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1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Identity EPITHAS ANP-N

Alternate Names Chemical Family: nickel salt.

MSDS Code: 40-5500

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended useSee Technical Data Sheet.Application MethodSee Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name Uyemura International Corporation

3990 Concours, Suite 425 240 Town Line Road Ontario, CA 91764 Southington, CT 06489

Emergency

24 hour Emergency Telephone No. 24 hours a day: In case of spill, leak, exposure or

accident- Call Chemtrec 1-800-424-9300 /+1-703-527-

3887.

Customer Service: Uyemura International Corporation CA: 909-466-5635, CT: 860-793-4011

Number for non-emergency questions concerning MSDS

(860) 793-4011

Additional information on this product may be obtained by

calling (800) 243-3564

2. Hazard identification of the product

2.1. Classification of the substance or mixture

Acute Tox. 4;H302 Harmful if swallowed.
Acute Tox. 4;H332 Harmful if inhaled.
Skin Irrit. 2;H315 Causes skin irritation.

Skin Sens. 1;H317 May cause an allergic skin reaction.

Resp. Sens. 1;H334 May cause allergy or asthma symptoms of breathing difficulties if inhaled.

Muta. 2;H341 Suspected of causing genetic defects.
Carc. 1A;H350i May cause cancer by inhalation.
Repr. 1B;H360D May damage the unborn child.

STOT RE 1;H372 Causes damage to organs through prolonged or repeated exposure.

Aquatic Chronic 1;H410 Very toxic to aquatic life with long lasting effects.

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2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H332 Harmful if inhaled.
- H334 May cause allergic or asthmatic symptoms or breathing difficulties if inhaled.
- H341 Suspected of causing genetic defects.
- H350 May cause cancer.
- H360D May damage the unborn child.
- H372 Causes damage to organs through prolonged or repeated exposure.
- H410 Very toxic to aquatic life with long lasting effects.

[Prevention]:

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P261 Avoid breathing dust / fume / gas / mist / vapors / spray.
- P262 Do not get in eyes, on skin, or on clothing.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P273 Avoid release to the environment.
- P280 Wear protective gloves / eye protection / face protection.

[Response]:

- P301+310 IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.
- P302+352 IF ON SKIN: Wash with plenty of soap and water.
- P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.
- P308+313 IF exposed or concerned: Get medical advice / attention.
- P314 Get Medical advice / attention if you feel unwell.
- P321 Specific treatment (see information on this label).
- P331 Do NOT induce vomiting.
- P333+313 If skin irritation or a rash occurs: Get medical advice / attention.

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P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P341 If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342+311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor / physician.

P362 Take off contaminated clothing and wash before reuse.

P363 Wash contaminated clothing before reuse.

P391 Collect spillage.

[Storage]:

P405 Store locked up.

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Nickel sulfate.	45-60	Carc. 1A;H350i	[1]
CAS Number: 0007786-81-4		Muta. 2;H341	
		Repr. 1B;H360D	
		STOT RE 1;H372	
		Acute tox. 4;H332	
		Acute tox. 4;H302	
		Skin Irrit. 2;H315	
		Resp. Sens. 1;H334	
		Skin Sens. 1;H317	
		Aquatic Acute 1;H400	
		Aquatic Chronic 1;H410	

^[1] Substance classified with a health or environmental hazard.

4. First aid measures

4.1. Description of first aid measures

General In all cases of doubt, or when symptoms persist, seek medical attention.

Never give anything by mouth to an unconscious person.

Inhalation Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give

artificial respiration. If unconscious place in the recovery position and obtain immediate

medical attention. Give nothing by mouth.

Eyes Get medical attention immediately. Immediately flush eyes with plenty of water,

occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Protect unharmed eye. Call ambulance (cue: caustic burn of the eyes). Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Continue rinsing until medical attention can be obtained. Immediate further treatment in ophthalmic

hospital/ophthalmologist.

^[2] Substance with a workplace exposure limit.

^[3] PBT-substance or vPvB-substance.

^{*}The full texts of the phrases are shown in Section 16.

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Skin In the case of contact, immediately flush skin with plenty of water for at least 15 minutes

while removing all contaminated clothing and shoes. Wash clothing before reuse. Clean

shoes thoroughly before reuse. Get immediate medical attention.

Ingestion If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Overview Effects of Single Acute Overexposure: Skin contact can cause allergic reaction (Nickel

itch). Nickel itself is not toxic if swallowed, but its soluble salts are toxic, and if swallowed may cause giddiness and severe nausea. A physician should be contacted immediately if anyone develops any signs or symptoms and suspects they are caused by an exposure to

soluble nickel compounds.

Chronic, Prolonged Exposure or Repeated Overexposure: Persons with a history, allergies, or known sensitization to soluble nickel compounds would be expected to be high risk from exposure. Examination of the nasal cavities and lungs should be surveyed for

evidence of chronic disorder. Suspected carcinogen.

Reproductive or genetic defect hazard. See section 2 for further details.

Inhalation Harmful if inhaled. May cause allergy or asthma symptoms of breathing difficulties if

inhaled.

Skin May cause an allergic skin reaction. Causes skin irritation.

Ingestion Harmful if swallowed.

5. Fire-fighting measures

5.1. Extinguishing media

Water fog. Do not use CO2

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: No hazardous decomposition data available.

Avoid breathing dust / fume / gas / mist / vapors / spray.

Do not get in eyes, on skin, or on clothing.

5.3. Advice for fire-fighters

Cool closed containers exposed to fire by spraying them with water. Do not allow run off water and contaminants from fire fighting to enter drains or water courses.

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6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Persons performing the clean-up work should wear personal protective clothing and equipment.

6.2. Environmental precautions

Do not allow spills to enter drains or watercourses.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

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6.3. Methods and material for containment and cleaning up

Steps to be taken in case material is released or spilled: Liquid or solid spills should be responded to immediately. The spill, if liquid can be absorbed with an inert material; the solid spill can be swept or shoveled and put into a clean container/cover to ensure proper containment. All cleanup materials when contained must be labeled properly and stored in a safe place to await proper disposal. Persons performing the clean-up work should wear personal protective clothing and equipment.

7. Handling and storage

7.1. Precautions for safe handling

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Incompatible materials: Strong reducing agents.

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

NOT INTENDED FOR DRUG USE. FOR INDUSTRIAL USE ONLY.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0007786-81-4	Nickel sulfate.	OSHA	PEL 1.0 mg/m3 as Ni
		ACGIH	TLV 0.1 mg/m3 as Ni
		NIOSH	No Established Limit
	Supplier	No Established Limit	

Carcinogen Data

CAS No.	Ingredient	Source	Value
0007786-81-4	Nickel sulfate.	OSHA	Select Carcinogen: No
		NTP	Known: Yes; Suspected: No
		IARC	Group 1: Yes; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

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8.2. Exposure controls

Respiratory If workers are exposed to concentrations above the exposure limit they must use the

appropriate, certified respirators.

Eyes Wear safety eyewear, e.g. safety spectacles, goggles or visors to protect against the

splash of liquids.

Skin Overalls which cover the body, arms and legs should be worn. Skin should not be exposed.

All parts of the body should be washed after contact. Wear nitrile or similar chemical

resistant gloves to keep skin contact to a minimum.

Refer to the manufacturer's recommendations regarding the suitability of any gloves used.

Engineering Controls Provide adequate ventilation. Where reasonably practicable this should be achieved by the

use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits

suitable respiratory protection must be worn.

Other Work Practices An eyewash fountain should be located in areas where the product is used. Use good

personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet.

Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

Appearance Green Liquid

Odor None

Odor threshold Not Measured

pH Ca. 3

Melting point / freezing point Not Measured

Initial boiling point and boiling range >100 C

Flash Point Not Measured
Evaporation rate (Ether = 1) Not Measured
Flammability (solid, gas) Not Applicable

Upper/lower flammability or explosive limits Lower Explosive Limit: Not Measured

Upper Explosive Limit: Not Measured

Vapor pressure (Pa)Not MeasuredVapor DensityNot Measured

Specific Gravity1.34Solubility in WaterSoluble

Partition coefficient n-octanol/water (Log Kow)Not MeasuredAuto-ignition temperatureNot MeasuredDecomposition temperatureNot MeasuredViscosity (cSt)Not Measured

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9.2. Other information

No other relevant information.

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

Strong reducing agents.

10.6. Hazardous decomposition products

No hazardous decomposition data available.

11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LD50, ppm
Nickel sulfate (7786-81-4)	264.00, Rat -	No data	No data	No data	No data
	Category: 3	available	available	available	available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	4	Harmful if swallowed.
Acute toxicity (dermal)		Not Applicable
Acute toxicity (inhalation)	4	Harmful if inhaled.
Skin corrosion/irritation	2	Causes skin irritation.
Serious eye damage/irritation		Not Applicable

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Respiratory sensitization	1	May cause allergy or asthma symptoms of breathin difficulties if inhaled.	
Skin sensitization	1	May cause an allergic skin reaction.	
Germ cell mutagenicity	2	Suspected of causing genetic defects.	
Carcinogenicity	1A	May cause cancer by inhalation.	
Reproductive toxicity	1B	May damage the unborn child.	
STOT-single exposure		Not Applicable	
STOT-repeated exposure	1	Causes damage to organs through prolonged or repeated exposure.	
Aspiration hazard		Not Applicable	

12. Ecological information

12.1. Toxicity

Very toxic to aquatic life with long lasting effects.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish,	48 hr EC50 crustacea,	ErC50 algae,	
	mg/l	mg/l	mg/l	
Nickel sulfate (7786-81-4)	15.30, Oncorhynchus mykiss	Not Available	Not Available	

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

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13. Disposal considerations

13.1. Waste treatment methods

The material resulting from a clean-up operation may be considered a listed hazardous waste and therefore, subject to very specific regulations. You must contain, store, transport and dispose of all this material in accordance with all applicable Federal, State and local health and environmental regulations. The shipments of hazardous waste are subject to manifesting requirements under all applicable Federal and State Regulations. Appropriate disposal will depend on the nature of the waste material and should be performed by competent and properly permitted facilities. RCRA waste number -Not listed Empty containers should be recycled or disposed of through an approved waste management company.

14. Transport information

DOT (Domestic Surface ICAO/IATA IMO / IMDG (Ocean Transportation) Transportation) 14.1. UN number Not Applicable UN3082 UN3082 14.2. UN proper Not regulated by US DOT in Environmentally hazardous Environmentally hazardous shipping name packages less than 100 liters. substances, liquid, n.o.s., (Nickel substances, liquid, n.o.s., (Nickel Sulfate) Sulfate) 14.3. Transport **DOT Hazard Class:** Not **IMDG**: 9 Air Class: 9 hazard class(es) Applicable Sub Class: Not Applicable DOT Label: ---14.4. Packing Not Applicable Ш Ш

group 14.5. Environmental hazards

IMDG Marine Pollutant: Yes (Nickel sulfate.)

14.6. Special precautions for user

No further information

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

Not Applicable

15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected

regulations are represented. All ingredients of this product are listed on the TSCA (Toxic

Substance Control Act) Inventory or are not required to be listed on the TSCA Inventory.

WHMIS Classification D2A

US EPA Tier II Hazards Fire: No

Sudden Release of Pressure: No

Reactive: No

Immediate (Acute): Yes Delayed (Chronic): Yes

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EPCRA 311/312 Chemicals and RQs (lbs):

Nickel sulfate. (100.00)

EPCRA 302 Extremely Hazardous:

(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals:

(No Product Ingredients Listed)

Proposition 65 - Carcinogens (>0.0%):

Nickel sulfate.

Proposition 65 - Developmental Toxins (>0.0%):

(No Product Ingredients Listed)

Proposition 65 - Female Repro Toxins (>0.0%):

(No Product Ingredients Listed)

Proposition 65 - Male Repro Toxins (>0.0%):

(No Product Ingredients Listed)

N.J. RTK Substances (>1%):

Nickel sulfate.

Penn RTK Substances (>1%):

Nickel sulfate.

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H334 May cause allergic or asthmatic symptoms or breathing difficulties if inhaled.

H341 Suspected of causing genetic defects.

H350i May cause cancer if inhaled.

H360D May damage the unborn child.

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H372 Causes damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

UIC urges each customer or recipient of this MSDS to study carefully to become aware of and understand the hazards associated with this product. The reader should consider consulting reference works or individuals that are experts in ventilation, toxicology, and fire prevention, as necessary or appropriate to use and understand the data contained in this MSDS.

To promote safe handling, each customer or recipient should: 1) Notify its employees, agents, contractors and others whom it knows or believes will use this material or the information in this MSDS and any other information regarding hazards or safety; 2) Furnish this same information to each of its customers for the product; and 3) Request its customers to notify their employees, customers, and other users of the product of this information. The information, recommendations and suggestions herein is believed to be reliable. However, it is the user's responsibility to determine the safe handling and suitability for his/her use of the product described herein. Since the use by others is outside our control, no guarantee, expressed or implied, is made by Uyemura International Corporation as to the effects of such use, the results obtained or the safety and toxicity of the product nor does UIC per se assume any liability arising out of use, by others of the product referred to herein. Nor is the information herein to be construed as absolutely complete since more information may be desirable or necessary when particular or exceptional circumstances exist, or because of applicable laws or government regulations.

End of Document