

## Nickel tin trioxide (cas 12035-38-0) MSDS

Material Safety Data Sheet

acc. to OSHA and ANSI

1 Identification of substance:

Product details:

Product name: Nickel tin oxide

2 Composition/Data on components:

Chemical characterization:

Description: (CAS#)

Nickel tin oxide, dihydrate (CAS# 12035-38-0), 100%

Identification number(s):

EINECS Number: 234-824-9

3 Hazards identification

Hazard description:

T Toxic

Information pertaining to particular dangers for man and environment

R 45 May cause cancer.

R 43 May cause sensitization by skin contact.

Classification system

HMS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH 1 Health (acute effects) = 1

Flammability = 0

FIRE 0

Reactivity = 1

REACTIVITY 1

4 First aid measures

General information

Immediately remove any clothing soiled by the product.

After inhalation

Supply fresh air and to be sure call for a doctor.

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

After skin contact

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

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After eye contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing Seek immediate medical advice.

#### 5 Fire fighting measures

Suitable extinguishing agents

Product is not flammable. Use fire fighting measures that suit the surrounding fire.

Special hazards caused by the material, its products of combustion or resulting gases:

In case of fire, the following can be released:

Toxic metal oxide fume

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

#### 6 Accidental release measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Measures for environmental protection:

Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:

Dispose contaminated material as waste according to item 13.

Additional information:

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

#### 7 Handling and storage

Handling

Information for safe handling:

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Open and handle container with care.

Information about protection against explosions and fires:

The product is not flammable

Storage

Requirements to be met by storerooms and receptacles:

No special requirements.

Information about storage in one common storage facility:

No information known.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

Store under lock and key and with access restricted to technical experts or their assistants only.

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#### 8 Exposure controls and personal protection

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Components with limit values that require monitoring at the workplace:

Nickel and inorganic compounds, as Ni

mg/m<sup>3</sup>

ACGIH TLV 1.5, A5-inhalable particulate (metal)

0.2, A1-inhalable particulate (insoluble compounds)  
0.1, A4-inhalable particulate (soluble compounds)  
Austria Carcinogen  
Denmark TWA 0.5  
Finland TWA 0.1 (skin) Carcinogen  
France VME 1; C3-Carcinogen  
Germany Carcinogen  
Hungary 0.005-STEL; Carcinogen (insoluble compounds)  
Japan 1; 2B-Carcinogen  
Korea TLV 1.5  
Netherlands MAC-TGG 1; Carcinogen  
1 (insoluble compounds)  
Poland TWA 0.25  
Russia 0.05-STEL  
Sweden NGV 0.5 (dust)  
Switzerland MAK-W 0.5; Carcinogen  
United Kingdom TWA 0.1  
USA PEL 1

Tin metal, tin oxide and inorganic tin compounds,  
except tin hydride, as Sn

mg/m<sup>3</sup>  
ACGIH TLV 2  
Austria MAK 2  
Belgium TWA 2  
Denmark TWA 2  
Finland TWA 2  
Germany MAK 2  
Hungary TWA 1; 2-STEL (skin)  
Netherlands MAC-TGG 2  
Norway TWA 1  
Poland TWA 2  
Switzerland MAK-W 2; 4-KZG-W  
United Kingdom TWA 2; 4-STEL  
USA PEL 2

Additional information: No data

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Breathing equipment:

Use suitable respirator when high concentrations are present.

Protection of hands: Impervious gloves

Eye protection: Safety glasses

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Body protection: Protective work clothing.

9 Physical and chemical properties:

General Information

Form: Powder

Color: Green

Odor: Odorless

Change in condition

Melting point/Melting range: Not determined

Boiling point/Boiling range: Not determined

Sublimation temperature / start: Not determined

Flash point: Not applicable  
Ignition temperature: Not determined  
Decomposition temperature: Not determined  
Danger of explosion: Product does not present an explosion hazard.  
Explosion limits:  
Lower: Not determined  
Upper: Not determined  
Vapor pressure: Not determined  
Density: Not determined  
Solubility in / Miscibility with  
Water: Insoluble

#### 10 Stability and reactivity

Thermal decomposition / conditions to be avoided:  
Decomposition will not occur if used and stored according to specifications.  
Materials to be avoided: No information known.  
Dangerous reactions No dangerous reactions known  
Dangerous products of decomposition: Toxic metal oxide fume

#### 11 Toxicological information

Acute toxicity:  
Primary irritant effect:  
on the skin: Irritant to skin and mucous membranes.  
on the eye: Irritating effect.  
Sensitization: Sensitization possible through skin contact.  
Subacute to chronic toxicity:  
Nickel and nickel compounds may cause a form of dermatitis known as nickel itch. They may also cause intestinal disorders, convulsions and asphyxia. Airborne nickel contaminated dusts are regarded as carcinogenic to the respiratory tract.  
Metallic tin and inorganic tin compounds may cause nausea, vomiting, diarrhea, irritation and pneumoconiosis.

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Additional toxicological information:  
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.  
IARC-1: Carcinogenic to humans: sufficient evidence of carcinogenicity.  
NTP-2: Reasonably anticipated to be a carcinogen: limited evidence from studies in humans or sufficient evidence from studies in experimental animals.  
ACGIH A1: Confirmed human carcinogen: Agent is carcinogenic to humans based on epidemiologic studies of, or convincing clinical evidence in, exposed humans.

#### 12 Ecological information:

General notes:  
Do not allow material to be released to the environment without proper governmental permits.

#### 13 Disposal considerations

Product:  
Recommendation  
Consult state, local or national regulations to ensure proper disposal.  
Uncleaned packagings:  
Recommendation: Disposal must be made according to official regulations.

#### 14 Transport information

Not a hazardous material for transportation.

DOT regulations:

Hazard class: None

Land transport ADR/RID (cross-border)

ADR/RID class: None

Maritime transport IMDG:

IMDG Class: None

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: None

Transport/Additional information:

Not dangerous according to the above specifications.

#### 15 Regulations

Product related hazard informations:

Hazard symbols:

T Toxic

Risk phrases:

45 May cause cancer.

43 May cause sensitization by skin contact.

Safety phrases:

53 Avoid exposure - obtain special instructions before use.

24 Avoid contact with skin.

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27/28 After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

37/39 Wear suitable gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately.

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

This product contains a chemical known to the state of California to cause cancer or reproductive toxicity.

Information about limitation of use:

For use only by technically qualified individuals.

This product contains nickel and is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know act of 1986 and 40 CFR 372.