

Safety Data Sheet According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Date of Compilation	: March 01, 2012
Date of Revision	: February 09, 2024
Due Date of Revision	: January, 2027
File Name	: 0013EM Ghs07 Div.4 sds Niacin
Version Number	: 07
Supersedes date	: August 22, 2022
Supersedes version	: 0013EM Ghs06 Div.4 sds Niacin

Jubilant Ingrevia Limited

Page 1 of 9



Safety Data Sheet According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

SECTIO	ON 1: IDENTIFICATION OF THE S	SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING	
1.1.	Product identifier		
CAS EC# SYN SYS MO	ODUCT NAME S RN # NONYMS STEMATIC NAME DLECULAR FORMULA RUCTURAL FORMULA	: Niacin : 59-67-6 : 200-441-0 : 3-Pyridinecarboxylic acid; Niacin; Nicotinic acid; 3-Carboxylpyridine; 3-Carboxypyridine : 3-Pyridinecarboxylic acid : $C_6H_5NO_2$	
1 0	Polovant identified uses of the sul	OH bstance or mixture and uses advised against	
1.2.		שאמוויב טו ווואנעוב מוע עשבש מעזושבע מצמוושנ	
1.2.1.	Relevant identified uses Niacin is used as a nutrient and/or dietary supplement in animal drugs, feeds, and related products. Niacin is also used to prevent niacin deficiency and to treat pellagra.		
<u>Uses a</u>	idvised against: None		
1.3.	Details of the supplier of the safet	y data sheet	
		nited, Plot 1-A, Sector 16-A, Institutional Area, Noida, Uttar Pradesh, 201301 - India 34881 / 84 / 85 / 87 / 95 / 96 <u>support@jubl.com</u> - <u>www.jubilantingrevia.com</u>	
2.1. C GHS-U	ION 2: HAZARD(S) IDENTIFICATION Classification of the substance or mix IS classification s eye damage/eye irritation: Category 2/	xture	
2.2. La	abel Elements		
Hazard	I Pictogram: GHS 07	\wedge	
Signal	Word: Warning!		
<u>HAZAR</u>	RD AND PRECAUTIONARY STATEME		
HAZAR •	RD STATEMENTS H319: Causes serious eye irritation.		
PRECA	P305+P351+P338: IF IN EYES: Rin: rinsing. P337+313: If eye irritation persists: 0 P405: Store locked up.	ctive clothing/eye protection/face protection. se cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue	
Other H	Hazards	BUSTIBLE DUST CONCENTRATIONS IN AIR (DURING PROCESSING).	

Jubilant Ingrevia Limited

Page 2 of 9



Safety Data Sheet

According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical	CAS #	Purity	GHS-US classification
Niacin	59-67-6	>99%	Serious eye damage/eye irritation: Category 2A

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures Key symptoms

Acute effects

It causes serious eye irritation.

FIRST AID:

- Eyes: If in eyes rinse cautiously with water for at least 15 minutes. Remove contact lenses if easy to do 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.
- Ingestion: If swallowed call a poison center if you feel unwell. Rinse mouth. Do NOT induce vomiting by use of emetics. Seek medical attention.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing media

Appropriate extinguishing media: Dry chemical powder, carbon dioxide, and alcohol resistant foam. Do not permit water to get inside containers. Water may also be used. Water 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.

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.
- Report any run-off of fire waters contaminated with this chemical as per local and federal procedures applicable.
- Wear Self contained breathing apparatus and protective clothing. Normal firefighting procedures to be used.
 Explosion: Avoid generating dust. Fine dust dispersed in air in sufficient concentration, and in the presence of an ignition source is a potential dust explosion hazard.

Unusual fire and explosion hazard

- Hazardous Products on Combustion: Combustion will produce Carbon monoxide, carbon dioxide and oxides of nitrogen.
- Potential for Dust explosion: Niacin presents a significant dust explosion hazard unless properly handled .Maximum Explosion pressure: 10.1 bar; Kst: Not available; Minimum Ignition energy: 7 mJ; Minimum Explosive concentration: 30 g/m3.
- **Special Flammability Hazards:** This product is an organic solid. As such, In its finely divided form, this product has the potential to present a dust explosion hazard under certain circumstances. Handle the product in a manner that prevents dust generation and accumulation. Please review the dust explosion data enclosed in this section.
- High vapor concentration may result in an explosion hazard.
- Vapors are heavier than air. May travel considerable distance from source and flashback.

SECTION 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.

Major Spill

• Alert Emergency Responders and tell them location and nature of hazard.



Safety Data Sheet

According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

- 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.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

- Wear appropriate protective equipment when performing mantainence on contaminated equipment.
- Wash hands thoroughly before eating and smoking after handling this material.
- Keep away from sources of ignition.
- Minimize dust generation and accumulation.
- Do not breathe vapor or mist.
- Wear protective gloves/clothing and eye/face protection.
- Ground and secure containers when dispensing or pouring product.
- Avoid contact with incompatible materials.
- 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.

Precautions for Unique hazards

 This material may present a dust explosion hazard in solid form and is sensitive to ignition by electrostatic discharge. Maintain areas below flammable vapor/explosive dust concentration.

Storage

- Store at ambient temperature in a well-ventilated place.
- Protect container against any physical damage.
- Store away from incompatible materials.
- Keep container tightly closed.
- Keep securely closed when not in use.
- Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.
- Dry powders can build static electricity charges when subjected to friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres
- SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

• Exposure Limits Values

Chemical name	ACGIH	NIOSH	OSHA-PELs
Niacin	None Listed	None Listed	15 mg/cubic meter (total dust); 5 mg/cubic meter (respirable fraction)

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.
Occupational exposure to nicotinic acid may occur through inhalation and dermal contact with this compound at workplaces where nicotinic
acid is produced or used. Monitoring data indicate that the general population may be exposed to nicotinic acid via ingestion of food and
dermal contact with this compound and other consumer products containing nicotinic acid.

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.
- **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.



Safety Data Sheet

According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

• 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).

General Industrial hygiene:

- Immediately change contaminated clothing.
- Apply skin protective barrier cream.
- Wash hands and face after working with the substance.
- Under no circumstances eat or drink at the workplace.
- Do not inhale substances, work under hood.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties.

Sr.No.	Parameter	Typical value	
1	Appearance	White crystalline solid	
2 Odor		Slightly amine to odorless	
3	Odor Threshold	Not available	
4	Melting point	237°C	
5	Boiling point	Sublimes (> 238 °C)	
6	Flash point	193°C Tag Open Cup	
7	Evaporation rate (n-BuAc=1)	Not available	
8	Explosive limits	30 g/m3 (LEL) – Not determinable (UEL)	
9	Vapor pressure	5.7 X 10 ⁻⁶ mmHg@25 ⁰ C	
10	Vapor density (air=1)	4.24	
11	Specific gravity (water=1)	1.473	
12	Solubility (water)	15 mg/ml; Slightly Soluble.	
13	Solubility in other solvents	Insoluble in Ether	
14	pH (in aq saturated solution)	2.7 (Acidic)	
15	Log Kow (octonol/water)	0.36	
16	Auto-ignition temperature	580°C	
17	Decomposition temperature	>140°C	
18	Viscosity	Not available	
19	Molecular Weight	123.11	
20	pKa (@20ºC)	4.75	
21	Log Koc	1.16 (Estimated)	
22	Flammable material	No	
23	Oxidizer	No	
24	Pyrophoric material	No	
25	Explosive material	No	

SECTION 10: STABILITY AND REACTIVITY

- Stability: Stable under normal temperatures and conditions. Stable in air, foods, acids and bases.
- Conditions to avoid: Avoid contact with incompatible chemicals, Avoid static discharge and generation of dust.
- Incompatible chemicals: Strong Acids, Strong Alkaline solutions and Oxidizing agents.
- Hazardous decomposition: When heated to decomposition it emits toxic fumes of nitrogen oxide.
- · Hazardous Polymerization: Not expected

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity



Safety Data Sheet

According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

In the workplace, single or repeated contact can lead to a flush effect on the skin, including the face. The reddening is the result of increased peripheral blood circulation from dilation of capillaries at the skin surface. The flush effect is accompanied by sensations of itching, tingling, and warmness of the skin. It causes serious eye irritation also. It vanishes after the exposure has ended and is thus reversible.

Chronic effects:

Affects the kidneys, eyes & liver.

RTECS#: QT0525000 LD50/LC50:

Acute Oral LD50(Mouse)		3720mg/kg
Acute Oral LD50(Rabbit)		4550mg/kg
Acute Oral LD50(Rat)		7000mg/kg
Acute Dermal LD50 :(Rat)		> 2000 mg/kg bw
Skin irritation/ corrosion	:	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
Germ cell Mutagenicity	:	This material was tested and found to be non-mutagenic in the Ames assay and . Mouse Micronucleus test. Equivocal test results occurred in the Unscheduled . DNA Synthesis assay in rat primary hepatocytes.
Carcinogenicity	÷	Not listed by NTP, IARC and OSHA. Not present on the EU CMR list. According to information presently available, Niacin is not found to be carcinogenic.
Reproductive toxicity	:	No reproductive and developmental toxicity.
STOT-single exposure	:	No data is available.
STOT- repeated exposure	:	No data available.
Aspiration hazard	:	No data available.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

- Ecotoxicity:
 - Acute toxicity to fish Fish (Salmotratta) LC50: 520 mg/l/96h
 - Acute toxicity to invertebrates Daphnia: Daphnia: EC50: 77 mg/L; 48h

Persistence and degradability

- Aerobic: In aqueous, aerobic soil suspensions containing mineral salts and a fertile garden soil inoculum, nicotinic acid was completely
 degraded after 2 to 4 days of incubation. In aqueous, aerobic soil suspensions containing a silt loam soil inoculum, nicotinic acid was
 degraded by 16.1% after 1 day,99.9% after 2 days, and 100% after 4 days of incubation. Nicotinic acid was readily biodegraded in screening
 tests using an activated sludge inoculums.
- Anaerobic: In aqueous, anaerobic soil suspensions containing mineral salts and a fertile garden soil inoculum, nicotinic acid was completely degraded after 8 to 17 days of incubation. In anaerobic aquifer slurries, nicotinic acid was completely biodegraded after incubation for one year reaching 74% of the potential methane production from this process.

Bio accumulative potential(Predicted)

- BCF = 3.162
- Log Kow = 0.36

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 = 1.16 Low absorption in soil.
- Henry's Law Constant = 5.11 X 10-11 atm-m3/mole. Non- volatile from aqueous bodies.
- Log Kow = 0.36 Very Low bioaccumulation is expected.

Other adverse effects



Safety Data Sheet

According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Environment Fate:

• **Terrestrial Fate:** Based on a classification scheme, an estimated value of Koc determined from a log Kow of 0.36 and a regression-derived equation, indicates that **nicotinic acid** is expected to have very high mobility in soil.

The pKa of **nicotinic acid** is 4.75, indicating that this compound will primarily exist in the anion form in the environment and anions generally do not adsorb more strongly to soils containing organic carbon and clay than their neutral counterparts.

Volatilization from moist soil is not expected, as ions do not volatilize. **Nicotinic acid** is not expected to volatilize from dry soil surfaces based upon an estimated vapor pressure of 5.7X10-6 mm Hg, determined from a fragment constant method. In aqueous, aerobic soil suspensions, **nicotinic acid** was completely degraded after 2 to 4 days of incubation, suggesting that biodegradation may be an important environmental fate process in soil.

- Aquatic Fate: Based on a classification scheme, an estimated Koc value, determined from a log Kow of 0.36 and a regression-derived equation, indicates that nicotinic acid is not expected to adsorb to suspended solids and sediment. A pKa of 4.75 indicates nicotinic acid will exist almost entirely in the anion form at pH values of 5 to 9 and therefore volatilization from water surfaces is not expected to be an important fate process. It is even suggested that suggests the potential for bio concentration in aquatic organisms is low. In aqueous, aerobic soil suspensions, nicotinic acid was completely degraded after 2 to 4 days of incubation, suggesting that biodegradation may be an important environmental fate process in water.
- Atmospheric Fate: According to a model of gas/particle partitioning of semi volatile organic compounds in the atmosphere, nicotinic acid, which has an estimated vapor pressure of 5.7X10-6 mm Hg at 25 deg C, determined from a fragment constant method, will exist in both the vapor and particulate phases in the ambient atmosphere. Vapor-phase nicotinic acid is degraded in the atmosphere by reaction with photochemical-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 24 days, calculated from its rate constant of 1.72X10-13 cu cm/molecule-sec at 25 deg C. Nicotinic acid does not absorb at wavelengths >290 nm and therefore is not expected to be susceptible to direct photolysis by sunlight.

SECTION 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 rinsates.

SECTION 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/US DOT/IMO/IMDG.

S.No	Agency	Status	UN Number
Land Transport	US DOT	Not dangerous	Not applicable
Maritime Transport	IMDG	Not dangerous	Not applicable
Air Transport	ΙΑΤΑ	Not dangerous	Not applicable

Environmental hazards

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

SECTION 15: REGULATORY INFORMATION

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

International Inventories

0

Chemical Inventory Lists:	Status
TSCA:	Listed
EC/ List No.	Listed (200-441-0)
Canada(DSL/NDSL):	Listed (DSL)
Korea:	Listed (KECI) (KE-29937)
Australia:	Listed (AICS)
Taiwan	Listed (TCSI)
New Zealand	Listed (NZIoC)
Philippines	Listed (PICCS)

Jubilant Ingrevia Limited

Page 7 of 9



Safety Data Sheet

According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

China: IECSC	Listed
Japan	Listed ((5)-731)

US Federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) Hazardous Substance List (40 CFR 302.4): Niacin not listed

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance: Niacin not listed

SARA 304 Emergency release notification: Niacin not listed

SARA 311/312 Hazardous chemical: See Section 2 for more Information

SARA 313 (TRI Reporting) : Niacin not listed.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): Niacin not listed

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended: Niacin not listed

California Prop. 65: Niacin not listed

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Niacin not listed

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Niacin not listed

EU Information

Water hazard class (WGK) 1, low hazard to waters

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006: Product not listed.

SECTION 16: OTHER INFORMATION

a)	Compilation information o				
	Date of compilation	: March 01, 2012			
	Chemical	: Niacin			
	CAS #	: 59-67-6			
	File Name	: 0013EM Ghs07 Div.4 sds Niacin			
	Revision Number	: 07			
	Date of Revision	: February 09, 2024			
	Revision Due Date	: January, 2027			
	Supersedes date	: 0013EM Ghs06 Div.4 sds Niacin			
b)	A key or legend to aberrat	ions and acronyms used in the safety data sheet			
	 PBT =Persistent Bio ac 	ccumulative and Toxic.			
	 vPvB= Very Persistent and Very Bio accumulative. 				
	SCBA= Self Contained Breathing Apparatus.				
	3 ,	Diric Effects of Chemical Substances.			
	NTP=National Toxicology Program.				
	IARC= International Agency for Research on Cancer.				
	EPA=Environmental Protection Agency.				
	TSCA= Toxic Substances Control Act.				
	CERCLA= Comprehensive Environmental Response, Compensation, and Liability Act.				
	 SARA= Superfund Amendments and Reauthorization Act. 				
	NFPA= National Fire Protection Association.				
	•	WHIMS= Workplace Hazardous Materials Information System.			
	DSL/NDSL= Domestic/Non-Domestic Substances List.				

• CSR=Chemical Safety Report.



Safety Data Sheet

According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

- BCF = Bio Concentration Factor.
- DNEL = Derived No Effect Level.
- PNEC = Predicted No Effect Concentration.
- TLV = Threshold Limit Value.
- ACGIH = American Conference of Governmental Industrial Hygienists.
- REACH = Registration, Evaluation, Authorization and Restriction of Chemicals.
- CLP = Classification, Labelling and Packaging.
- LD / LC = Lethal Doses / Lethal Concentration.
- GHS = Globally Harmonized System.
- ADR = Accord European relative au transport international de merchandises.
- IMDG-Code = International Maritime Code for Dangerous Goods.
- EmS = Emergency measures on Sea.
- ICAO = International Civil Aviation Organization.
- IATA/DGR= International Air Transport Association/Dangerous Goods Regulation.

c) Key Literature reference and sources for data

Biographical reference and data sources

- Globally Harmonized System of Classification and Labelling of Chemicals.
- CLP REG (regulation) (EC) no. 1272/2008, last modification by regulation (EC) no. 790/2009.
- Degussa Antwerpen N.V Antwerpen4; European Chemicals Bureau; IUCLID Dataset.
- European Chemicals Bureau; IUCLID Dataset, Nicotinic Acid (59-67-6) (2000 CD-ROM edition).
- [(1) Naik MN et al; Soil BiolBiochem 4: 313-23 (1972) (2) Sims GK, Sommers LE; J Environ Qual 14: 580-4 (1985) (3) Pitter P, Simanova J; SbVysSkChem-TechnolPraze, (Oddil) F: TechnolVodyProstredi 22: 93-113(1978)]
- [(1) Naik MN et al; Soil BiolBiochem 4: 313-23 (1972) (2) Adrian NR, Suflita JM; Environ ToxicolChem 13: 1551-57 (1994)]
- RTECS

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

(End of Safety Data Sheet)