

SAFETY DATA SHEET

according to EC Directive 1907/2006/EC

Print Date: 02/26/2009

Revision Number: 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product code: 1674800
 Product name: **UNIZINC NCZ 421 3X CONC.**

Use of the Substance/Preparation
 Chemical plating of metals

Supplier

2. HAZARDS IDENTIFICATION

Classification

Xn



Indication of danger: Xn - Harmful
 Carcinogenic Category 3

Most important hazards:

R40 - Limited evidence of a carcinogenic effect

R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

3. COMPOSITION/INFORMATION ON INGREDIENTS

Description Aqueous solution

Components	CAS-No	EC-No.	Weight %	Classification
trisodium 2-(carboxylatomethyl(2-hydroxyethyl)amino)ethyliminodi(acetate) thiocarbamide	139-89-9	205-381-9	5-10	Xi;R36
	62-56-6	200-543-5	2.5-5	Carc. Cat.3;R40 Repr. Cat.3;R63 Xn;R22 N;R51/53

For the full text of the R phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

General advice:	Consult a physician for severe cases.
Skin contact:	Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use.
Inhalation:	Move to fresh air Artificial respiration and/or oxygen may be necessary If symptoms persist, call a physician
Eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
Ingestion:	Call a physician or Poison Control Center immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.
Protection of first-aiders:	Use personal protective equipment.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Extinguishing media which must not be used for safety reasons:	No information available
Special protective equipment for firefighters:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA / NIOSH (approved or equivalent) and full protective gear.
Specific hazards:	In case of fire hazardous decomposition products may be produced such as, Carbon oxides, nitrogen oxides, Sulphur oxides.
Specific methods:	In the event of fire, cool tanks with water spray Not applicable.
Flammability Limits in Air:	
Lower:	Not applicable.
Upper:	Not applicable.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Prevent unauthorized access. For personal protection see section 8.
Environmental precautions:	Should not be released into the environment.
Methods for cleaning up:	Avoid formation of aerosol. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Clean contaminated surface thoroughly. Dispose of in accordance with local regulations.
Methods for containment:	Prevent further leakage or spillage if safe to do so

7. HANDLING AND STORAGE

Handling

Technical measures/Precautions:	Use only in area provided with appropriate exhaust ventilation.
Safe handling advice:	Do not breathe vapours/dust. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice. Do not ingest. For personal protection see section 8.

Storage

Technical measures/Storage conditions:	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep locked-up.
Incompatible products:	No special storage conditions required

Storage Temperature

Keep above:	-5 °C
Keep below:	40 °C

8. EXPOSURE CONTROLS / PERSONAL PROTECTION



Engineering measures to reduce exposure:

Ensure adequate ventilation, especially in confined areas

Personal protective equipment

- Respiratory protection:** In case of insufficient ventilation wear suitable respiratory equipment. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators..
- Hand protection:** Wear protective gloves. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
- Gloves:** nitrile rubber
- Skin and body protection:** long sleeved clothing. boots.
- Eye protection:** tightly fitting safety goggles. Ensure that eyewash stations and safety showers are close to the workstation location.
- Hygiene measures:** Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

Components	EU	Austria	Czech Republic	Denmark	Finland
thiocarbamide					TWA: 0.5 mg/m ³

Components	Lithuania	The Netherlands	Norway	Poland	Portugal
thiocarbamide		MAC: 0.5 mg/m ³ Skin			

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	liquid	Colour:	yellow
Odour:	No information available	Specific gravity:	1.040 - 1.060
pH:	12.00 - 13.00	Boiling point:	> 100°C
Melting point:		Vapour pressure:	ca. 23 hPa
VOC Content(%):	Not applicable.	Solubility in water:	miscible
Flash point:	Not applicable	Explosive properties:	Not applicable.
Decomposition temperature:			Not applicable

Explosion limits:

Not applicable.
Not applicable.

10. STABILITY AND REACTIVITY

- Stability:** Stable under recommended storage conditions.
- Materials to avoid:** none
- Conditions to avoid:** Stable at normal conditions
- Hazardous decomposition products:** None reasonably foreseeable
- Hazardous reactions:** None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Component Information

Components	LD50/oral/rat	LC50/inhalation/8h/rat	LD50/dermal/rabbit
trisodium 2-(carboxylatomethyl(2-hydroxyethyl)amino)ethyliminodi(acetate) - 139-89-9	No information available	No information available	No information available
thiocarbamide - 62-56-6	1750 mg/kg	0.9 mg/L	No information available

Product Information

LC50/inhalation/4h/rat = No information available

LD50/dermal/rabbit = No information available

LD50/oral/rat = No information available

Local effects

Skin contact:	Prolonged skin contact may cause skin irritation
Eye contact :	Contact with eyes may cause irritation
Inhalation :	May cause irritation of respiratory tract
Ingestion :	May be harmful if swallowed

Chronic toxicity:

Sensitization:

No information available

Carcinogenic substances

Components	EU 67/548	IARC:
thiocarbamide	3	

12. ECOLOGICAL INFORMATION

Environmental hazard

Ecotoxicity effects:	No data is available on the product itself
Aquatic toxicity:	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
Mobility:	No information available
Bioaccumulative potential:	Not determined

Components	Freshwater Algae	Freshwater Fish Species
thiocarbamide - 62-56-6	72 h EC50 Scenedesmus subspicatus = 3.8 mg/L 96 h EC50 Scenedesmus subspicatus = 6.8 mg/L	96 h LC50 (Brachydanio rerio) = 10000 mg/L 96 h LC50 (Pimephales promelas) > 600 mg/L

Components	Microtoxicity	Water Flea
thiocarbamide 62-56-6	30 min EC50 Photobacterium phosphoreum = 3100 mg/L 15 min EC50 Photobacterium phosphoreum = 3395 mg/L	48 h EC50 = 35 mg/L

Germany, Water Endangering Classes (VwVwS): 2

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:	Dispose of in accordance with local regulations.
Contaminated packaging:	Empty containers should be taken for local recycling, recovery or waste disposal
EWC waste disposal No:	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific

14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

IMDG

ADR/RID

ICAO/IATA

15. REGULATORY INFORMATION

Symbol(s)

Xn - Harmful.

Xn



R-phrase(s)

R40 - Limited evidence of a carcinogenic effect

R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S-phrase(s)

S23 - Do not breathe dust/fume/gas/mist/vapours/spray

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

S36/37 - Wear suitable protective clothing and gloves

contains:

thiocarbamide

Labelling

Substances currently restricted by WEEE/RoHS (European Directive 2002/96/EC , 2002/95/EC) or ELV (European Directive 2000/53/EC):

PBDE

PBB

CrVI

Hg

Pb

Cd

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Please note: Current legislation restricting the use of certain substances applies to „homogeneous material“ in finished articles being supplied to the market. Substances deposited during surface finishing may have a composition (weight percent) higher than the weight percent of the substance in the operating solution from which the deposit is made. Atotech encourages its customers to implement systems to ensure their finished products comply with the regulations in force.

International Inventories

All of the components in this product are on or exempt from the following inventories:

US TSCA, CANADA DSL / NDSL, Europe (EINECS/ELINCS/NLP), Australia, Korea, China, Japan, Philippines.

International Inventory Legend

TSCA: US - Toxic Substance Control Act

DSL: Canada - Domestic Substance List

NDSL: Canada - Non-Domestic Substance List

IECSC: China - Inventory of Existing Chemical Substances China

EINECS: EU Inventory of Existing Commercial Chemical Substances

ELINCS: EU List of Notified Chemical Substances

ECL: Korea - Existing Chemicals List

AICS: Australia - Inventory of Chemical Substances

ENCS: Japan - Existing and New Chemical Substances

PICCS: Phillipines - Inventory of Chemicals and Chemical Substances

16. OTHER INFORMATION

Text of R phrases mentioned in Section 3

- R22 - Harmful if swallowed.
- R36 - Irritating to eyes.
- R40 - Limited evidence of a carcinogenic effect
- R63 - Possible risk of harm to the unborn child.
- R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Revision Date:

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