natural
BULK SUPPLIES

SAFETY DATA SHEET
NIACINAMIDE (VITAMIN B3)

1. PRODUCT INFORMATION AND COMPANY IDENTIFICATION

Product Name: Niacinamide (Vitamin B3)

Company: Natural Bulk Supplies, 318 Half Day Rd, # 348,
Buffalo Grove, IL 60089 Phone: 847-489-7180

Emergency Contact: Infotrac: 800-535-5053(North America) +1-352-323-3500 (International)

2. HAZARD IDENTIFICATION

Classification of the substance or mixture
GHS-US classification
Serious Eye Damage/ Eye Irritation: Category 2A

Label Elements
Hazard Pictogram: GHS 07.

Signal Word: Warning!

HAZARD AND PRECAUTIONARY STATEMENTS:
HAZARD STATEMENTS
H319: Causes serious eye irritation.

Precautionary statements
P264: Wash hands, eyes and face thoroughly after handling.
P280: Wear protective gloves/clothing and eye/face protection.
P305 + P351 + P338: IF IN EYES, Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rising.
P337 + P313: If eye irritation persists: Get medical advice/attention
P405: Store locked up .
P501: Dispose of contents/container in accordance with local/regional/national/ international regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

INCI NAME	CAS NO.	CONCENTRATION (%)
Niacinamide	98-92-0	~100%

GHS-US classification
Serious Eye Damage/ Eye Irritation:
Category 2A

4. FIRST AID MEASURES

Description of first aid measures

Key symptoms

Acute effects:
In contact with eyes, it causes serious eye irritation and redness of eyes.

Chronic effects:
Affects the kidneys, eyes & liver.

FIRST AID:
Eyes: If in eyes rinse cautiously with water for at least 15 minutes. Remove contact lenses if easy to do so. Continue rinsing. Seek medical attention.
Skin: Immediately take off all contaminated clothing. Wash thoroughly with water for at least 15 minutes. Wash contaminated clothes before reuse. Seek immediate medical attention.
Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if you feel unwell. Monitor for respiratory distress. Apply artificial respiration if not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Toxic vapours may be released on thermal decomposition including nitrogen oxides, carbon monoxide and cyanide.
Ingestion: If swallowed call a poison center if you feel unwell. Rinse mouth. Do NOT induce vomiting by use of emetics. Seek medical attention.

5. FIRE FIGHTING MEASURES

Extinguishing media
Appropriate extinguishing media: Dry chemical powder, carbon dioxide, and alcohol resistant foam. Water may be in effective. Water sprays can be effective in cooling down the fire-exposed containers and knocking down the vapours. Water jets may be used to flush spills

away and dilute the same to non-flammable mixtures fog or alcohol-resistant foam by directing streams to the periphery of the fires to prevent spread. Do not permit water to get inside containers.

Special Protective Equipment and Precautions for Fire Fighter
Evacuate the area and fight fires from a safe distance.
If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions or as per locally valid procedures.
Fire fighters must wear Self Contained Breathing Apparatus (SCBA) and full protective clothing. The chemical is harmful in contact with skin.
Report any run-off of fire waters contaminated with this chemical as per local and federal procedures applicable.

Unusual fire and explosion hazard
Toxic vapors may be released on thermal decomposition including nitrogen oxides, carbon monoxide and cyanide.
High vapor concentration may result in an explosion hazard.
Vapors are heavier than air. May travel considerable distance from source and flashback.

6. ACCIDENTAL RELEASE MEASURES

Minor Spills
Clean up all spills immediately following relevant Standard Operating Procedures.
Avoid breathing vapors and contact with skin and eyes.
Shut off leak source if possible.
Shut off all possible sources of ignition.
Wear protective clothing, boots, impervious gloves and safety glasses.
Wipe up.
Decontaminate all equipment.
Use non-sparking tools.

Major Spill
Alert Emergency Responders and tell them location and nature of hazard.
Shut off all possible sources of ignition and increase ventilation.
Wear protective clothing, full boots, impervious gloves, safety glasses and Self Contained Breathing Apparatus (SCBA), as may be deemed appropriate.
Clear area of personnel and move upwind.
Stop leaks if possible.
Prevent, by any means available, spillage from entering drains or water and watercourses.
Collect recoverable product into labeled containers for recycling, recovery or disposal.
Contain spill with sand, earth or vermiculite.
Spread area with lime or absorbent material, and leave for at least 1 hour before washing.
Clean up all tools and equipment.

Inform authorities in event of contamination of any public sewers, drains or water bodies.

7. HANDLING AND STORAGE

Precautions for safe handling
Do not breathe vapor or mist.
Wear protective gloves/clothing and eye/face protection.
Wash thoroughly after handling.
Ground and secure containers when dispensing or pouring product.
Avoid contact with incompatible materials.
When handling, DO NOT eat, drink or smoke.
Launder contaminated clothing before re-use.
If on skin or hair, IMMEDIATELY remove all contaminated clothing and rinse/shower with plenty of water.
Use in a well-ventilated place/Use protective clothing commensurate with exposure levels.
Use non-sparking tools.

Storage
Store in a cool, well ventilated place.
Store in a flame proof area.
Store away from incompatible materials.
Keep only in original container.
Keep securely closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Exposure Limits Values

Chemical name	ACGIH	NIOSH	OSHA-Final PELs
Niacinamide	None Listed	None Listed	None Listed

Exposure Limits (International):
OEL-RUSSIA: STEL 1 mg/m3

Exposure Controls
Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. Local ventilation is usually preferred. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protection:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.
Eyes: Safety goggles/ Chemical Safety glasses and Face shield.
Clothing: Boots and clothing to prevent contact.
Respirator: Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.For emergency situations, wear a positive pressure, pressure-demand, full face piece self-contained breathing apparatus (SCBA) or pressuredemand supplied air respirator with escape SCBA and a fully-encapsulating, chemical resistant suit. (EPA, 1998).

Hand protection:
In full contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

In Splash contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374, for example KCL 740 Dermatril® (full contact), 740 Dermatril® (splash contact).

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties.

Appearance	White crystalline powder
Odor	Odorless
Odor Threshold	Not available
Melting Point	128–131°C
Boiling Point	157°C at 5×10^{-4} mm Hg
Flash Point	182°C
Evaporation Rate (n-BuAc=1)	Not available
Explosive Limits	Not available
Vapor Pressure	4.2×10^{-4} mm Hg at 25°C (estimated)

Vapor Density (air=1)	Not available
Specific Gravity (water=1)	1.400 at 25°C
Solubility	Freely soluble in water and in alcohol. Soluble in glycerin.
pH @ 5% aq solution (25°C)	5.35 to 5.5
Log Kow (octanol/water)	-0.37 (estimated)
Auto-Ignition Temperature	480°C
Decomposition Temperature	>140°C
Viscosity	Not available
Bulk Density	~360 kg/m³
Molecular Weight	122.12
pKa (@200°C)	3.35
Koc	51.56 (estimated)
Flammable Material	No
Oxidizer	No
Pyrophoric Material	No
Explosive Material	No

10. STABILITY AND REACTIVITY

Reactivity: It is a crystalline white solid. It is odorless and soluble in water.

Stability: Stable under normal temperatures and conditions.

Conditions to avoid: Dust generation.

Incompatible chemicals: Strong acids and bases, strong oxidizing agents.

Hazardous decomposition: Burning may produce hazardous combustion gases like Nitrogen oxides, carbon monoxide, carbon dioxide.

Hazardous Polymerization: Not expected.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity: In contact with eyes, it causes serious eye irritation and redness of eyes.

Chronic Effects: Affects the kidneys, eyes & liver.

RTECS#: QS3675000

LD50/LC50:

Test	**Species**	**Result**
Acute Oral LD50	Rat	3530-3540mg/kg
Acute Dermal LD50	Rabbit	>2000 mg/kg

Skin irritation: rabbit, Patch test OECD 404, 1981: Not irritating
Eye irritation: rabbit, OECD Guideline 405: moderately irritating

Skin corrosion/irritation
Not irritating to skin. Causes marginal skin irritation on long exposure.

Serious eye damage/irritation
Causes serious eye irritation.

Respiratory or skin sensitization
Not sensitizing.

Type: Beuhler test.
Species: Guinea pig.
Method: OECD Guideline- 406 “Skin sensitization”, 1981.
Result: not sensitizing.

Germ cell Mutagenicity
Non mutagenic.

Carcinogenicity
Not a carcinogen

Route of administration	Species	Exposure period	Doses	Result	Source
oral feed	Mouse (swiss)	life span study (110 weeks)	1%, average daily intake, m: 100.5 mg,	Consumption of nicotinamide caused no	Degussa Antwerpen N.V. Antwerpen 4

			f: 66.3 mg.	apparent carcinogenic action	

Reproductive toxicity
No reproductive and developmental toxicity.

STOT-single exposure
No data is available.

STOT- repeated exposure
Species: Rat (Wistar)
Route of administration: oral feed
Exposure period: 28 days
Doses: 215 and 1000 mg/kg
Method: OECD Guideline- 407 " Repeated dose oral toxicity- Rodent"
Year: 1981
GLP: yes
Remark: Effects: decreased body weight and food consumption in males; increased transaminases; spleen weight reduced in males liver, weight increased in females; minimal to mild hypertrophy in liver; reduced extramedullary hematopoiesis, all findings were reversible.

Aspiration Hazards
No data available.

12. ECOLOGICAL INFORMATION

Toxicity
Ecotoxicity:
Fish toxicity: P.reticulataLC50 : 4200 mg/l/96h.
Daphnia magna EC50: >1000 mg/L/24 hr.
Algeal toxicity: Desmodesmussubspicatus NOEC: 560 mg/l/72h.

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).
ANAEROBIC: Nicotinamide was not degraded using an anaerobic spore-forming rod (Clostridia sp.) bacteria isolated from Potamac River mud(1).
Bioaccumulative potential (Predicted)
BCF = 3
Log Kow = -0.37

Based on the Log Kow and Bio concentration factor value it is expected to have low potential to concentrate in fatty tissue of fish and aquatic organisms.

Mobility in soil
Log Koc = 15 (If released to soil, nicotinamide is expected to have very high mobility based upon estimated KOC value.)
Henry's Law Constant = 2.9X10-12 atm-cu m/mole. (Volatilization from moist soil surfaces is not expected to be an important fate process based upon an estimated Henry's Law constant)
Log Kow = -0.37 (Very Low bioaccumulation is expected).

Other adverse effects
Environment Fate:
Nicotinamide's production and use as a medication and dietary supplement may result in its release to the environment through various waste
streams.
If released to air, an estimated vapor pressure of 4.2X10-4 mm Hg at 25 deg C indicates nicotinamide will exist in both the vapor and particulate phases in the atmosphere.
Vapor-phase nicotinamide will be degraded in the atmosphere by reaction with photo chemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 7 days.
If released to soil, nicotinamide is expected to have very high mobility based upon an estimated Koc of 15.
Volatilization from moist soil surfaces is not expected to be an important fate process based upon an estimated Henry's Law constant of 2.9X10-12 atm-cu m/mole.
If released into water, nicotinamide is not expected to adsorb to suspended solids and sediment based upon the estimated Koc.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Burn in a chemical incinerator equipped with an afterburner and scrubber.
Exert extra care in igniting, as this material is combustible.
Dispose of this material in accordance with standard practice for disposal of potentially hazardous materials as required by applicable federal, state or local laws. Note that disposal regulations may also apply to empty containers and equipment reinstates.

14. TRANSPORT INFORMATION

This substance is considered to be Non-Hazardous for transport by Air/Rail/Road and Sea and thus not regulated by IATA/ICAO/IMO/IMDG/US DOT.

S.No	Agency	Status

Land Transport	DOT	Not Regulated
Maritime Transport	IMDG	Not Regulated
Air Transport	IATA	Not Regulated

Environmental hazards
It is expected that this chemical is not a marine pollutant and is not Harmful to the Aquatic environment.

15. REGULATORY INFORMATION

European Union Information
Classification as per CLP Regulation 1272/2008:
Eye Irrit Cat.2
Hazard Statements: : H319

US information
TSCA
CAS# 98-92-0 is listed on the TSCA inventory.
WGK (Water Danger/Protection)
CAS# 98-92-0: 0
Canada
CAS# 98-92-0 is listed on Canada's DSL List.
CAS# 98-92-0 is not listed on Canada's Ingredient Disclosure List.

16. OTHER INFORMATION

All statements, technical information and recommendations contained herein are based on tests and data which Natural Bulk Supplies believes to be currently reliable, but this accuracy or completeness thereof is not guaranteed and no warranty of any kind is made with respect thereto. This information is not intended as a license to operate under or a recommendation to practice or infringe any patent of this company or others covering any process, composition of matter or use. Since we shall have no control of the use of the product described here in, we assume no Liability for loss or damage incurred from the proper or improper use of such product.