

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifiers**Product name: **NICKEL (II) SULPHATE**CAS-No.: **7786-81-4**Product Number: **A69590****1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : Philip Harris Ltd., 2 Gregory Street, Hyde, Cheshire, SK14 4HR,

UNITED KINGDOM

Telephone: +44 (0)845 1200 506 Fax: +44 (0)161 367 2140

Email: enquiries@philipharris.co.uk

1.4 Emergency telephone numberEmergency Phone #: **+44 (0)845 1200 506****2. HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture**

According to Regulation (EC) No1272/2008; Carcinogenicity (Category 1A), Acute toxicity, Oral (Category 4), Respiratory sensitization (Category 1), Skin sensitization (Category 1), Acute aquatic toxicity (Category 1), Chronic aquatic toxicity (Category 1), Germ cell mutagenicity (Category 2)

According to European Directive 67/548/EEC as amended: May cause cancer by inhalation. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May cause sensitization by inhalation and skin contact. Harmful by inhalation and if swallowed. May cause harm to the unborn child. Possible risk of irreversible effects. Toxic: danger of serious damage to health by prolonged exposure through inhalation. Irritating to skin.

2.2 Label elements

Pictogram



Signal word

Danger

Hazard statement(s): H302 Harmful if swallowed. H317 May cause an allergic skin reaction. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H341 Suspected of causing genetic defects. H350 May cause cancer. H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s): P201 Obtain special instructions before use. P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. P273 Avoid release to the environment. P280 Wear protective

gloves. P308 + P313 IF exposed or concerned: Get medical advice/ attention. P501 Dispose of contents/ container to an approved waste disposal plant.

According to European Directive 67/548/EEC as amended.

Hazard symbol(s)



R-phrase(s): R49 May cause cancer by inhalation. R61 May cause harm to the unborn child. R20/22 Also harmful by inhalation and if swallowed. R48/23 Also toxic: danger of serious damage to health by prolonged exposure through inhalation. R38 Irritating to skin. R68 Possible risk of irreversible effects. R42/43 May cause sensitization by inhalation and skin contact. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s): S53 Avoid exposure - obtain special instructions before use. S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S60 This material and its container must be disposed of as hazardous waste. S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets. Restricted to professional users.

2.3 Other hazards – no data available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Nickel sulphate

Formula:	NiSO ₄
Molecular Weight:	154.76
CAS-No.:	7786-81-4
EC-No.:	232-104-9
Index-No.:	028-009-00-5

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact: Wash off with soap and plenty of water. Take victim immediately to hospital.

In case of eye contact: Flush eyes with water as a precaution.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2 Most important symptoms and effects, both acute and delayed: no data available

4.3 Indication of immediate medical attention and special treatment needed: no data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture: Sulphur oxides, Nickel/nickel oxides

5.3 Precautions for fire-fighters: Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information: no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections: For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling: Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities: Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end uses: no data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS No.	Value	Control Parameters	Update
Nickel sulphate	7786-81-4	TWA	0.1mg/m ³	EH40 WEL

Workplace Exposure Limits. Remarks Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.

Capable of causing cancer and/or heritable genetic damage. The identified substances include those which: - are assigned the risk phrases 'R45: May cause cancer'; 'R46: may cause heritable genetic damage'; 'R49: May cause cancer by inhalation' or – a substance or process listed in Schedule 1 of COSHH.

Capable of causing occupational asthma. The identified substances are those which: - are assigned the risk phrase 'R42: May cause sensitisation by inhalation'; or 'R42/43: May cause sensitisation by inhalation and skin contact' or - are listed in section C of HSE publication 'Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma' as updated from time to time, or any other substance which the risk assessment has shown to be a potential cause of occupational asthma.

8.2 Exposure controls

Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: 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 and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection: Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- | | | |
|---|--|----------------------|
| a) Appearance: | Form: Solid | Colour: Green |
| b) Odour: | no data available | |
| c) Odour Threshold: | no data available | |
| d) pH: | pH 4.5 | |
| e) Melting/freezing point: | Melting point/range: no data available | |
| f) Initial boiling point and boiling range: | no data available | |
| g) Flash point: | no data available | |
| h) Evaporation rate: | no data available | |
| i) Flammability (solid, gas): | no data available | |
| j) Upper/lower flammability or explosive limits: | no data available | |
| k) Vapour pressure: | no data available | |
| l) Vapour density: | no data available | |
| m) Relative density: | 1.950 g/cm ³ at 20 °C | |
| n) Water solubility: | no data available | |
| o) Partition coefficient: n-octanol/water: noctanol/ water log Pow: | 5 | |
| p) Autoignition temperature: | no data available | |
| q) Decomposition temperature: | no data available | |
| r) Viscosity: | no data available | |

s) Explosive properties: no data available
t) Oxidizing properties: no data available
9.2 Other safety information: Bulk density 1.20 g/l

10. STABILITY AND REACTIVITY

10.1 Reactivity: no data available

10.2 Chemical stability: no data available

10.3 Possibility of hazardous reactions: no data available

10.4 Conditions to avoid: no data available

10.5 Incompatible materials: Oxidizing agents

10.6 Hazardous decomposition products: Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity: LD50 Intraperitoneal - mouse - 20.894 mg/kg

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: May cause allergic skin reaction.

Germ cell mutagenicity: In vitro tests showed mutagenic effects

Carcinogenicity: This is or contains a component that has been reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification. Human carcinogen. IARC: 1 - Group 1: Carcinogenic to humans (Nickel sulphate).

Reproductive toxicity: Presumed human reproductive toxicant

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: Inhalation - Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard: no data available

Potential health effects

Inhalation Toxic if inhaled. Causes respiratory tract irritation.

Ingestion Toxic if swallowed.

Skin Toxic if absorbed through skin. Causes skin irritation.

Eyes May cause eye irritation.

Signs and Symptoms of Exposure: no data available

Additional Information: RTECS: QR9350000

12. ECOLOGICAL INFORMATION

12.1 Toxicity: Toxicity to fish mortality LOEC - *Oncorhynchus mykiss* (rainbow trout) - ca. 4.9 mg/l - 216h

Toxicity to daphnia and other aquatic invertebrates.

EC50 - *Daphnia magna* (Water flea) - 2 mg/l - 48 h

12.2 Persistence and degradability: no data available

12.3 Bioaccumulative potential: Bioaccumulation *Cyprinus carpio* (Carp) - 46.5 h -3,200 µg/l

Bioconcentration factor (BCF): 11.3

12.4 Mobility in soil: no data available

12.5 Results of PBT and vPvB assessment: no data available

12.6 Other adverse effects: Very toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging: Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN-Number

ADR/RID: 3077 IMDG: 3077 IATA: 3077

14.2 UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Nickel sulphate)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Nickel sulphate)

IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Nickel sulphate)

14.3 Transport hazard class(es)

ADR/RID: 9 IMDG: 9 IATA: 9

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: Yes IMDG Marine pollutant: Yes IATA: Yes

14.6 Special precautions for users: EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packaging and combination packaging containing inner packaging with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture: no data available

15.2 Chemical Safety Assessment: no data available

16. OTHER INFORMATION: no data available