

# SAFETY DATA SHEET

Version 1 of 1 • Print date 27.06.2023

## 021NU Ethanol 96.2%

### 1. SUBSTANCE AND COMPANY IDENTIFICATION

**Substance Identification:**

**Synonym**

**Recommended use:**

**Restriction on use:**

**Supplier:**

**Emergency Telephone Numbers:**

Natural Undenatured Ethanol 96.2%

Ethanol 96.2

Manufacturing medical devices

Emulsifier for cosmetics

Preservative

Sterilization and disinfectant

Do not use for products in contact with foodstuff.

Do not use for private purposes.

iSolvents

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Rapid Spill Response 0800172743

### 2. HAZARD IDENTIFICATION

**Classification according to SANS10228**

| Hazard class                      | Category | Hazard class and category | Hazard statement |
|-----------------------------------|----------|---------------------------|------------------|
| Flammable liquid                  | 2        | Flammable Liquid 2        | H225             |
| Serious eye damage/eye irritation | 2        | Eye Irritant 2            | H319             |

**The most important adverse physical hazard, human health hazard and environmental hazard**

The product is combustible and can be ignited by potential ignition sources

The product is toxic when taken into the body

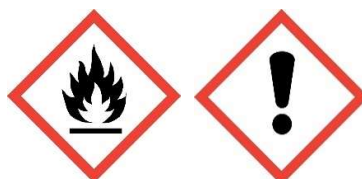
**Label elements according to the Global Harmonized System**

**Signal word**

**Danger**

**Pictograms**

GHS02, GHS08



### **Hazard statements**

H225 Highly flammable liquid and vapour  
H319 Causes serious eye irritation

### **Precautionary statements**

#### **Prevention statements**

P202 Do not handle until all safety precautions have been read and understood  
P210 Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking  
P233 Keep container tightly closed

#### **Response statements**

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P308+P313 IF exposed or concerned: Get medical advice / attention

## **3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Substance      | Chemical identity | Common name   | EC-No     | CAS-No  | Index-No     | Reach Reg. No         |
|----------------|-------------------|---------------|-----------|---------|--------------|-----------------------|
| 1) 100% volume | Ethanol           | Grain Alcohol | 200-578-6 | 64-17-5 | 603-002-00-5 | 01-2119457610-43-xxxx |

## **4. FIRST AID**

### **Eye Contact**

Immediately irrigate with clean, fresh water whilst holding the eyelids apart, for at least 10 minutes. If eye irritation persists consult an ophthalmologist.

### **Inhalation**

Provide fresh air. If the person is not breathing give artificial respiration if possible. In cases of doubt or if symptoms persist seek medical advice.

### **Ingestion**

Do not induce vomiting. Rinse the mouth and give copious amount of water to drink. Seek medical attention.

### **Notable symptoms, acute and delayed**

Irritation, Nausea, Vomiting, Abdominal pain, Breathing difficulties, Vertigo, Drowsiness, Narcosis, Loss of righting reflex, and ataxia

### **Further medical remarks**

No known systemic effects. No specific antidote treatment. The only delayed effect can be local tissue damage.

## **5. FIRE FIGHTING**

### **Extinguishing media**

Suitable extinguishing media

Class B fire extinguishers, carbon dioxide (CO<sub>2</sub>) fire extinguishers, dry extinguishing powder, alcohol resistant foam, water spray.

Unsuitable extinguishing media

Water jet

**Special hazards arising from the substance**

Combustible. In the case of insufficient ventilation it may form explosive vapour mixtures with the air. Vapours are heavier than air so it spreads along the floors. Do not allow run-off into trenches, conduits and shafts. Pay attention to flashback.

**Special protective equipment and precautions for fire-fighters**

In the case of fire or explosions do not breathe in the fumes. Fight fire with the normal precautions from a reasonable distance. Wear self-contained breathing apparatus and protective clothing.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment, and emergency procedures:**

For non-emergency personnel  
Avoid contact with skin, eyes and clothes. Do not breathe in vapour or spray.  
Avoid sources of ignition.

**Environmental precautions:**

Keep away from drains, surface, and ground water. Avoid subsoil penetration.  
Danger of explosion.

**Methods and material for containment and cleaning up:**

1. Wear full protective clothing
2. Contain a spill by covering drains
3. Absorb with liquid-binding material like sand or universal binding agents that are inert (sand, silica gel, acid binder sawdust).
4. Place spillage in appropriate disposal container
5. Ventilate affected area

Neutralizing chemicals: alcohol-resistant foam, dry powder and water.

## 7. HANDLING AND STORAGE

**Precautions for safe handling:**

**Measures to prevent fire as well as aerosol generation**

Work under hood. Provide sufficient ventilation. Keep away from sources of ignition. No smoking. Take precautionary measures against static discharge. Due to danger of explosion always prevent leakage of vapours into ditches.

**Advice on general occupational hygiene**

Immediately change contaminated clothing. Wash hands before breaks and after work. Keep away from food, drink and animal feed when handling.  
Avoid 40°C and freezing.

**Conditions for safe storage, including incompatibilities:**

**Safe storage**

Store in a well-ventilated place. Use local and general ventilation. Keep container tightly closed. Protect from sunlight.

|                                     |                                            |
|-------------------------------------|--------------------------------------------|
| Storage temperature                 | Between 2-8°C                              |
| Incompatible substances or mixtures | Storage class 3 – do not store with metals |

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT

### Control parameters

| Occupational Exposure Limit Values |               |         |                             |                                  |
|------------------------------------|---------------|---------|-----------------------------|----------------------------------|
| Country                            | Name of agent | CAS No  | Time Weighted Average (ppm) | Short-term Exposure Limits (ppm) |
| RSA                                | Ethanol       | 64-17-5 | 1000                        | 1000                             |

TWA: Time-weighted average (long-term exposure limit) measured in relation to a reference period of 8 hours.  
 STEL: Short-term exposure limit above which exposure should not occur within a 15-minute period.

### Individual protection measures

|                           |                                                                                                                                                                                                                                                                         |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Protective equipment      | <p>Eye protection: safety goggles with side protection</p> <p>Skin protection: suitable gloves made out of butyl rubber of 0.7mm thickness</p> <p>Wear flame retardant protective clothing</p> <p>Respiratory protection: Not required for normal conditions of use</p> |
| Other protection measures | Take recovery periods for skin regeneration if the skin is damaged. Use creams as a barrier to exposure                                                                                                                                                                 |

|                                       |                                         |
|---------------------------------------|-----------------------------------------|
| <b>Environmental exposure Control</b> | Keep away from drains and ground water. |
|---------------------------------------|-----------------------------------------|

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

|                                         |                                    |
|-----------------------------------------|------------------------------------|
| Physical State                          | Liquid at 20°C, 1,013 hPa          |
| Colour                                  | Colourless                         |
| Odour                                   | Characteristic Sanitizer           |
| pH                                      | 7 (20°C)                           |
| Melting point / freezing point          | -115°C                             |
| Initial boiling point and boiling range | 77°C - 80°C at 1.013 hPa           |
| Flash point                             | 12°C (closed cup)                  |
| Evaporation rate                        | 2.5 – 2.83 times higher than water |

|                                  |                                                  |
|----------------------------------|--------------------------------------------------|
| Flammability                     | Flammable liquid in accordance with GHS criteria |
| Upper and lower explosive limits | 27,7 vol% (UEL) and 3,1 vol% (LEL)               |
| Vapour pressure                  | 100 hPa at 37.7°C                                |
| Vapour density                   | Heavier than air                                 |
| Density                          | 0.789 kg/dm <sup>3</sup> at 20°C                 |
| Partition coefficient            | -0,31 (log value)                                |
| Auto-ignition temperature        | 360°C                                            |
| Decomposition temperature        | 975 – 1400°C                                     |
| Viscosity                        | 1.1 cP at 25°C                                   |

## 10. STABILITY AND REACTIVITY

|                                           |                                                                                                                                                                            |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reactivity</b>                         | It's a reactive substance but stable under normal conditions. There is risk of ignition, especially if heated. Vapours may form explosive mixtures with air and aluminium. |
| <b>Chemical stability</b>                 | The material is stable under normal temperature and pressure, in ambient, anticipated storage and handling conditions.                                                     |
| <b>Possibility of hazardous reactions</b> | Violently reacts with strong oxidisers like Alkali metals, Alkaline Earth metals.                                                                                          |
| <b>Conditions to avoid</b>                | Keep away from heat, hot surfaces, sparks and open flames. No smoking                                                                                                      |
| <b>Incompatible materials</b>             | Strong oxidizing agents                                                                                                                                                    |
| <b>Hazardous decomposition products</b>   | Carbon monoxide and Carbon dioxide                                                                                                                                         |

## 11. TOXICOLOGY

### Hazard classification according to GHS

|                       |                                          |
|-----------------------|------------------------------------------|
| <b>Acute toxicity</b> | Shall not be classified as acutely toxic |
|-----------------------|------------------------------------------|

| Ethanol Toxicity  |                          |
|-------------------|--------------------------|
| Exposure route    | Toxicity value           |
| Oral              | 10.47mg per kg           |
| Vapour inhalation | 124,7mg every four hours |

### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

### Serious eye damage/eye irritation

Causes serious eye irritation

#### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser

#### Germ cell mutagenicity

Suspected of causing genetic defects

#### Carcinogenicity

Presumed to have carcinogenic potential for humans

#### Reproductive toxicity

Shall not be classified as a reproductive toxicant

#### Single exposure for specific target organ

May cause respiratory irritation

#### Repeated exposure for specific target organ

Shall not be classified as a specific target organ toxicant for repeated exposure

#### Aspiration hazard

Shall not be classified as presenting an aspiration hazard

#### Endocrine disrupting properties

None

#### Symptoms related to the physical, chemical and toxicological characteristics

|                     |                                                                                                                                        |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>If swallowed</b> | Vomiting, abdominal pain, nausea, causes damage to liver through prolonged or repeated swallowing, loss of righting reflex and ataxia. |
| <b>If in eyes</b>   | Causes serious eye irritation                                                                                                          |
| <b>If inhaled</b>   | Drowsiness, narcosis, vertigo, breathing difficulties and inebriation                                                                  |
| <b>If on skin</b>   | Prolonged or repeated skin contact may cause removal of natural fat from the skin, causing skin inflammation and dermatitis.           |

## 12. ECOLOGY

#### Toxicity classification according to GHS

##### Toxicity

Shall not be classified as hazardous to the aquatic environment

#### Aquatic toxicity of Ethanol

| Toxicity value   | Species               | Exposure time |
|------------------|-----------------------|---------------|
| 15.4mg per litre | fish                  | 96 hours      |
| 10mg per litre   | Aquatic invertebrates | 48 hours      |
| 22mg per litre   | algae                 | 96 hours      |

#### Persistence and degradability

The substance is readily biodegradable

#### Bio-accumulative potential

It does not significantly accumulate in organisms

#### Mobility in soil

No significant data on this

Endocrine disrupting properties

None

### 13. DISPOSAL CONSIDERATIONS

#### Waste residues

The material, and its waste residues, and its container must be disposed of as hazardous waste in accordance with SANS10234.

#### Safe Handling

Do not empty into drains. Contain in a High-Density Poly-Ethylene (HDPE) plastic drum for disposal. Wear Personal Protective Equipment when handling and disposing the waste. Product waste must be segregated and handled separately by local and national waste management facilities.

#### Methods of disposal

The waste drums must be given a serial number to identify it, its location, and its contents. Product waste can be landfilled or treated.

#### Contaminated packaging

Dispose of with the waste.

### 14. TRANSPORT

#### Road, sea and air shipping codes

ADRRID – transport of dangerous goods by road

IMDG-Code – International Maritime Dangerous Goods for Marine environment

ICAO-TI – International Civil Aviation Organization

#### Ethanol

#### UN number or ID number

ADRIDD

IMDG-Code

ICAO-TI

UN1170

UN1170

UN1170

#### UN proper shipping name

ADRRID

IMDG-Code

ICAO-TI

ETHANOL

ETHANOL

ethanol

#### Transport hazard class(es)

ADRRID

IMDG-Code

ICAO-TI

3

3

3

#### Packaging group

ADRRID

IMDG-Code

ICAO-TI

II

II

II

#### Danger label(s)



## 15. REGULATORY INFORMATION

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

Regulatory reference

SANS 10234; SANS 11014; SANS 10228; SANS 10229; SANS10231/2/3;  
Occupational Health and Safety Act 85 of 1993; National Road Traffic Act 93  
of 1996

## 16. OTHER

Labelling according to SA directives.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release, and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.

Issue date: 24/01/2024

Revision date: 23/01/2027

### Full text of H-statements

|      |                                     |
|------|-------------------------------------|
| H225 | Highly flammable liquid and vapour. |
| H319 | Causes serious eye irritation       |