, swelling, and potentially permanent damage to the cornea.
<b>Chronic Exposure:</b>	can lead to skin sensitization, respiratory issues, and an increased risk of developing cancer due to prolonged contact or inhalation of its fumes.
<b>Aggravation of pre-existing conditions:</b>	may aggravate pre-existing conditions such as asthma, skin allergies, or respiratory disorders, potentially leading to worsened symptoms or flare-ups.

### SECTION 3: Composition/information on ingredients

<b>3.1 Chemical characterisation:</b>	Substances
<b>CAS No:</b>	Description: 95-54-5 O-PHENYLENEDIAMINE
<b>Identification number(s):</b>	EC number: 202-430-6

### SECTION 4: First aid measures

<b>4.1 Description of first aid measures</b>	
<b>General information:</b>	
<b>After inhalation:</b>	If breathed in, move person into fresh air. If not breathing, give

	artificial respiration. Consult a physician.
<b>After skin contact:</b>	Remove contaminated clothing immediately .Wash with plenty of water. Consult a physician.
<b>After eye contact:</b>	Immediately flush eyes with plenty of water for at least 15 minutes. consult a physician.
<b>After swallowing:</b>	Rinse mouth with water. Immediately after ingestion Never give anything by mouth to an unconscious person. Do not induce vomiting. Consult a physician.
<b>4.2 Most important symptoms and effects, both acute and delayed:</b>	Acute exposure to O-phenylenediamine can cause skin irritation, eye damage, respiratory distress, and gastrointestinal issues, while chronic exposure may lead to dermatitis, respiratory problems, liver and kidney damage, and an increased risk of cancer.
<b>4.3 Indication of any immediate medical attention and special treatment needed:</b>	Treat symptomatically.

## SECTION 5: Firefighting measures

<b>5.1 Extinguishing media:</b>	Carbon dioxide. Water spray. Alcohol-resistant foam.
<b>5.2 Special hazards arising from the substance or mixture:</b>	Carbon oxides, nitrogen oxides.
<b>5.3 Advice for firefighters:</b>	Wear fully protective suit, safety glasses and respiratory device. Cool tanks/drums with water spray/remove them into safety.
<b>5.4 further information:</b>	no data available

## SECTION 6: Accidental release measures

<b>6.1 Personal precautions, protective equipment and emergency procedures:</b>	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Avoid dust accumulation. Seek medical attention.
<b>6.2 Environmental precautions:</b>	Do not enter this chemical into drains.
<b>6.3 Methods and material for containment and cleaning up:</b>	Take up spill into absorbent material, e.g.: sand, earth, vermiculite, powdered limestone. Scoop absorbed substance into closing containers. Spill must not return in its original container. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

## SECTION 7: Handling and storage

<b>7.1 Precautions for safe handling:</b>	For use in are with adequate ventilation. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material Do not use in confined spaces. Electrostatic discharge protection. Minimize dust generation and accumulation. Avoid ingestion and inhalation.
<b>7.2 Conditions for safe storage, including any incompatibilities:</b>	Store in original containers. Keep containers securely sealed Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers.

	Protect containers against physical damage and check regularly for leaks. Store in a dry and dark area. Keep away from moisture.
<b>Requirements to be met by storerooms and receptacles:</b>	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
<b>7.3 Specific end uses:</b>	no data available

## SECTION 8: Exposure controls/personal protection

<b>8.1 Control parameters</b>	
<b>Additional information about design of technical facilities:</b>	A system of local and general exhaust is recommended.
<b>8.2 Exposure controls</b>	
<b>Appropriate engineering controls</b>	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
<b>Personal protective equipment:</b>	Dust respirator, protective masks, wearing anti chemical gloves, rubber gloves, etc.
<b>General protective and hygienic measures:</b>	Eyes, body and hand protection, maintain indoor air unobstructed. Wear protective equipment.
	<b>Respiratory protection:</b> Required.
<b>Protection of hands:</b>	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. Wash and dry hands.
	<b>Eye protection:</b> Required

<b>Protection of Body:</b>	Complete suit protecting against chemicals, Flame retardant antistatic protective clothing.
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## SECTION 9: Physical and chemical properties

<b>9.1 Information on basic physical and chemical properties</b>	
<b>General Information</b>	
<b>Appearance: Form:</b>	Crystalline powder
<b>Colour:</b>	White to pale yellow
<b>Odour:</b>	Odourless or faintly aromatic
<b>pH-value:</b>	3
<b>Melting point/Melting range:</b>	107°C
<b>Boiling point/Boiling range:</b>	290°C
<b>Flammability (solid, gaseous):</b>	Combustible
<b>Ignition temperature:</b>	400°C
<b>Decomposition temperature:</b>	200°C
<b>Self-igniting:</b>	None
<b>Flash point:</b>	52°C
<b>Danger of explosion:</b>	None
<b>Explosion limits: Lower:</b>	Not applicable
<b>Explosion limits: Upper:</b>	Not applicable
<b>Vapour pressure:</b>	Very low
<b>Density at 20 °C:</b>	1.22 g/cm <sup>3</sup>
<b>Relative density:</b>	1.22
<b>Vapour density:</b>	Not applicable
<b>Evaporation rate:</b>	No data available
<b>Solubility in / Miscibility with- -water at 20 °C:</b>	Readily Soluble
<b>Partition coefficient:(n- octanol/water)</b>	0.78
<b>Viscosity:</b>	Not applicable

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity</b>	Can undergo polymerization in presence of light, heat and peroxides
<b>10.2 Chemical stability</b>	This chemical is stable under storage conditions.
<b>10.3 Possibility of hazardous reactions</b>	Can react with strong oxidizers or acids may lead to the release of toxic gases or heat.
<b>10.4 Conditions to avoid</b>	High temperatures, strong oxidizers, direct sunlight.
<b>10.5 Incompatible materials</b>	Strong oxidizing agents, strong acids, bases and alkaline materials.
<b>10.6 Hazardous decomposition products</b>	Carbon monoxides, carbon dioxide, nitrogen oxides.

## SECTION 11: Toxicological information

<b>11.1 Information on toxicological effects</b>	
<b>Acute Toxicity:</b>	<b>LD50</b> (Oral, Rat): 100 mg/kg <b>LD50</b> (Dermal, Rabbit): 1.100 mg/kg <b>LC50</b> (Inhalation Rat): 3.6 mg/l (4 hr)
<b>Skin corrosion/Irritation:</b>	No data available
<b>Serious eye damage/irritation:</b>	Causes serious eye irritation
<b>Respiratory damage/irritation:</b>	No data available
<b>Ingestion:</b>	No data available
<b>Germ cell mutagenicity:</b>	Suspected of causing genetic defects
<b>Carcinogenicity:</b>	Suspected of causing cancer
<b>Reproductive toxicity:</b>	No data available
<b>Specific target organ toxicity - single exposure:</b>	No data available
<b>Specific target organ toxicity - repeated exposure:</b>	No data available
<b>Aspiration hazard:</b>	No data available
<b>Signs and Symptoms of Exposure:</b>	Refer section 2.3
<b>11.2 Additional toxicological information</b>	



<b>Biodegradability:</b>	Low Biodegradable
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## SECTION 12: Ecological information

<b>12.1 Toxicity</b> <b>Aquatic toxicity:</b>	LC50(fish): no data available EC50(daphnia): no data available ErC50(algae): no data available
<b>12.2 Persistence and degradability:</b>	Low Biodegradable
<b>12.3 Bioaccumulative potential:</b>	Moderate bioaccumulative
<b>12.4 Mobility in soil:</b>	Moderate mobility
<b>12.5 Other adverse effects:</b>	No data available

## SECTION 13: Disposal considerations

<b>13.1 Waste treatment methods</b>	
<b>Uncleaned packaging Recommendation:</b>	dispose of in accordance with local hazardous waste regulations
<b>Recommended cleansing agents:</b>	Water, mild soap or detergents, sodium bicarbonate, isopropyl alcohol, acetone.

## SECTION 14: Transport information

<b>14.1 UN-Number · ADR, ADN, IMDG, IATA:</b>	1673
<b>14.2 UN proper shipping name · ADR, ADN, IMDG, IATA:</b>	O-PHENYLENEDIAMINES
<b>14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA :</b>	6.1
<b>14.4 Packing group · ADR, IMDG, IATA:</b>	3
<b>14.5 Environmental hazards:</b>	Yes, harmful to aquatic life.
<b>14.6 Special precautions for user:</b>	Handle responsibly.

## SECTION 15: Regulatory information

<b>15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Directive 2012/18/EU</b>	Directive 2012/18/EU, under that this substance is classified in listed substances as flammable liquids
<b>Named dangerous substances:</b>	This substance is listed in the annex 1 to the directive.
<b>15.2 Chemical safety assessment:</b>	Chemical assessment has not been carried out.

## SECTION 16: Other information

The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information.

However, due to the diversity of information sources and limitations of our knowledge, this document is only for reference. Users should make their independent judgment suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

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