

Nickel sulfamate solution US DIN 50970 special C**10591043**

Version 2.0

Revision Date 06/22/2021

Print Date 06/02/2022

SECTION 1. IDENTIFICATION

Product name : Nickel sulfamate solution US DIN 50970 special C

Number : 000000016947

Product Use Description : Electroplating Material, Industrial use

Manufacturer or supplier's details : Honeywell International Inc.
115 Tabor Road
Morris Plains, NJ 07950-2546

For more information call : 1-800-322-2766
+1-973-455-5268(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**
: **Transportation (CHEMTREC): 1-800-424-9300 or +1-703-527-3887**
:
: (24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : liquid

Color : green

Odor : odourless

Classification of the substance or mixture

Classification of the substance or mixture : Acute toxicity, Category 4, Oral
Acute toxicity, Category 4, Inhalation
Serious eye damage, Category 1
Respiratory sensitisation, Category 1
Skin sensitisation, Category 1
Germ cell mutagenicity, Category 2
Carcinogenicity, Category 1A
Reproductive toxicity, Category 1B

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Specific target organ toxicity - repeated exposure, Category 1,
Respiratory Tract

GHS Label elements, including precautionary statements

Symbol(s)

:



Signal word

:

Danger

Hazard statements

:

Harmful if swallowed or if inhaled.
May cause an allergic skin reaction.
Causes serious eye damage.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Suspected of causing genetic defects.
May cause cancer.
May damage fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

:

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.

Response:
IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue

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rinsing.

Immediately call a POISON CENTER/ doctor.

If skin irritation or rash occurs: Get medical advice/ attention.

Wash contaminated clothing before reuse.

Storage:

Store locked up.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity

NTP:	Nickel bis(sulphamidate) Known carcinogen	13770-89-3
IARC:	Nickel bis(sulphamidate) Group 1: Carcinogenic to humans	13770-89-3

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Mixture

Chemical name	CAS-No.	Concentration
Nickel bis(sulphamidate)	13770-89-3	51.00 %
Water	7732-18-5	49.00 %

SECTION 4. FIRST AID MEASURES

Inhalation : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.

Skin contact : Wash off immediately with plenty of water for at least 15

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- minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician if symptoms occur.
- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.
- Ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician immediately.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray
Foam
Carbon dioxide (CO₂)
Dry powder
- Specific hazards during firefighting : The product is not flammable.
In case of fire hazardous decomposition products may be produced such as:
Sulphur oxides
Nitrogen oxides (NO_x)
Toxic metal oxide fumes
- Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.
- Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.
Wear personal protective equipment. Unprotected persons must be kept away.
Ensure adequate ventilation.
Do not swallow.
Do not breathe vapours or spray mist.
Do not get in eyes, on skin, or on clothing.

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Environmental precautions : Prevent further leakage or spillage if safe to do so.
Discharge into the environment must be avoided.
Do not flush into surface water or sanitary sewer system.
Do not allow run-off from fire fighting to enter drains or water courses.

Methods and materials for containment and cleaning up : Ventilate the area.
Avoid formation of aerosol.
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE**Handling**

Precautions for safe handling : Wear personal protective equipment.
Keep container tightly closed.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Use only in well-ventilated areas.
Avoid formation of aerosol.
Do not swallow.
Do not breathe vapours or spray mist.
Do not get in eyes, on skin, or on clothing.

Advice on protection against fire and explosion : The product itself does not burn.
No special precautions required.

Storage

Conditions for safe storage, including any incompatibilities : Store in original container.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Store in a place accessible by authorized persons only.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective measures : Ensure that eyewash stations and safety showers are close to

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- the workstation location.
Avoid formation of aerosol.
Do not breathe vapours or spray mist.
- Engineering measures : Perform filling operations only at stations with exhaust ventilation facilities.
Use product only in closed system.
- Eye protection : Wear as appropriate:
Safety glasses with side-shields
If splashes are likely to occur, wear:
Goggles or face shield, giving complete protection to eyes
- Hand protection : Impervious gloves
Gloves must be inspected prior to use.
Replace when worn.
- Skin and body protection : complete suit protecting against chemicals
- Respiratory protection : In case of insufficient ventilation wear suitable respiratory equipment.
Use NIOSH approved respiratory protection.
- Hygiene measures : Wash hands before breaks and immediately after handling the product.
When using do not smoke.
Keep working clothes separately.
Remove and wash contaminated clothing before re-use.
Wash thoroughly after handling.
When using do not eat or drink.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
Nickel bis(sulphamidate)	13770-89-3	TWA : Time weighted average	0.1 mg/m ³	05 1998	Honeywell:Limit established by Honeywell International Inc.
Further information	:	Expressed as : as Ni			

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Nickel bis(sulphamidate)	13770-89-3	REL : Recomm ended exposure limit (REL):	0.015 mg/m3	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended
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Further information	:	Expressed as : as Ni
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Nickel bis(sulphamidate)	13770-89-3	PEL : Permissi ble exposure limit	1 mg/m3	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended
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Further information	:	Expressed as : as Ni
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Nickel bis(sulphamidate)	13770-89-3	TWA : Time weighted average	0.1 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
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Further information	:	Expressed as : as Ni
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	liquid
Color	:	green
Odor	:	odourless
pH	:	3.7 - 5 at , 20 °C
Melting point/range	:	Note: No data available
Boiling point/boiling range	:	ca. 112 °C at 1,013 hPa
Flash point	:	Note: Not applicable

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Flammability	: Not applicable
Lower explosion limit	: Note: Not applicable
Upper explosion limit	: Note: Not applicable
Vapor pressure	: Note: No data available, similar to water
Vapor density	: Note: No data available
Density	: 1.50 - 1.57 g/cm ³ at 20 °C
Water solubility	: Note: completely miscible
Partition coefficient: n-octanol/water	: Note: No data available
Ignition temperature	: Note: Not applicable
Auto-ignition temperature	: Note: not auto-flammable
Viscosity, dynamic	: Note: No data available
Viscosity, kinematic	: Note: No data available
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Bulk density	: Note: Not applicable

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SECTION 10. STABILITY AND REACTIVITY

Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Hazardous polymerisation does not occur.
Conditions to avoid	: Keep away from heat and sources of ignition.
Incompatible materials	: Strong acids Potassium Sulphur
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: Sulphur oxides Nitrogen oxides (NOx) Toxic metal oxide fumes

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	: LD50: 1,098 mg/kg Species: Rat, female Method: OECD Test Guideline 425 Test substance: Nickel sulfamate-4-hydrate
Acute inhalation toxicity	: Acute toxicity estimate: 4.86 mg/l , dust/mist Exposure time: 4 h Method: Calculation method
Acute dermal toxicity	: Note: No data available
Skin irritation	: Species: Rabbit Result: No skin irritation Classification: non-irritant Method: OECD Test Guideline 404

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Test substance: Nickel sulfamate-4-hydrate

Eye irritation : Species: Rabbit
Result: Risk of serious damage to eyes.

Sensitisation : Species: Guinea pig
Classification: sensitising effects
Test substance: Nickel sulfamate-4-hydrate
Method: OECD Test Guideline 406

Genotoxicity in vitro : Test Method: Ames test
Cell type: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: negative
Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
GLP: yes
Test substance: Nickel sulfamate-4-hydrate

CMR effects
Nickel bis(sulphamidate) : Carcinogenicity: Human carcinogen.

Mutagenicity: In vitro tests showed mutagenic effects

Reproductive toxicity: Positive evidence of adverse effects on sexual function and fertility from human epidemiological studies.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish : Note: No data available

Toxicity to daphnia and other aquatic invertebrates : Note: No data available

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Toxicity to algae : Note: No data available

Elimination information (persistence and degradability)

Biodegradability : Note: Not applicable

Further information on ecology

Nickel bis(sulphamidate) :

Long-term (chronic) aquatic hazard

Nickel bis(sulphamidate) : Very toxic to aquatic life with long lasting effects.

Nickel bis(sulphamidate) :

Nickel bis(sulphamidate) :

Nickel bis(sulphamidate) :

Additional ecological information : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT	UN/ID No.	: UN 3082
	Proper shipping name	: Environmentally hazardous substances, liquid, n.o.s. (Nickel bis(sulphamidate), Solution)
	Class	9
	Packing group	III
	Hazard Labels	9

IATA	UN/ID No.	: UN 3082
	Description of the goods	: Environmentally hazardous substances, liquid,

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		n.o.s. (Nickel bis(sulphamidate), Solution)
Class	:	9
Packaging group	:	III
Hazard Labels	:	9
Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964
Packing instruction (passenger aircraft)	:	Y964

IMDG	UN/ID No.	:	UN 3082
	Description of the goods	:	Environmentally hazardous substances, liquid, n.o.s. (NICKEL BIS(SULPHAMIDATE), SOLUTION)
	Class	:	9
	Packaging group	:	III
	Hazard Labels	:	9
	EmS Number	:	F-A, S-F
	Marine pollutant	:	yes
	IMDG Code segregation group		7 – Heavy metals and their salts,

Not regulated for transport when single and combination packagings are <5L for liquids or <5kg for solids per ADR 2.2.9.2.10, IMDG 2.10.3 and IATA SP A197).

SECTION 15. REGULATORY INFORMATION**Inventories**

US. Toxic Substances Control Act : On TSCA Inventory

Australia. Industrial Chemical (Notification and Assessment) Act : On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL) : All components of this product are on the Canadian DSL

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Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory List

Korea. Existing Chemicals Inventory (KECI) : On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS) : On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC) : On the inventory, or in compliance with the inventory


New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand : On the inventory, or in compliance with the inventory

National regulatory information

SARA 302 Components : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components : The following components are subject to reporting levels established by SARA Title III, Section 313:
: Nickel bis(sulphamidate) 13770-89-3

SARA 311/312 Hazards : Acute Health Hazard
Chronic Health Hazard

California Prop. 65 :  **WARNING:** This product can expose you to chemicals, listed below, known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Nickel bis(sulphamidate) 13770-89-3

New Jersey RTK : Nickel bis(sulphamidate) 13770-89-3

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Pennsylvania RTK : Nickel bis(sulphamidate) 13770-89-3

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 2*	2
Flammability	: 0	0
Physical Hazard	: 0	
Instability	:	0

* - Chronic health hazard

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Previous Issue Date: 08/24/2018

Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group