



Safety Data Sheet (SDS)

Revision / Review Date: 2/5/15

1. Chemical Product and Company Identification

Product Name: IPPD
Distributed By: HB Chemical
1665 Enterprise Parkway
Twinsburg Oh 44087
Phone - 330-920-8023
MSDS Prepared By (w Suppliers Input): HB Chemical
Chemical Name / Family: N-isopropyl-N'-phenyl-1,4-phenylenediamine
CAS#: 101-72-4
EC# 202-969-7
REACH #: 17-2120040926-54-0000
Product Use: Rubber antioxidant

For emergency health, safety, and environmental information, calls 330-920-8023
For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300

2. Hazard(s) Identification

Classification:

The substance is classified as following according to 67/548/EEC and REGULATION (EC) No 1272/2008:

REGULATION (EC) No 1272/2008	
Hazard classes/Hazard categories	Hazard statement
Acute Tox. 4	H302
Skin Sens. 1	H317
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

For full text of H- phrases: see section 2.2.

67/548/EEC	
Hazards characteristics	R-Phrases
Xn	R22

-	R43
N	R50/53

For full text of R- phrases: see section 16.



Hazard Pictograms:

<u>Signal words:</u>	Warning
<u>Hazard Statement:</u>	H302: Harmful if swallowed. H317: May cause an allergic skin reaction. H410: Very toxic to aquatic life with long lasting effects.
<u>Precautionary statement:</u>	P261: Avoid breathing dust/fume/gas/mist/vapours/spray. P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P272: Contaminated work clothing should not be allowed out of the workplace. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301 + P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P302 + P352: IF ON SKIN: Wash with plenty of soap and water. P330: Rinse mouth. P333 + P313: If skin irritation or rash occurs: Get medical advice/attention. P363: Wash contaminated clothing before reuse. P391: Collect spillage. P501: Dispose of contents/container to local/regional/national/International regulation.
<u>Other hazards:</u>	The substance is not considered a PBT/vPvB

3. Composition / Information on Ingredients

Substance/Mixture: Substance

Ingredient(s):

Chemical Name	Pre-Registration No.	CAS No.	EC No.	Concentration
N-isopropyl-N'-phenyl-p-phenyle nediamine	-	101-72-4	202-969-7	>95%

4. First Aid Measures

Description of first aid measures:

In all cases of doubt, or when symptoms persist, seek medical attention.

Inhalation:

Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately.

Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Eyes:

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Skin:

Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion:

Wash out mouth with water. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms and effects, both acute and delayed:

Harmful if swallowed. May cause an allergic skin reaction.

Indication of any immediate medical attention and special treatment needed:

If skin irritation or rash occurs, get medical advice /attention.

5. Fire-Fighting Measures

Suitable Extinguishing Media:

Use water spray (fog), foam, dry chemical or CO₂.

Unsuitable Extinguishing Media:

Not available.

Special hazards arising from the substance or mixture:

No specific fire or explosion hazard. During a fire the product can form carbon monoxide, carbon dioxide, nitrogen oxides.

Special Fire Fighting Procedures:

Firefighters should wear full protective clothing, including self-contained breathing equipment. Fight fire from a safe distance and from a protected location. Use water spray to cool fire exposed surfaces.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Provide adequate ventilation Avoid inhalation of vapour or dust. Avoid skin and eye cont. refer to section 8 of SDS for personal protection details.

For emergency responders:

Wear an appropriate NIOSH/MSHA approved respirator if dust is generated.

Environmental Disposal Information:

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Do not allow material to be released to the environment without proper governmental permits. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Methods for containment and Cleaning up:

Large spill: Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.
Small spill: Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

Reference to other sections:

See Section 7 for information on safe handling.
See section 8 for information on personal protection equipment. See Section 13 for information on disposal.

Additional information:

Not applicable

7. Handling and Storage:

Precautions for safe handling:

Protective measures:

Good hygienic practices should be observed. Avoid contact with skin and eyes. Avoid breathing dust; if exposed to high dust concentration, leave area immediately. Work clothes should be washed separately at the end of each work day. Since empty containers contain product residue, follow all hazard warnings and precautions even after container is emptied. Keep away from sources of ignition. Ensure good ventilation/exhaustion at the workplace. Normal measures for preventive fire protection.

Advice on general occupational hygiene:

Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities:

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-

ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Packaging materials, Recommended: Use original container.

Specific end use(s): Not applicable.

8. Exposure Controls / Personal Protection

Control parameters:

Occupational exposure limits:

OSHA PEL/8Hr-TWA = 15 mg/m³ (Total Dust).
OSHA PEL/8-Hr TWA = 0.5 mg/m³ (Respirable Dust). ACGIH
TLV/8-Hr TWA = 10 mg/m³.

Additional exposure limits under the conditions of use: Not available

DNEL/DMEL and PNEC-Values:

Not available

Exposure controls

Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety practice. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin. Provide safety shower and cleaning eyes equipment's.

Individual protection measures, such as personal protective equipment:

Eye/face protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
Recommended: safety glasses with side-shields.

Hand protection:

Type of gloves recommended - Butyl rubber.
Minimum breakthrough time / gloves: 480 min. Minimum thickness / gloves 0.11 mm.

Body protection:

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Recommended: protective clothing.

Respiratory protection:

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Recommended: dust-protection mask.

Thermal hazards:

Wear suitable protective clothing to prevent heat.

<u>Environmental exposure controls:</u>	Avoid discharge into the environment. According to local regulations, Federal and official regulations.
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9. Physical and Chemical Properties

<u>Appearance:</u>	Flakes
<u>Colour:</u>	Dark-gray to black
<u>Odour:</u>	Aromatic odour
<u>Odour threshold:</u>	Not available
<u>pH:</u>	Not available
<u>Melting point/range (°C):</u>	78.5-79°C
<u>Boiling point/range (°C):</u>	148-152°C(2.67 hPa)
<u>Flash point (°C):</u>	Not available
<u>Evaporation rate:</u>	Not available
<u>Flammability limit - lower (%):</u>	Not available
<u>Flammability (solid, gas):</u>	Non-flammable
<u>Ignition temperature (°C):</u>	Not available
<u>Upper/lower flammability/explosive limits:</u>	Not available
<u>Vapour pressure (50°C):</u>	0.000093 kPa
<u>Vapour density:</u>	Not available
<u>Relative Density:</u>	1.04 g/cm ³ (25°C)
<u>Bulk density (kg/m³):</u>	Not available
<u>Water solubility (g/l):</u>	15 mg/L
<u>n-Octanol/Water (log Po/w):</u>	Not available
<u>Auto-ignition temperature:</u>	Not available
<u>Decomposition temperature:</u>	>200°C
<u>Viscosity, dynamic (mPa.s):</u>	Not relevant, substance is solid
<u>Explosive properties:</u>	Non explosive
<u>Oxidising properties:</u>	Not oxidizing
<u>Molecular Formula:</u>	C ₁₅ H ₁₈ N ₂
<u>Molecular Weight:</u>	226.32
<u>Other information:</u>	
<u>Fat solubility(solvent– oil to be specified)etc.:</u>	Not available
<u>Surface tension:</u>	Not available
<u>Dissociation constant in water(pKa):</u>	Not available
<u>Oxidation-reduction Potential:</u>	Not available
<u>Specific gravity:</u>	1.04

10. Stability and Reactivity

<u>Reactivity:</u>	The substance is stable under normal storage and handling conditions.
<u>Chemical stability:</u>	Stable at room temperature in closed containers under normal storage and handling conditions.

<u>Possibility of hazardous reactions:</u>	No dangerous reactions known.
<u>Conditions to avoid:</u>	Incompatible materials. Decomposition temperature >200°C.
<u>Incompatible materials:</u>	Strong oxidizing agents.
<u>Hazardous decomposition products:</u>	Carbon monoxide, carbon dioxide, nitrogen oxides.

11. Toxicological Information

Toxicokinetics, metabolism and distribution

Non-human toxicological data: Not available

Information on toxicological effects

Acute toxicity: LD50(Oral, Rat): 522 mg/kg bw
LD50(Dermal, Rabbit): >7940 mg/kg bw
LC50(Inhalation, Rat): Not available

Skin corrosion/Irritation: Not classified

Serious eye damage/irritation: Not classified

Respiratory or skin sensitization: May cause an allergic skin reaction.

Respiratory or skin sensitization: Not classified

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive toxicity: Not classified

STOT- single exposure: Not classified

STOT-repeated exposure: Not classified

Aspiration hazard: Not classified

12. Ecological Information

Toxicity:

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	0.41 mg/L	96h	Fish	OECD 203	N/A	N/A
EC50	0.69 mg/L	48h	Daphnia	OECD 202	N/A	N/A
EC50	N/A	72h	Algae	OECD 201	N/A	N/A

Persistence and degradability: Not readily biodegradable.

Bioaccumulative potential: Not available.

<u>Mobility in soil:</u>	Not available.
<u>Results of PBT&vPvB assessment:</u>	The substance is not considered a PBT/vPvB.
<u>Other adverse effects:</u>	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. Disposal Considerations

<u>Waste treatment methods:</u>	The material should be disposed of by incineration in a chemical incinerator in compliance with national and regional requirements.
<u>Product / Packaging disposal:</u>	If empty container retains product residues, all label precautions must be observed. Return for reuse or dispose according to national or local regulations.

14. Transport Information

	Land transport(ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number:	3077	3077	3077
UN Proper shipping name:	Environmentally hazardous substances, solid, n.o.s. (N-isopropyl-N'-phenyl-p-phenyl enediamine)	Environmentally hazardous substances, solid, n.o.s. (N-isopropyl-N'-phenyl-p-phenyl enediamine)	Environmentally hazardous substances, solid, n.o.s. (N-isopropyl-N'-phenyl-p-phenyl enediamine)
Transport hazard Class:	9	9	9
Packaging group:	III	III	III
Environmental hazards:	Yes	Yes	Yes
Special precautions for user:	See section 2.2	See section 2.2	See section 2.2
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	IBC08	IBC08	IBC08

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

<u>Relevant information regarding authorization:</u>	Not applicable.
<u>Relevant information regarding restriction:</u>	Not applicable.
<u>Other EU regulations:</u>	Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.
<u>Other National regulations:</u>	Not applicable
<u>Chemical Safety Assessment has been carried out?</u>	YES NO X

16. Other Information

The above information has been compiled from what we believe to be credible sources. To our knowledge the information is accurate and reliable, however, it is not guaranteed. Any recommendations issued by HB Chemical personnel or literature is derived from experience and by no means should be taken as fact or construed as a recommendation to violate of any law, regulation or patent. It is the users responsibility to determine the suitability of any HB supplied material in their application. The individual conditions of each customer are well outside of our control and we cannot be held liable for its functionality and use. Please contact our office should you need specific information beyond what is supplied above. As with all Chemical usage safety precautions beyond the stated are highly recommended.