

Revision Date: 03.10.2020

Version 1.1

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1. Product identifier**Product Name: Nitroethane Cleaner

GTIN/EAN No.: 5907745979767, 5907745979781, 5907745979798

Synonyms: Nitroethane

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use: Individual applications as a cleaning agent
Industrial applications
Solvent
Synthesis intermediate

1.3. Details of the supplier of the safety data sheet

Company: Nitrochemis
Sanocka 11/20
53-304 Wroclaw, Poland
Telephone: +48 507 733 248
E-mail: biuro@nitrochemis.pl

1.4. Emergency telephone number

Emergency Phone 112
998 (Fire brigade)
999 (Ambulance Service)

SECTION 2: HAZARDS IDENTIFICATION**2.1. Classification of the substance or mixture**

Flammable liquids - H226 (Category 3)
Acute toxicity, Oral - H302 (Category 4)
Acute toxicity, Inhalation - H332 (Category 4)

2.2. Label elements

Pictogram: Warning

Hazard statement(s)

H226 - Flammable liquid and vapor.
H302 - Harmful if swallowed.
H332 - Harmful if inhaled.

Precautionary statement(s)

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P370+P378 In case of fire: Use a powder extinguisher to extinguish.
P301+P312+P330 - IF SWALLOWED: Call a POISON CENTER /doctor if you feel unwell. Rinse mouth.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.

2.3. Other hazards

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.1. Substances**

Component	EINECS/ELINCS	Concentration	CAS No.	Classification	REACH No.
Nitroethane	201-188-9	99	79-24-3	Acute Tox. 4 (H302, H332) Flammable (H226)	-

SECTION 4: FIRST AID MEASURES**4.1. Description of first aid measures**

In case of eye Contact	Immediately flush eyes with water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Consult a physician.
In case of skin Contact	Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Consult a physician.
If swallowed	Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.
If inhaled	Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

4.2. Most important symptoms and effects, both acute and delayed

Breathing difficulties. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically and supportively.

SECTION 5: FIREFIGHTING MEASURES**5.1. Extinguishing media**

Extinguishing media Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use dry chemical. Do NOT use straight streams of water.

5.2. Special hazards arising from the substance or mixture

Flammable liquid and vapor. May explode when heated. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back.

5.3. Advice for firefighters

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool.

SECTION 6: ACCIDENTAL RELEASE MEASURE**6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment as indicated in Section 8.

6.2. Environmental precautions

Should not be released into the environment.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges. Avoid runoff into storm sewers and ditches which lead to waterways. Cover with sand, dry lime or soda ash and place in a closed container for disposal. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

6.4. Reference to other sections

For disposal see section 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Use only in a chemical fume hood. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Keep from contact with moist air and steam.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks, and flame. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Store protected from moisture.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace control parameters

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

Exposure Limits

Component	ACGIH	NIOSH	OSHA - Final PELs
Nitroethane	100 ppm TWA	100 ppm TWA; 310 mg/m ³ TWA; 1000 ppm IDLH	100 ppm TWA; 310 mg/m ³ TWA

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

NIOSH - The National Institute for Occupational Safety and Health

OSHA - Occupational Safety and Health Administration

8.2. Exposure controls

Personal protective equipment

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin protection

Wear appropriate protective gloves to prevent skin exposure.

Body Protection

Wear appropriate protective clothing to prevent skin exposure.

Respiratory protection

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Form: Liquid Colour: colourless
Odour	Characteristic
pH	6
Melting/freezing point	-89°C / -128°F - lit.
Initial boiling point and boiling range	112-116°C / 760°F - lit.

Flash point	30,5°C / 86,9°F - closed cup
Flammability (solid, gas)	No data available
Vapour pressure	15,60mmHg at 20°C - lit.
Vapour density	2,58 (Air = 1,0) - lit
Relative density	1,045 g/cm ³ at 25°C - lit.
Water solubility	4,5% at 20 °C - lit.
Auto-ignition temperature	414°C - lit.
Decomposition temperature	335-382°C
Viscosity	0.677 mm ² /s at 20°C - lit.

9.2. Other information

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SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable at room temperature in closed containers under normal storage and handling conditions. May explode when heated. Hygroscopic: absorbs moisture or water from the air.

10.3. Possibility of hazardous reactions

Heating may cause an explosion.

10.4. Conditions to avoid

Incompatible materials, ignition sources, excess heat, strong oxidants, exposure to moist air or water.

10.5. Incompatible materials

Moisture, water, amines, bases, strong acids, strong alkalis, strong oxidizing agents, hydrocarbons, combustible materials, metal oxides, hydroxides, plastics, calcium hydroxide, sodium hydroxide, potassium hydroxide, brass, copper, activated carbon, clay-based absorbents.

10.6. Hazardous decomposition products

Nitrogen oxides, carbon monoxide, carbon dioxide, nitrogen gas.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

LD50 Oral - Rat: 1100 mg/kg

LD50 Oral - Mouse: 860 mg/kg

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. May cause methemoglobinemia, thereby impairing the blood's ability to transport oxygen.

LC50 Inhalation - Rat: > 6,75 mg/l / 6h (Vapor)

Assessment: The component/mixture is moderately toxic after short term inhalation.

LD50 Dermal - Rabbit: > 2200 mg/kg

Symptoms: No deaths occurred at this concentration.

The substance or mixture has no acute dermal toxicity.

Skin corrosion/irritation

Prolonged exposure not likely to cause significant skin irritation.

Serious eye damage/eye irritation

May cause slight eye irritation. Corneal injury is unlikely. Vapor may cause eye irritation experienced as mild discomfort and redness.

Respiratory or skin sensitization

For skin sensitization: Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization: No relevant data found.

Germ cell mutagenicity

Animal genetic toxicity studies were negative. In vitro genetic toxicity studies were negative.

Carcinogenicity

Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Reproductive toxicity

Limited data in laboratory animals suggest that the material does not affect reproduction.

Specific target organ toxicity - single exposure

No data available.

Specific target organ toxicity - repeated exposure

No data available.

Aspiration hazard

No data available.

Additional Information

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SECTION 12: ECOLOGICAL INFORMATION**12.1. Toxicity**

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

Toxicity to fish

LC50 (Danio rerio (zebra fish)): 880 mg/l

Exposure time: 48h

Test Type: static test

Method: OECD Test Guideline 203 or Equivalent

Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 1200 mg/l

Exposure time: 24h

Toxicity to algae

IC50 (Pseudokirchneriella subcapitata (green algae)): 17,4 mg/l

End point: Growth rate inhibition

Exposure time: 72 h

Test Type: static test

Method: OECD Test Guideline 201 or Equivalent

Toxicity to bacteria

EC50 (Bacteria): 310 mg/l

End point: Respiration rates.

Exposure time: 0,5 h

12.2. Persistence and degradability

Not readily biodegradable.

Remarks: Material is inherently biodegradable (reaches > 20% biodegradation in OECD test(s) for inherent biodegradability).

Biodegradation: < 0.1 %

Exposure time: 28 d

Method: OECD Test Guideline 301D or Equivalent

10-day Window: Fail

Biodegradation: 24 %
 Exposure time: 5 d
 Method: GSF Activated Sludge Test
 10-day Window: Fail

12.3. Bioaccumulative potential

Bioaccumulation
 Species: Fish
 Bioconcentration factor (BCF): 1
 Method: Measured

Partition coefficient: octanol/water
 log Pow: 0.162
 Method: OECD Test Guideline 107
 Remarks: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

12.4. Mobility in soil

Distribution among environmental compartments
 Koc: 19
 Method: Estimated.
 Remarks: Potential for mobility in soil is very high (Koc between 0 and 50).

12.5. Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6. Other adverse effects

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SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: TRANSPORT INFORMATION

	ADR/RID	IMDG/IMO	IATA
14.1 UN Number	UN2842	UN2842	UN2842
14.2 UN proper shipping name	NITROETHANE	NITROETHANE	NITROETHANE
14.3 Transport hazard class(es)	3	3	3
14.4 Packing group	III	III	III
14.5 Environmental hazards	No	No	No
14.6 Special precautions for user	D/E	EmS Code: F-E, S-D	No

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	IECSC	AICS	KECI
Nitroethane	201-188-9	-		x	x	-	x	x	x	x	x

x - is on the list

15.2. Chemical safety assessment
OSHA Hazards

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

Flammable liquid, Harmful by ingestion.

EPCRA - Emergency Planning and Community Right-to-Know Act
SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312

Hazards Fire

Hazard Acute Health Hazard

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61). This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F). This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCOMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A. This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3. This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Nitroethane	x	x	x	-	x

SECTION 16: OTHER INFORMATION
Full text:

EINECS - European Inventory of Existing Commercial Chemical Substances

ELINCS - European List of Notified Chemical Substances

NLP - No-longer Polymers

TSCA - Toxic Substances Control Act

DSL - Domestic Substances List

NDSL - Non-Domestic Substances List

PICCS - Philippine Inventory of Chemicals and Chemical Substances

ENCS - Japanese Existing and New Chemical Substances Inventory

IECSC - The Inventory of Existing Chemical Substance in China

AICS - Australian Inventory of Chemical Substances

KECI - Korea Existing Chemicals Inventory