SECTION 1: Identification of the substance/preparation and company

1.1 Product identifier

Synthetic Indigo, grains

1.2 Relevant Identified uses of the substance or mixture and uses advised against

Use pattern:
Textile dye

1.3 Details of the supplier of the safety data sheet

PRO Chemical & Dye
126 Shove Street
Fall River, MA  02724

1.4 Emergency telephone numbers

800-255-3924 ChemTel.  (United States)
+ 1  01  813-248-0585 (Outside the United States)

SECTION 2: Hazard(s) Identification

2.1 Classification of the Substance or Mixture

Classification of the chemical in accordance with paragraph Cd) of §1910.1200
May cause damage to organs through prolonged or repeated exposure.

Classification of the Substance or Mixture
Specific target organ toxicity - Repeated exposure, Category 2
2.2 Label elements

Signal word: Warning

Hazard Statements:
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements (Prevention):
P260 Do not breathe vapor/spray.

Precautionary Statements (Response):
P314 Get medical advice/attention if you feel unwell.

Precautionary Statements (Storage):

Precautionary Statements (Disposal):
P501 Dispose of contents/container to waste treatment in accordance with national regulations.

2.3 Other hazards

If applicable in this section are given hazards which are not part of the overall classification but can contribute to the hazards which may be associated with the substance or mixture.

Not applicable

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical characterization:
indigo dyestuff preparation, contains, C. I. Vat Blue 1

Hazardous Ingredients (GHS) according to 29 CFR 1910.1200

<table>
<thead>
<tr>
<th>Substance</th>
<th>Content</th>
<th>EC index no.</th>
<th>CAS number</th>
<th>Carc.</th>
<th>Muta.</th>
<th>Acute Tox. 3 (oral)</th>
<th>Acute Tox. 3 (dermal)</th>
<th>Acute Tox. 3 (inhalation)</th>
<th>STOT RE 1</th>
<th>Eye Dam. 1</th>
<th>Skin Sens. 1B</th>
<th>Aquatic. Acute 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>aniline</td>
<td>0.2 - 1</td>
<td>612-008-00-7</td>
<td>62-53-3</td>
<td>Carc. 2</td>
<td>Muta.2</td>
<td>Acute Tox. 3 (oral)</td>
<td>Acute Tox. 3 (dermal)</td>
<td>Acute Tox. 3 (inhalation)</td>
<td>STOT RE 1</td>
<td>Eye Dam. 1</td>
<td>Skin Sens. 1B</td>
<td>Aquatic. Acute 1</td>
</tr>
</tbody>
</table>
SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Take off immediately all contaminated clothing.

After inhalation: Upon inhalation of aerosol/vapor/dust: Take the patient into the fresh air; if there is difficulty in breathing, medical advice is required.

After contact with skin: Cleansing with plenty of water, soap or other non-irritating cleansing agents.

After contact with eyes: Contamination of the eyes must be treated by thorough irrigation with water, with the eyelids held open. Eventually a doctor (or eye specialist) should be consulted.

After ingestion: If the product is swallowed, the patient must at once drink water repeatedly, if possible with the addition of activated carbon. If the patient feels unwell, seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Please see hazard statements in section 2.2 if given and information in this section if stated.

4.3 Indication of any immediate medical attention and special treatment needed

Please see precautionary statements in section 2.2 as well as first aid information in this section if stated.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media: Water spray, foam, dry powder.

Extinguishing media that must not be used for safety reasons: C02

5.2 Special hazards arising from the substance or mixture

not determined

5.3 Advice for firefighters

Special protective equipment for firefighting: Firemen have to wear self-contained breathing apparatus.

Further information: Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Avoid formation and deposition of dust.

6.2 Environmental precautions

Environmental precautions: Do not empty into drains or waters.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up/taking up: Take up spilled product with dust-binding material or suitable vacuum cleaner. Fill into labelled, sealable containers.

6.4 Reference to other sections
SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling: Avoid formation and deposition of dust.
Keep container tightly closed and dry.

Advice on protection against fire and explosion: Observe the usual precautionary measures required for chemicals with dust-explosive properties. Observe national regulations.

7.2 Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels: Store in original container in a cool, dry place.
In filling operations take precautionary measures against static discharges.

Storage stability: Storage period: 60 Months

7.3 Specific end use(s)

not determined

SECTION 8: Exposure controls/personal protection

8.1 Exposure limits
Ingredients with occupational exposure limits to be monitored
aniline

Content: 0.2 - 1
CAS number: 62-53-3

8.2 Exposure controls

General protective measures: Do not breathe dust. Avoid contact with eyes and skin. Take off immediately all contaminated clothing.

Hygiene measures: Keep away from food and drink stuffs.
Do not eat, drink or smoke at work.
Wash hands before breaks and at end of work and use skin-protecting ointment.

Respiratory protection: If airborne concentrations pose a health hazard, become irritating, or exceed recommended limits, use a NIOSH approved respirator in accordance with OSHA respiratory protection requirements under 29 CFR 1910.134.

Hand protection: Wear suitable gloves e.g. of PVC or nitrile rubber. In the event of contamination, change protective gloves immediately.

Eye protection: safety glasses with side protection shield

Body protection: Wear protective clothing.
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form: granules
Color: dark-blue
Odor: odorless
Melting/softening point: approx. 250 DC

2. Density: approx. 1.35 g/cm³ (20 °C)
Solubility in water: dispersible
pH value: > 9 - < 11.5 (20 °C, 100 g/l) in aqueous suspension
Viscosity (flow time): not determined

9.2 Other information

Combustion number: not determined
Dust explosion class: not determined
Bulk density: approx. 500 kg/m³
Further information (phys.-chem.): not necessary

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazardous reactions when stored and handled according to prescribed instructions.

10.2 Chemical stability

Thermal decomposition > 250 °C
No thermal decomposition when stored and handled correctly.

10.3 Possibility of hazardous reactions

Hazardous reactions: In the case of dusty organic products the possibility of a dust explosion should always be considered.
Hazardous decomposition products: Not applicable

3. For avoidable conditions: not necessary

10.5 Incompatible materials
10.6 Hazardous decomposition products
Not applicable

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity: LD50 > 5,000 mg/kg (rat)
Acute inhalation toxicity: (8 h, rat)
   Method: Inhalation risk test
   No mortality after exposure to an enriched saturated atmosphere at 20 °C.
Irritant effect on skin: non-irritant (rabbit)
Irritant effect on eyes: non-irritant (rabbit eye)
Sensitization: non-sensitizing (human)
   Method: Patch-Test
Teratogenicity: not necessary
Carcinogenicity: not necessary

11.2 Information on toxicological effects

Primary route of exposure
   Inhalation: Yes    Skin Absorption: No    Ingestion: No
   Skin Contact: Yes  Eye Contact: Yes

Effects of overexposure
There is no toxicological test data available and no information was found in available literature for any adverse acute or chronic health effects associated with overexposure to this product

Signs and symptoms of overexposure
No additional information available.

Medical conditions aggravated
None found.

11.3 Carcinogen status
IARC: No    NTP: No    OSHA: No    ACGIH: No

SECTION 12: Ecological information

12.1 Toxicity

Fish toxicity: LC50 > 100 mg/l (96 h, Leuciscus idus)
Daphnia toxicity: EC50 > 100 mg/l (48 h, Daphnia magna)
12.2 Persistence and degradability

Biodegradability: > 70 (Color decrease)
Method: Batch method

If regulations are followed when introducing effluent into biological waste water treatment plants, no adverse effect on the degradation activity of activated sludge is to be expected.

Dissolved Organic carbon (DOC): not determined

Remarks: Product does not add to the AOX-value of the sewage. (DIN EN 1485)
The product does not contain heavy metals in concentrations of concern for waste water.
The product does not release nitrogen which can contribute to eutrophication.
The product does not contain phosphates or organophosphorus compounds.

12.3 Bioaccumulative potential

12.4 Mobility in soil
not determined

12.5 Results of PBT and vPvB assessment
not determined

12.6 Other adverse effects
not determined

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product: If utilization or recycling of the product is not possible, it should be disposed of according to the local regulations and laws, e.g. by incineration in a suitable plant.

European Waste Catalogue (EWC) code: 040217 Dyestuffs and pigments other than those mentioned in 040216

Uncleaned packaging: Soiled, empty containers are to be treated in the same way as the contents.

SECTION 14: Transport information

14.1 Transport classification
D.O.T. Information
4.

<table>
<thead>
<tr>
<th>CFR</th>
<th>Non dangerous goods</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMDG</td>
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<tr>
<td>IATA_C</td>
<td>Non dangerous goods</td>
</tr>
<tr>
<td>IATA_P</td>
<td>Non dangerous goods</td>
</tr>
</tbody>
</table>

14.2 Special precautions for user

Keep separated from foodstuffs.

14.3 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No transport in bulk according to Annex II of MARPOL 73/78 and the IBC code foreseen for this substance or mixture:

SECTION 15: Regulatory information

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

US Regulations

TSCA

The components of this product are listed on the TSCA inventory.

Sara 313

This product is not subject to SARA Title III Section 313 reporting requirements under 40 CFR 372.

Sara 312

<table>
<thead>
<tr>
<th></th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate (acute) health hazard</td>
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</tr>
<tr>
<td>Delayed (chronic) health hazard</td>
<td>No</td>
</tr>
<tr>
<td>Fire hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden Release of Pressure</td>
<td>No</td>
</tr>
<tr>
<td>Reactivity</td>
<td>No</td>
</tr>
</tbody>
</table>

HMIS code: 1 - 1 - 0 -

15.2 Chemical safety assessment

not determined

SECTION 16: Other information

None of the products you purchase from this company are subject to the German Ordinance that bans certain azo dyes or the 19th Amendment of the Council Directive 76/769/EEC.

Text of all shortcuts referred to in sections 2 and 3:

H301   Toxic if swallowed.
H311   Toxic in contact with skin.
H317   May cause an allergic skin reaction.
H318   Causes serious eye damage.
| H331 | Toxic if inhaled. |
| H341 | Suspected of causing genetic defects. |
| H351 | Suspected of causing cancer. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life. |

Aquatic. Acute 1 Hazardous to the aquatic environment: Acute Category 1

| Acute Tox. 3(dermal) | Acute Toxicity: Cat. 3 (dermal) |
| Acute Tox. 3(inhalation) | Acute Toxicity: Cat. 3 (inhalation) |
| Acute Tox. 3 (oral) | Acute Toxicity: Cat. 3 (oral) |

Carc. 2 Carcinogenicity, Hazard Category 2

| Eye Dam. 1 | Serious eye damage/eye irritation: Irreversible effects on the eye, Cat. 1 |
| Muta. 2 | Germ cell mutagenicity, Hazard Category 2 |
| Skin Sens. 1B | Respiratory or skin sensitization: Skin Sensitization, Cat. 1B |
| STOT RE 1 | Specific target organ toxicity — Repeated exposure, Category 1 |

This information is based on our present state of knowledge. It should not therefore be construed as guaranteeing specific properties of the products described or their suitability for a particular application.