SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier
Product Name: NPB
Synonyms: NPD, N,N'-Bis(naphthalen-1-yl)-N,N'-bis(phenyl)benzidine
Chemical Name: N,N'-Di(1-naphthyl)-N,N'-diphenyl-(1,1'-biphenyl)-4,4'-diamine
Chemical Formula: C44H32N2
CAS No.: 123847-85-8
EC No.: Not available.
Index No.: Not available.
REACH Registration No.: Not applicable.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified Use(s): PC21 Laboratory chemicals, Research and development use only

1.3 Details of the supplier of the safety data sheet
Company Identification: Ossila Limited
Address of Supplier: Solpro Business Park
Windsor Street
Sheffield
Postal code: S4 7WB, UK
Telephone: +44 114 299 9180
E-mail: info@ossila.com
Office hours: 08:00 - 17:00

1.4 Emergency telephone number
Emergency Phone #: +44 (0) 20 3885 0382 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements
The product does not need to be labelled in accordance with EC directives or respective national laws.

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

2.4 Additional Information
Not applicable.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
No components need to be disclosed according to the applicable regulations.

3.2 Mixtures
Not applicable.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures
General Advice
First aiders should ensure they have taken adequate steps to protect themselves from exposure (see Section 8 for recommended personal protection equipment).
Show this safety data sheet to the doctor in attendance.

Inhalation
Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell.

Skin Contact
Rinse skin with water. If skin irritation occurs, get medical advice/attention.

Eye Contact
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion
Rinse out mouth with water. Get medical advice/attention if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed
Most important symptoms and effects, both acute and delayed, are included on labelling (Section 2.2) and in Section 11.

4.3 Indication of any immediate medical attention and special treatment needed
Treat symptomatically.
SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media
- Suitable Extinguishing media: As appropriate for surrounding fire.
- Unsuitable extinguishing media: As appropriate for surrounding fire.

5.2 Special hazards arising from the substance or mixture
- Carbon oxides
- Nitrogen oxides (NOx)

5.3 Advice for firefighters
Firefighters should wear complete protective clothing including self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Follow safe handling advice and personal protective equipment recommendations (as per section 8). Provide adequate ventilation.

6.2 Environmental precautions
Avoid release to the environment.

6.3 Methods and material for containment and cleaning up
- Sweep up spilled substance but avoid making dust. Use vacuum equipment for collecting spilt materials, where practicable. Dispose of contents in accordance with local, state or national legislation.

6.4 Reference to other sections
See Also Section 8, 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling
- Advice on safe handling: Avoid inhalation, ingestion, and contact with skin and eyes. Use only in a well-ventilated area. Wear protective clothing as per section 8.
- Hygiene measures: Keep away from food and drink. Wash hands after handling, before breaks, and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities
- Store in a well-ventilated place. Keep container tightly closed.
- Storage temperature: Ambient.
- Storage life: Product is air, and light sensitive. Store in the dark. Handle and store under inert gas.
- Incompatible materials: None known.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
8.1.1 Occupational Exposure Limits
No Occupational Exposure Limit assigned.

8.2 Exposure controls
8.2.1. Appropriate engineering controls
Ensure adequate ventilation and/or exhaust. A washing facility/water for eye and skin cleaning purposes should be present.

8.2.2. Personal protection equipment
Eye Protection: Wear eye protection with side protection tested and approved under appropriate government standards such as EN166 (EU).
Hand protection: Handle with gloves. Gloves must be inspected prior to use and proper glove removal techniques should be used. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.
Body protection: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Respiratory protection: No personal respiratory protection is necessary under normal circumstances.
Thermal hazards: None known.
8.2.3. Environmental Exposure Controls
Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
- Physical State: Solid: Powder.
- Colour: White.
- Odour: Not known.
- Odour threshold: Not known.
- Melting point/freezing point: 279-283 °C (lit.)
- Initial boiling point and boiling range: Not known.
- Flammability: Not known.
- Lower and upper explosion limit: Not known.
- Flash Point: Not known.
Auto-ignition temperature (°C) Not known.
Decomposition temperature (°C) Not known.
pH Not known.
Kinematic viscosity Not known.
Partition coefficient: n-octanol/water (log value) Not known.
Vapour pressure Not known.
Density Not known.
Relative density Not known.
Relative vapour density Not known.
Particle characteristics Not known.

9.2 Other information None.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity None anticipated.
10.2 Chemical Stability Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions Not known.
10.4 Conditions to avoid Not known.
10.5 Incompatible materials Not known.
10.6 Hazardous decomposition products In the event of fire: see Section 5.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute toxicity - Ingestion No data available
Acute toxicity - Skin Contact No data available
Acute toxicity - Inhalation No data available
Skin corrosion/irritation No data available
Serious eye damage/irritation No data available
Skin sensitization data No data available
Respiratory sensitization data No data available
Germ cell mutagenicity No data available
Carcinogenicity No data available
Reproductive toxicity No data available
Lactation No data available
STOT - single exposure No data available
STOT - repeated exposure No data available
Aspiration hazard No data available

11.2 Information on other hazards
11.2.1 Endocrine disrupting properties None known.
11.2.2 Information on other hazards None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity - Aquatic invertebrates No data available
Toxicity - Fish No data available
Toxicity - Algae No data available
Toxicity - Sediment Compartment No data available
Toxicity - Terrestrial Compartment No data available

12.2 Persistence and Degradation
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties Not known.
12.7 Other adverse effects

Not known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Dispose of contents in accordance with local, state or national legislation. Recycle only completely emptied packaging. Normal disposal is via incineration operated by an accredited disposal contractor. Send to a licensed recycler, reclamer or incinerator.

13.2 Additional Information

Disposal should be in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION

IATA/IMO/RID/ADR

Not classified as hazardous for transport.

SECTION 15: REGULATORY INFORMATION

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

<table>
<thead>
<tr>
<th>European Regulations - Authorisations and/or Restrictions On Use</th>
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<tbody>
<tr>
<td>Candidate List of Substances of Very High Concern for Authorisation</td>
</tr>
<tr>
<td>REACH: ANNEX XIV list of substances subject to authorisation</td>
</tr>
<tr>
<td>REACH: Annex XVII Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</td>
</tr>
<tr>
<td>Community Rolling Action Plan (CoRAP)</td>
</tr>
<tr>
<td>Regulation (EC) N° 1005/2009 on substances that deplete the ozone layer</td>
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<tr>
<th>National regulations</th>
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<td>Other</td>
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<tr>
<th>15.2 Chemical Safety Assessment</th>
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<tbody>
<tr>
<td>A REACH chemical safety assessment has not been carried out.</td>
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</table>

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements:

LEGEND

<table>
<thead>
<tr>
<th>Acronyms</th>
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<tbody>
<tr>
<td>ADN : European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways</td>
</tr>
<tr>
<td>ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road</td>
</tr>
<tr>
<td>CAS : Chemical Abstracts Service</td>
</tr>
<tr>
<td>CLP : Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
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<tr>
<td>DNEL : Derived No Effect Level</td>
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<td>EC : European Community</td>
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<td>EINECS : European Inventory of Existing Commercial Chemical Substances</td>
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<td>IATA : International Air Transport Association</td>
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<td>IBC : Intermediate Bulk Container</td>
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<tr>
<td>ICAO : International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG : International Maritime Dangerous Goods</td>
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<td>LTBL : Long term exposure limit</td>
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<tr>
<td>PBT : Persistent, Bioaccumulative and Toxic</td>
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<tr>
<td>PNEC : Predicted No Effect Concentration</td>
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<tr>
<td>REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
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<tr>
<td>RID : Regulations concerning the International Carriage of Dangerous Goods by Rail</td>
</tr>
<tr>
<td>STEL : Short term exposure limit</td>
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<tr>
<td>STOT : Specific Target Organ Toxicity</td>
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<td>UN : United Nations</td>
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</tbody>
</table>
vPvB : very Persistent and very Bioaccumulative

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