Nickel (II) Ammonium Sulfate Hexahydrate
MSDS# 16427

Section 1 - Chemical Product and Company Identification

MSDS Name: Nickel (II) Ammonium Sulfate Hexahydrate
Catalog Numbers:
Synonyms:
   Nickel ammonium sulfate; ammonium nickel sulfate hexahydrate;
sulfuric acid ammonium nickel(2+) salt(2:2:1); nickelous ammonium su

Company Identification: Fisher Scientific UK
Bishop Meadow Road, Loughborough
Leics. LE11 5RG
For information in Europe, call: (01509) 231166
Emergency Number, Europe:
01509 231166

Section 2 - Composition, Information on Ingredients

CAS#: 7785-20-8
Chemical Name: Nickel (II) ammonium sulfate hexahydrate
%: 100
EINECS#: unlisted

Section 3 - Hazards Identification

Harmful if swallowed. Limited evidence of a carcinogenic effect. May cause sensitization by inhalation and skin contact.
Potential Health Effects
Eye:
   Causes eye irritation.
Skin:
   Causes skin irritation. May cause severe irritation and possible burns. May cause dermatitis.
Ingestion:
   Causes gastrointestinal irritation with nausea, vomiting and diarrhea.
Inhalation:
   Causes respiratory tract irritation. May cause allergic respiratory reaction.
Chronic:

Section 4 - First Aid Measures

Eyes:
   Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin:
   Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion:
   If victim is conscious and alert, give 2-4 cupfuls of milk or water.
   Get medical aid immediately.
Inhalation:
Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

Section 5 - Fire Fighting Measures

General Information:
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Extinguishing Media:
Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Section 6 - Accidental Release Measures

General Information:
Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:
Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions.

Section 7 - Handling and Storage

Handling:
Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Avoid ingestion and inhalation.

Storage:
Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:
Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

Exposure Limits
CAS# 7785-20-8:
United States OSHA: 1 mg/m3 TWA (as Ni) (Nickel soluble compounds).
Belgium - TWA: (nickel soluble compounds): 0.1 mg/m3 VLE (as Ni)
Malaysia: (nickel soluble compounds): 0.1 mg/m3 TWA (inhalable fraction, as Ni)
Netherlands: (nickel soluble compounds): 0.1 mg/m3 MAC (as Ni)
Spain: (nickel soluble compounds): 0.1 mg/m3 VLA-ED (as Ni)

Personal Protective Equipment

Eyes:
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:
Wear appropriate gloves to prevent skin exposure.

Clothing:
Wear appropriate protective clothing to minimize contact with skin.

Respirators:
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties
Physical State: Solid
Color: blue-green
Odor: none reported
pH: 4.6 @ 0.1M
Vapor Pressure: Not applicable.
Viscosity: Not applicable.
Boiling Point: Not applicable.
Freezing/Melting Point: Not available
Autoignition Temperature: Not available.
Flash Point: Noncombustible.
Explosion Limits: Lower: Not available
Explosion Limits: Upper: Not available
Decomposition Temperature: Not available
Solubility in water: 10% @20C
Specific Gravity/Density: 1.9
Molecular Formula: H8N2NiO8S.6H2O
Molecular Weight: 395

Section 10 - Stability and Reactivity
Chemical Stability:
Stable at room temperature in closed containers under normal storage and handling conditions.
Conditions to Avoid:
Incompatible materials, dust generation.
Incompatibilities with Other Materials
Not available
Hazardous Decomposition Products
Oxides of sulfur, nickel oxide, ammonia.
Hazardous Polymerization
Has not been reported.

Section 11 - Toxicological Information
RTECS#:
CAS# 7785-20-8: WS6061000
LD50/LC50:
CAS# 7785-20-8: Oral, rat: LD50 = 399 mg/kg;
Carcinogenicity:
Nickel (II) ammonium sulfate hexahydrate -
California: carcinogen, initial date 5/7/04 (Nickel compounds).
NTP: Known carcinogen (Nickel compounds).
IARC: Group 1 carcinogen (Nickel compounds).
Other:
See actual entry in RTECS for complete information.

Section 12 - Ecological Information
Other:
No information available.

Section 13 - Disposal Considerations
Products considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location.
Contact a specialist disposal company or the local authority or advice. Empty containers must be decontaminated before returning for recycling.

Section 14 - Transport Information
IATA
Shipping Name: Not regulated.
Hazard Class: Not regulated.
UN Number: Not regulated.
Packing Group:
IMO
Shipping Name: Not regulated.
Hazard Class: 
UN Number: 
Packing Group:
RID/ADR
Shipping Name: Not regulated.
Hazard Class: 
UN Number: 
Packing Group:

Section 15 - Regulatory Information
European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: XN
Risk Phrases:
R 22  Harmful if swallowed.
R 40  Limited evidence of a carcinogenic effect.
R 42/43  May cause sensitization by inhalation and skin contact.
Safety Phrases:
S 22  Do not breathe dust.
S 36/37  Wear suitable protective clothing and gloves.

WGK (Water Danger/Protection)
CAS# 7785-20-8: Not available

Canada
US Federal
TSCA
CAS# 7785-20-8 is not on the TSCA Inventory because it is a hydrate.
It is considered to be listed if the CAS number for the anhydrous form is on the

Section 16 - Other Information
MSDS Creation Date:
5/12/1998
Revision #3 Date
10/03/2005
The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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