

## Safety Data Sheet (SDS)

### Section 1 – Identification

Product: Nicotine USP, 99% solution

Manufacturer: AmeriNic, Inc. 841 AVOCA Farm Road Merry Hill, North Carolina 27957 - 252-482-2133

Recommended use of the chemical: For use in the manufacture of juice/liquid for electronic cigarettes or other vapor alternative tobacco products.

### Section 2 – Hazards Identification

Hazard Classification:

Acute toxicity (oral)	Category 1
Acute toxicity (dermal)	Category 1
Acute toxicity (inhalation)	Category 1
Reproductive toxicity	Category 2

Signal word: Danger

Hazard statements:

H300	Fatal if swallowed
H310	Fatal in contact with skin
H330	Fatal if inhaled
H361	Suspected of damaging unborn child
H400	Very toxic to aquatic life

Pictograms:



Precautionary Statements:

P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/gas/mist/vapors/spray.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves / protective clothing.
P284	In case of inadequate ventilation wear respiratory protection.

P301 + P330 + P310	If swallowed, rinse mouth and immediately call a POISON CENTER or doctor.
P302 + P352 + P310	If on skin, immediately wash with plenty of soap and water and call a POISON CENTER or doctor.
P304 + P340 + P310	If inhaled, immediately remove person to fresh air and keep comfortable for breathing and call a POISON CENTER or doctor.
P361	Remove / take off immediately all contaminated clothing.
P405	Store locked up.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents / container in accordance with local / regional / national / international regulations.

### Section 3 – Composition/Information on Ingredients

Ingredient	CAS Number	Concentration by Weight
Nicotine	54-11-5	99%
Tobacco compounds	Not applicable	1%

The identity of trace components of this mixture is considered to be a trade secret and is withheld in accordance with 29 CFR 1910.1200 (i).

### Section 4 – First Aid Measures

Inhalation: Signs of overexposure include burning sensation, nausea, vomiting, convulsions, abdominal pain, diarrhea, headache, sweating, weakness, dizziness, confusion. Move patient to fresh air and seek immediate medical attention. If patient is not breathing, begin artificial respiration.

Ingestion: Signs of overexposure as same as inhalation. Seek immediate medical attention.

Skin: Signs of overexposure include redness and burning sensation. Remove contaminated clothing and wash exposed area thoroughly with soap and water. Seek immediate medical attention.

Eye: Immediately flush eyes with plenty of room temperature water for at least 15 minutes. Irritation, pain, swelling, lacrimation (excessive secretion of tears), or photophobia (sensitivity to light) may occur. Seek immediate medical attention.

### Section 5 – Fire-Fighting Measures

Use powder, alcohol-resistant foam, water spray, or carbon dioxide (CO<sub>2</sub>).

Hazardous decomposition products: nitrogen oxides and carbon monoxide are produced during combustion; gases are irritating.

Protective equipment for firefighters: Wear adequate personal protection to prevent contact with material or its combustion products. Self-contained, NIOSH-approved breathing apparatus with a full facepiece operated in a pressure demand or other positive pressure mode.

### Section 6 – Accidental Release Measures

Collect leaking liquid in sealable containers. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Do not wash away into sewer. Use complete protective clothing including self-contained breathing apparatus.

### **Section 7 – Handling and Storage**

Store in tightly closed containers separately from strong oxidizers, food, and feedstuffs. Store in cool, dry, well-ventilated area away from sources of ignition.

### **Section 8 – Exposure Controls/Personal Protection**

OSHA Permissible Exposure Limits (PEL): 0.5 mg/m<sup>3</sup> (8-hour time-weighted average); skin

American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV): 0.5 mg/m<sup>3</sup> (8-hour time-weighted average); skin

NIOSH Recommended Exposure Limit (REL): 0.5 mg/m<sup>3</sup> (10-hour time-weighted average); skin

NIOSH Immediately dangerous to life or health (IDLH): 5 mg/m<sup>3</sup>

Wear chemical resistant clothing including apron and gloves to prevent skin contact.

Wear goggles or face shield. An eye wash and body wash station should be readily accessible.

Provide dedicated areas with suitable containers for the disposal of contaminated or non-contaminated PPE and accessories to be destroyed or washed. Provide first aid kits and the proper fire extinguishers in close proximity to the work area.

Conduct routine air testing. At 20°C (68 °F), evaporation of nicotine can quickly cause hazardous air conditions in enclosed spaces. Install a closed system or use a fume hood or have other adequate engineering controls in place to keep airborne concentrations below the occupational exposure limits. Wear NIOSH-certified respirator with full face piece operated in a pressure-demand or positive-pressure mode, in areas where the concentration is unknown or potential exists for exposures above 0.5 mg/m<sup>3</sup>. If the possibility of exposure above 5 mg/m<sup>3</sup> exists, use a NIOSH-approved self-contained breathing apparatus with a full facepiece operated in pressure-demand or other positive-pressure mode equipped with an emergency escape air cylinder.

### **Section 9 – Physical and Chemical Properties**

Appearance: dark brown liquid.

Odor: Fishlike odor when warm.

Vapor pressure: 0.08 mm Hg at 20 °C

Odor threshold: 0.003 g/L taste detection in water

Vapor density: 5.6 (air=1)

pH: 10.2

Relative density: 1.01 (water = 1)

Melting point/freezing point: -80 °C (-112°F)

Solubilities: Miscible in water below 60°F, very soluble in alcohol, oils

Initial boiling point and boiling range: 247°C (477°F)

Flash point: 95°C (203°F)

Evaporation rate: no data available.

Upper/lower flammability or explosive limits: 4.0%/0.7% by volume

Partition coefficient n-octanol/water: log Kow = 1.2

Auto-ignition temperature: 240 °C (464°F)

Decomposition temperature: 247 °C (477°F)

Viscosity: viscous upon exposure to air

### **Section 10 – Stability and Reactivity**

Reactivity: Stable under normal conditions.

Chemical stability: Explosive vapor/air mixtures may be formed above 95°C.

Incompatible materials: Reacts violently with strong oxidizers; incompatible with strong acids.

Conditions to avoid: Temperatures above 95 °C and contact with strong oxidizers or strong acids.

Hazardous decomposition products: When heated to combustion, nitrogen oxides and carbon monoxide are emitted.

### **Section 11 – Toxicological Information**

Acute toxicity based on animal studies:

#### Oral

LD50 for rat: 50–188 mg/kg

LD50 for mouse: 3.3–24 mg/kg

#### Dermal

LD50 for rat: 50–140 mg/kg

LD50 for rabbit: 50 mg/kg

#### Inhalation

No data.

Ingestion: Early phase symptoms of ingestion include vomiting, abdominal pain, increased salivation, fluid buildup in the airways, rapid and heavy breathing, high blood pressure, rapid heart rate, narrowing of the blood vessels, pale skin, headache, dizziness, confusion, agitation, restlessness, loss of balance, difficulty walking, visual and hearing distortions. Late phase symptoms include diarrhea, shallow breathing, no breathing, low blood pressure, slow heart rate, abnormal heart rhythm, shock, loss of normal reflexes, lethargy, weakness, paralysis, and coma. May be fatal if swallowed. The fatal adult dose has been described as 40 to 60 mg (approximately 40-60 milliliters).

Skin: This substance is well absorbed by dermal exposure route. May be fatal if absorbed through skin. Systemic effects similar to that of ingestion can occur from nicotine poisoning. This substance can cause skin irritation and dermatitis; no quantitative data are available.

Eyes: This substance can cause eye irritation, severe pain, inflammation of the conjunctiva, and opacification of the cornea; no quantitative data are available.

Inhalation: This substance is well absorbed by inhalation exposure route. Inhalation can produce systemic effects similar to that of ingestion.

Long-term or chronic exposures: While tobacco smoking and smokeless tobacco have been identified as carcinogens by IARC and NTP, neither agency has evaluated nicotine by itself. The State of California has identified nicotine as a chemical known to cause reproductive toxicity (Proposition 65). Animal tests indicate that nicotine may be a teratogen. Repeated exposure can cause increased blood pressure, irregular heartbeat, and disturbed hearing and vision.

#### **Section 12 – Ecological Information (non-mandatory)**

Based on its Kow, an estimated bioconcentration factor (BCF) of 3 indicates that potential for bioconcentration in aquatic organisms is low. Based on its Koc, nicotine is expected to have high mobility in soil and will adsorb strongly to soils. Based on its Henry's Law constant, nicotine is expected to be essentially non-volatile from water or soil. Aqueous and soil-based biodegradation studies indicate that nicotine is readily biodegradable in both types of media.

This substance is very toxic to aquatic organisms. Avoid release to the environment.

#### **Section 13 – Disposal Considerations**

Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Consult state, local, or national regulations to ensure proper disposal. Contact a licensed professional waste disposal service to dispose of this material.

Do not allow product to reach sewage system.

#### **Section 14 – Transport Information**

UN number: 1654

UN proper shipping name: Nicotine liquid or solid

Transport hazard class: IMO 6.1 Toxic Substances

Packing group number: II

#### **Section 15 – Regulatory Information**

##### TSCA

CAS# 54-11-5 is listed on the TSCA inventory.

##### CERCLA Hazardous Substances and corresponding RQs

CAS# 54-11-5: 100 lb final RQ; 45.4 kg final RQ

##### SARA Section 302 Extremely Hazardous Substances

CAS# 54-11-5: 100 lb TPQ

##### SARA Codes

CAS # 54-11-5: immediate, delayed.

##### Section 313

This material contains Nicotine (CAS# 54-11-5, 99%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

SARA 311/312 Hazards

Acute health hazard, Chronic health hazard.

STATE

CAS# 54-11-5 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

WARNING: This product contains Nicotine, a chemical known to the state of California to cause developmental reproductive toxicity.

Canada - DSL/NDSL

CAS# 54-11-5 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS class D, division 1, subdivision A (Material causing immediate and serious toxic effects (VERY TOXIC)).

Canadian Ingredient Disclosure List

CAS# 54-11-5 is listed on the Canadian Ingredient Disclosure List.

National Fire Protection Association (USA)

Health: 4

Flammability: 1

Reactivity: 0

**Section 16 – Other Information**

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