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

1.1 Product identifier
Trade name: 2-Amino-4-nitrophenol
Stock number: A13964
CAS Number: 99-57-0
EC number: 202-767-9

1.2 Relevant identified uses of the substance or mixture and uses advised against.
Identified use: SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier: Thermo Fisher (Kandel) GmbH
Zeppelinstr. 7b
76185 Karlsruhe / Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300
Email: tech@alfa.com
www.alfa.com
Informing department: Product safety Tel + +049 (0) 7275 988687-0

1.4 Emergency telephone number:
Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)
Poison Information Center Mainz
www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
GHS07
Acute Tox. 4 H302 Harmful if swallowed.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC
Xn; Harmful
R22: Harmful if swallowed.
Xi; Irritant
R36: Irritating to eyes.
Xi; Sensitising
R43: May cause sensitisation by skin contact.

Information concerning particular hazards for human and environment: Not applicable
Other hazards that do not result in classification No information known.

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008 The substance is classified and labelled according to the CLP regulation.
Hazard pictograms

GHS07

Signal word Warning
Hazard statements
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.

Precautionary statements
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/.../if you feel unwell.
P363 Wash contaminated clothing before reuse.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substances
CAS# Designation:
99-57-0 2-Amino-4-nitrophenol
Identification number(s):
EC number: 202-767-9

SECTION 4: First aid measures

4.1 Description of first aid measures
After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
Seek immediate medical advice.

After skin contact
Instantly wash with water and soap and rinse thoroughly.
Seek immediate medical advice.

After eye contact
Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing
Seek medical treatment.

4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.
4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

- Carbon monoxide
- Carbon dioxide
- Nitrogen oxides (NOx)

5.3 Advice for firefighters

Protective equipment:
- Wear self-contained breathing apparatus.
- Wear full protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Wear protective equipment. Keep unprotected persons away.
- Ensure adequate ventilation.

6.2 Environmental precautions:

- Do not allow product to reach sewage system or water bodies.

6.3 Methods and material for containment and cleaning up:

- Dispose of contaminated material as waste according to section 13.

6.4 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.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Keep containers tightly sealed.
- Store in cool, dry place in tightly closed containers.
- Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires: No information known.

7.2 Conditions for safe storage, including any incompatibilities

Storage:
- Requirements to be met by storerooms and containers: No special requirements.
- Information about storage in one common storage facility:
  - Do not store together with acids.
  - Store away from oxidising agents.
  - Store away from acid chlorides.
  - Store away from acid anhydrides.

Further information about storage conditions:
- Keep container tightly sealed.
- Store in cool, dry conditions in well sealed containers.

7.3 Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with critical values that require monitoring at the workplace:
- The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information: No data.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:
- The usual precautionary measures should be adhered to in handling the chemicals.
- Keep away from foodstuffs, beverages and food.
- Instantly remove any soiled and impregnated garments.
- Wash hands during breaks and at the end of the work.
- Avoid contact with the eyes.
- Avoid contact with the eyes and skin.
- Maintain an ergonomically appropriate working environment.

Breathing equipment:
- Use breathing protection with high concentrations.
- Recommended filter device for short term use:
  - Use a respirator with P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

Protection of hands:
- Check protective gloves prior to each use for their proper condition.
- The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Material of gloves:
- Nitrile rubber, NBR

Penetration time of glove material (in minutes): Not determined.

Eye protection:
- Safety glasses

Face protection: Protective work clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information:
- Appearance: Powder
- Colour: Yellow-orange to brown
- Smell: Not determined
- Odour threshold: Not determined
- pH-value: Not applicable.

Change in condition:
- Melting point/Melting range: 141-145 °C
- Boiling point/Boiling range: Not determined
- Sublimation temperature/start: Not determined.
- Inflammability (solid, gaseous): Not determined.
- Ignition temperature: Not determined.
- Decomposition temperature: Not determined.
Trade name 2-Amino-4-nitrophenol

Self-inflammability: Not determined.

Danger of explosion: Not determined.

Critical values for explosion:
- Lower: Not determined
- Upper: Not determined

Steam pressure: Not applicable.

Density: Not determined.

Relative density: Not determined.

Vapour density: Not applicable.

Evaporation rate: Not applicable.

Solubility in / Miscibility with:
- Water at 20 °C: 0.9 g/l

Partition coefficient (n-octanol/water): Not determined.

Viscosity:
- Dynamic: Not applicable.
- Kinematic: Not applicable.

9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity No information known.

10.2 Chemical stability Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions Reacts with strong oxidising agents

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials:
- Acids
- Oxidising agents
- Acid chlorides
- Acid anhydrides

10.6 Hazardous decomposition products:
- Carbon monoxide and carbon dioxide
- Nitrogen oxides (NOx)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity: Harmful if swallowed.

LD₅₀ values that are relevant for classification:
- Oral: 850 mg/kg (mouse)
- 2400 mg/kg (rat)

Skin irritation or corrosion: May cause irritation

Eye irritation or corrosion: Causes serious eye irritation

Sensitization: May cause an allergic skin reaction

Germ cell mutagenicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutagenicity data for this substance.

Carcinogenicity: IARC-3: Not classifiable as to carcinogenicity to humans.

Specific target organ system toxicity - repeated exposure: No effects known.

Specific target organ system toxicity - single exposure: No effects known.

Aspiration hazard: No effects known.

Subacute to chronic toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability: No further relevant information available.

12.3 Bioaccumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

Additional ecological information:

General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water.
- Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.
- Avoid transfer into the environment.

12.5 Results of PBT and vPvB assessment:
- PBT: Not applicable.
- vPvB: Not applicable.

12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation:
- Hand over to disposers of hazardous waste.
- Must be specially treated under adherence to official regulations.
- Consult state, local or national regulations for proper disposal.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

UN-Number
- ADR, ADN, IMDG, IATA: Not applicable

14.1 UN proper shipping name
- ADR, ADN, IMDG, IATA: Not applicable

14.3 Transport hazard class(es)
- ADR, ADN, IMDG, IATA: Not applicable

Class
- Not applicable

Packaging
- ADR, ADN, IMDG, IATA: Not applicable
### Trade name: 2-Amino-4-nitrophenol

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<td>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</td>
<td>Not applicable.</td>
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**UN “Model Regulation”:**

- **SECTION 15: Regulatory information**
  - **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
    - Australian Inventory of Chemical Substances: Substance is not listed.
    - Standard for the Uniform Scheduling of Drugs and Poisons: Substance is not listed.
  - **National regulations**
    - Information about limitation of use:
      - Employment restrictions concerning young persons must be observed.
      - For use only by technically qualified individuals.
    - **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
  - **Other regulations, limitations and prohibitive regulations**
    - ELINCS (European List of Notified Chemical Substances): Substance is not listed.
    - Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006: Substance is not listed.
  - **The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.**
    - Substance is not listed.
  - **Annex XIV of the REACH Regulations (requiring Authorisation for use)**
    - Substance is not listed.
  - **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing SDS:** Global Marketing Department

**Abbreviations and acronyms:**
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- vPvB: very Persistent and very Bioaccumulative
- ACGIH: American Conference of Governmental Industrial Hygienists (USA)
- OSHA: Occupational Safety and Health Administration (USA)
- NTP: National Toxicology Program (USA)
- IARC: International Agency for Research on Cancer
- EPA: Environmental Protection Agency (USA)