

## Chemical Safety Data Sheet MSDS / SDS

## Nicotinamide SDS

Revision Date:2024-04-25 Revision Number:1

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier**

Product name: Nicotinamide  
CAS: 98-92-0

**Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses: For R&D use only. Not for medicinal, household or other use.  
Uses advised against: none

**Company Identification**

Company: Chemicalbook.in  
Address: 5 vasavi Layout Basaveswara Nilayam Pragathi Nagar Hyderabad, India -500090  
Telephone: +91 9550333722

**SECTION 2: Hazards identification****Classification of the substance or mixture**

Eye irritation, Category 2

## GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Warning

Hazard statement(s)

H319 Causes serious eye irritation

Precautionary statement(s)

Prevention

P264 Wash ... thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

Response

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage

none

Disposal

none

Other hazards which do not result in classification

no data available

## SECTION 3: Composition/information on ingredients

Substance

Chemical name: Nicotinamide

Common names and synonyms: Nicotinamide

CAS number: 98-92-0  
EC number: 202-713-4  
Concentration: 100%

#### **SECTION 4: First aid measures**

##### **Description of necessary first-aid measures**

###### **If inhaled**

Fresh air, rest.

###### **Following skin contact**

Rinse skin with plenty of water or shower.

###### **Following eye contact**

Rinse with plenty of water (remove contact lenses if easily possible).

###### **Following ingestion**

Rinse mouth. Give one or two glasses of water to drink.

##### **Most important symptoms/effects, acute and delayed**

no data available

##### **Indication of immediate medical attention and special treatment needed, if necessary**

##### **Absorption, Distribution and Excretion**

<sup>14</sup>(C)Niacinamide was incorporated into an oil-in-water (o/w) skin cream and into a 30% (w/w) soap base and applied to the skin of female Colworth Wistar rats. The final concentration of niacinamide in the soap solution was approximately 0.3% (w/v) and was 1% (w/w) in the skin cream. Application of the skin cream and soap paste was made to rat skin at approximately 20 mg/sq cm. The cream was carefully massaged over 10 sq cm of skin for up to 5 min before covering with polythene-lined occlusive protective patches. The rats were placed in metabolism cages for 48 hr during which time all excreta was collected. At 48 hr, the animals were killed and the patch, carcass, and treated area of skin were assayed for <sup>14</sup>(C). Up to 32% <sup>14</sup>(C) was recovered in excreta and in the carcasses from rats treated with skin cream containing <sup>14</sup>(C)Niacinamide and up to 30% from those treated with soap paste.

## SECTION 5: Firefighting measures

### Suitable extinguishing media

This chemical is a noncombustible solid. Use dry chemical, carbon dioxide, water spray, or alcohol foam extinguishers. Poisonous gases are produced in fire. If material of contaminated runoff enters waterways, notify downstream users of potentially contaminated waters. Notify local health and fire officials and pollution control agencies. From a secure, explosion-proof location, use water spray to cool exposed containers. If cooling streams are ineffective (venting sound increase in volume and pitch, tank discolors, or shows any signs of deforming), withdraw immediately to a secure position. If employees are expected to fight fires, they must be trained and equipped in OSHA 1910.156.

### Specific hazards arising from the chemical

Combustible. Gives off irritating or toxic fumes (or gases) in a fire. Finely dispersed particles form explosive mixtures in air.

### Special protective actions for fire-fighters

Use water spray, foam, powder, carbon dioxide.

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Wash away remainder with plenty of water.

### Environmental precautions

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Wash away remainder with plenty of water.

### Methods and materials for containment and cleaning up

Evacuate persons not wearing protective equipment from area of spill or leak until clean up is complete. Remove all ignition sources. Use HEPA vacuum or wet method to reduce dust during cleanup. Do not dry sweep. Collect powdered material in the most convenient and safe manner and deposit in sealed containers. Ventilate after clean up is complete. It may be necessary to contain and dispose of this chemical as a hazardous waste. If material of contaminated runoff enters waterways, notify downstream users of potentially contaminated waters. Contact your Department of Environmental Protection or regional office of the federal EPA for specific recommendations. If employees are expected to clean up spills, they must be trained and equipped. OSHA 1910.120 may be applicable.

## SECTION 7: Handling and storage

### Precautions for safe handling

Prevent deposition of dust. Closed system, dust explosion-proof electrical equipment and lighting. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### Conditions for safe storage, including any incompatibilities

Separated from oxidants.

## SECTION 8: Exposure controls/personal protection

### Control parameters

### Occupational Exposure limit values

Component	Nicotinamide			
CAS No.	98-92-0			
	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Latvia	?	1	?	?
	Remarks			

### Biological limit values

no data available

### Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### Individual protection measures, such as personal protective equipment (PPE)

#### Eye/face protection

Wear safety goggles.

**Skin protection**

Protective gloves.

**Respiratory protection**

Avoid inhalation of dust.

**Thermal hazards**

no data available

**SECTION 9: Physical and chemical properties and safety characteristics**

Physical state:	Solid. Powder.
Colour:	White.
Odour:	ODORLESS
Melting point/freezing point:	130 °C.
Boiling point or initial boiling point and boiling range:	157 °C. Atm. press.: -0.001 mm Hg.
Flammability:	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.
Lower and upper explosion limit/flammability limit:	no data available
Flash point:	150°C
Auto-ignition temperature:	Remarks: No self-heating observed up to melting point temperature of ca. 140 °C.
Decomposition temperature:	no data available
pH:	10% "wt in vol" soln in water is neutral to litmus
Kinematic viscosity:	no data available

Solubility:	2.8 [ug/mL]
Partition coefficient n-octanol/water:	log Pow = -0.38. Temperature:21 °C. Remarks:No data on pH value.;Pow = 0.421. Temperature:21 °C. Remarks:No data on pH value.
Vapour pressure:	0 Pa. Temperature:25 °C.
Density and/or relative density:	1.4 g/cm <sup>3</sup> . Temperature:25 °C.
Relative vapour density:	(air = 1): 4.2
Particle characteristics:	no data available

## SECTION 10: Stability and reactivity

### Reactivity

On combustion, forms toxic gases including nitrogen oxides. Reacts with oxidants oxidants.

### Chemical stability

Stable to heat, acids and alkali.

### Possibility of hazardous reactions

Dust explosion possible if in powder or granular form, mixed with air. An amine and amide. Acts as a weak base in solution. Amines are chemical bases. They neutralize acids to form salts plus water. These acid-base reactions are exothermic. The amount of heat that is evolved per mole of amine in a neutralization is largely independent of the strength of the amine as a base. Amines may be incompatible with isocyanates, halogenated organics, peroxides, phenols (acidic), epoxides, anhydrides, and acid halides. Flammable gaseous hydrogen is generated by amines in combination with strong reducing agents, such as hydrides. Organic amides/imides react with azo and diazo compounds to generate toxic gases. Flammable gases are formed by the reaction of organic amides/imides with strong reducing agents. Amides are very weak bases (weaker than water). Imides are less basic yet and in fact react with strong bases to form salts. That is, they can react as acids. Mixing amides with dehydrating agents such as P<sub>2</sub>O<sub>5</sub> or SOCl<sub>2</sub> generates the corresponding nitrile. The combustion of these compounds generates mixed oxides of nitrogen (NO<sub>x</sub>).

### Conditions to avoid

no data available

**Incompatible materials**

no data available

**Hazardous decomposition products**

When heated to decomposition it emits toxic fumes of nitrogen oxides.

**SECTION 11: Toxicological information****Acute toxicity**

Oral: LD50 - rat (male/female) - > 2 500 mg/kg bw.

Inhalation: LC50 - rat (male/female) - > 3.8 mg/L air (analytical).

Dermal: LD50 - rabbit (male/female) - > 2 000 mg/kg bw.

**Skin corrosion/irritation**

no data available

**Serious eye damage/irritation**

no data available

**Respiratory or skin sensitization**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

no data available

**Reproductive toxicity**



no data available

#### **STOT-single exposure**

The substance is irritating to the eyes.

#### **STOT-repeated exposure**

no data available

#### **Aspiration hazard**

A nuisance-causing concentration of airborne particles can be reached quickly when dispersed, especially if powdered.

## **SECTION 12: Ecological information**

### **Toxicity**

Toxicity to fish: LC50 - *Poecilia reticulata* - > 1 000 mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia magna* - > 1 000 mg/L - 24 h.

Toxicity to algae: IC50 - *Desmodesmus subspicatus* (previous name: *Scenedesmus subspicatus*) - > 1 000 mg/L - 72 h.

Toxicity to microorganisms: NOEC - *Pseudomonas putida* - 4 235 mg/L - 18 h.

### **Persistence and degradability**

AEROBIC: Nicotinamide was determined to be readily biodegradable in an aerobic screening test recommended by the Department of Environment, Standing Committee of Analysts, UK(1).

### **Bioaccumulative potential**

An estimated BCF of 3 was calculated in fish for nicotinamide(SRC), using a log Kow of -0.37(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

### **Mobility in soil**

The Koc of nicotinamide is estimated as 15(SRC), using a log Kow of -0.37(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that nicotinamide is expected to have very high mobility in soil.

### Other adverse effects

no data available

## SECTION 13: Disposal considerations

### Disposal methods

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

## SECTION 14: Transport information

### UN Number

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### UN Proper Shipping Name

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### Transport hazard class(es)

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

**Packing group, if applicable**

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

**Environmental hazards**

ADR/RID: No

IMDG: No

IATA: No

**Special precautions for user**

no data available

**Transport in bulk according to IMO instruments**

no data available

**SECTION 15: Regulatory information**

**Safety, health and environmental regulations specific for the product in question**

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

**EC Inventory**

Listed.

**United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

**China Catalog of Hazardous chemicals 2015**

Not Listed.

**New Zealand Inventory of Chemicals (NZIoC)**

Listed.

**(PICCS)**

Listed.

**Vietnam National Chemical Inventory**

Listed.

**IECSC)**

Listed.

**Korea Existing Chemicals List (KECL)**

Listed.

## **SECTION 16: Other information**

### **Abbreviations and acronyms**

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### **References**

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:  
[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website:  
<http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

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