SECTION 1: Identification

1.1. GHS Product identifier

Product form : Substance
Trade name : ÁCIDO NÍTRICO CONCENTRADO 98-99%
Product code : 106.01.0; 106.64.5; 122.64.3

1.2. Other means of identification

Other means of identification : CONCENTRATED NITRIC ACID 98-99%

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Metallurgy, pickling, surface treatment, laboratory reagents, rubber, explosives, organic synthesis, photoengraving, electroplating, among others.
Restrictions on use : This product should not be used in applications other than those mentioned above without first consulting the supplier.

1.4. Supplier's details

USIQUÍMICA DO BRASIL LTDA
Rua da Lagoa, 431 – Cumbica – Guarulhos – SP
Telefone: (11) 3821-7000 – Tronco chave

1.5. Emergency phone number

Emergency number : (0800) 0111-767 - (0800) 7071-767 SUATRANS

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification according to GHS BR (ABNT NBR 14725: 2023)

Acute toxicity (oral), Category 4
Acute toxicity (dermal), Category 4
Acute toxicity (inhalation:vapour) Category 1
Skin corrosion/irritation, Category 1
Serious eye damage/eye irritation, Category 1

2.2. GHS Label elements, including precautionary statements

GHS BR labelling

Hazard pictograms (GHS BR) :



Signal word (GHS BR) : Danger
Hazard statements (GHS BR) : H302+H312 - Harmful if swallowed or in contact with skin
H314 - Causes severe skin burns and eye damage
H330 - Fatal if inhaled

Precautionary statements (GHS BR)
Prevention : P260 - Do not breathe dust, fume, gas, mist, vapours or spray.
P264 - Wash hands, forearms and face thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves, protective clothing, eye protection, face protection and hearing protection.
P284 - Wear respiratory protection.

Response : P301+P312 - IF SWALLOWED: Call a POISON CENTER or a doctor if you feel unwell.
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or a doctor.
P312 - Call a POISON CENTER or a doctor if you feel unwell.
P320 - Specific treatment is urgent (see supplemental first aid instruction on this label).
P321 - Specific treatment (see supplemental first aid instruction on this label).
P330 - Rinse mouth.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P363 - Wash contaminated clothing before reuse.

Storage : P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.

Disposal : P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and international regulations.

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : ÁCIDO NÍTRICO CONCENTRADO 98-99%

Name	GHS Product identifier	%	Classification according to GHS BR (ABNT NBR 14725: 2023)
NITRIC ACID	CAS-No.: 7697-37-2	98 – 99	Ox. Liq. 2, H272 Acute Tox. 1 (Inhalation:vapour), H330 Skin Corr. 1A, H314 Eye Dam. 1, H318

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : Seek medical attention immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. Immediately call a POISON CENTER/doctor.

First-aid measures after skin contact : After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Do not remove clothing if it sticks to the skin. Be careful, the product may remain trapped under clothing, footwear or a wrist-watch.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

First-aid measures after ingestion : If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting because of corrosive effects.

Self protection of the first-aider : First-aiders should pay attention to their own protection and use the recommended personal protective equipment (see section 8).

4.2. Most important symptoms and effects, acute and delayed

Symptoms/effects : Fatal if inhaled. Swallowing a small quantity of this material presents some health hazard. Causes severe skin burns and eye damage.

Symptoms/effects after inhalation : May cause shortness of breath, tightness of the chest, a sore throat and cough. May cause irritation to the respiratory tract, sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing.

Symptoms/effects after skin contact : Harmful in contact with skin. Highly corrosive to skin. Causes severe burns. irritation (itching, redness, blistering).

Symptoms/effects after eye contact : Causes serious eye burns. May cause destruction of eye tissue. Causes serious eye damage. stinging. redness, itching, tears.

Symptoms/effects after ingestion : Harmful if swallowed. Ingestion may cause nausea and vomiting. Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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

Notes to physician : Treat symptomatically

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media : Water spray. dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2).

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : In case of fire and/or explosion do not breathe fumes. In case of fire, corrosive gases come free.

Explosion hazard : No direct explosion hazard.

5.3. Special protective actions for fire-fighters

Firefighting instructions : Fight fire with normal precautions from a reasonable distance. Do not enter fire area without proper protective equipment, including respiratory protection.

Protection during firefighting : Use self-contained breathing apparatus and chemically protective clothing.

Other information : On exposure to high temperature, may decompose, releasing toxic gases. In case of fire, corrosive and harmful gases come free.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid contact with skin and eyes. Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Evacuate area. Only qualified personnel equipped with suitable protective equipment may intervene. Notify fire brigade and environmental authorities.

6.1.2. For emergency responders

Protective equipment : Self-contained breathing apparatus. Total impervious protective suits, gloves, and boots must be worn to prevent any contact with the product. Corrosionproof suit. Equip cleanup crew with proper protection.

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Do not allow to enter drains or water courses. Notify authorities if product enters sewers or public waters.

6.3. Methods and materials for containment and cleaning up

For containment : Stop leak without risks if possible. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Collect leaking and spilled liquid in sealable containers as far as possible. Absorb spillage to prevent material damage. Clean contaminated surfaces with an excess of water.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Do not eat, drink or smoke when using this product. When heated, material emits highly irritating vapours, affecting the eyes. Keep only in original container. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment.

Hygiene measures : Take off immediately all contaminated clothing and wash it before reuse. Always wash hands after handling the product. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Store locked up.

Storage conditions : Store in a well-ventilated place. Keep container tightly closed. Keep cool. Protect from sunlight.

Packaging materials : Always store product in container of same material as original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

8.3. Individual protection measures

Personal protective equipment:
Corrosionproof clothing.

Hand protection:
Protective gloves made of PVC. Nitrile rubber gloves

Eye protection:
Wear closed safety glasses

Skin and body protection:
Long sleeved protective clothing. Chemical resistant apron. Wear impervious rubber safety shoes

Respiratory protection:
Approved supplied air respirator

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Smoking liquid
Colour	:	Colorless to light brown. The vapors are generally reddish-brown.
Odour	:	Characteristic asphyxiating odor.
Odour threshold	:	Not available
pH	:	< 1
Melting point	:	Not available
Freezing point	:	Not available
Boiling point	:	117 °C
Flash point	:	Not available
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
Flammability	:	Not available
Vapour pressure	:	6,7 – 7,9 mm Hg a 20 °C (55% - 50% HNO3).
Vapour pressure at 50°C	:	Not available
Relative vapour density at 20°C	:	Not available
Relative density	:	Not available
Density	:	1.33 g/cm³ 20°C

Solubility	:	Water-soluble (heat release).
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Viscosity, kinematic	:	Not available
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Particle size	:	Not applicable
Particle size distribution	:	Not applicable
Particle shape	:	Not applicable
Particle aspect ratio	:	Not applicable
Particle specific surface area	:	Not applicable

9.2. Data relevant with regard to physical hazard classes

Additional information : No additional information available

9.3. Further safety characteristics

No additional information available

SECTION 10: Stability and reactivity

Chemical stability	:	Stable under normal conditions of use.
Conditions to avoid	:	Extremely high or low temperatures. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Hazardous decomposition products	:	May liberate toxic gases. Inhalation or contact with substance or decomposition products could cause severe injury or death. On exposure to high temperature, may decompose, releasing corrosive gases.
Incompatible materials	:	It can react violently with organic fuels and strong bases, and oxidize materials such as wood and powdered metals. It is corrosive to paper and clothing, and reacts with water, releasing heat and toxic fumes.
Possibility of hazardous reactions	:	Its reactions with compounds such as alcohols, amines, ammonia, aldehydes, hydrazines, acetic anhydride, ketones, flammable substances, alkali metals, sulfuric acid, and hydrocarbons can be exothermic and explosive. Nitric acid can react violently with organic fuels and strong bases, and oxidize materials such as wood and powdered metals. It is corrosive to paper and clothing, and reacts with water, releasing heat and toxic fumes.
Reactivity	:	The product is non-reactive under normal conditions of use, storage and transport.
Handling temperature	:	No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Harmful if swallowed.
Acute toxicity (dermal)	:	Harmful in contact with skin.
Acute toxicity (inhalation)	:	Inhalation:vapour: Fatal if inhaled.

ÁCIDO NÍTRICO CONCENTRADO 98-99%	
LD50 oral rat	900 mg/kg
LD50 dermal rat	1449 mg/kg
LC50 Inhalation - Rat	554 ppmv

Skin corrosion/irritation : Causes severe skin burns.
pH: < 1

Serious eye damage/irritation	:	Causes serious eye damage. pH: < 1
Respiratory or skin sensitisation	:	Not available
Germ cell mutagenicity	:	Not available
Carcinogenicity	:	Not available
Reproductive toxicity	:	Not available
STOT-single exposure	:	Not available
STOT-repeated exposure	:	Not available
Aspiration hazard	:	Not available

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

Symptoms/effects	:	Fatal if inhaled. Swallowing a small quantity of this material presents some health hazard. Causes severe skin burns and eye damage.
Symptoms/effects after inhalation	:	May cause shortness of breath, tightness of the chest, a sore throat and cough. May cause irritation to the respiratory tract, sneezing, coughing, burning sensation of throat with constricting sensation of the larynx and difficulty in breathing.
Symptoms/effects after skin contact	:	Harmful in contact with skin. Highly corrosive to skin. Causes severe burns. irritation (itching, redness, blistering).
Symptoms/effects after eye contact	:	Causes serious eye burns. May cause destruction of eye tissue. Causes serious eye damage. stinging. redness, itching, tears.
Symptoms/effects after ingestion	:	Harmful if swallowed. Ingestion may cause nausea and vomiting. Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	:	The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short–term (acute)	:	Not available
Hazardous to the aquatic environment, long–term (chronic)	:	Not available

12.2. Persistence and degradability

ÁCIDO NÍTRICO CONCENTRADO 98-99%	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Hazardous to the ozone layer	:	Not available
Other adverse effects	:	May cause pH changes in aqueous ecological systems. Before neutralisation, the product may represent a danger to aquatic organisms.

SECTION 13: Disposal considerations

Waste treatment methods	:	Must follow special treatment according to local regulation.
Sewage disposal recommendations	:	Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	:	Disposal must be done according to official regulations.
Additional information	:	Do not re-use empty containers.

SECTION 14: Transport information

14.1 National and international Regulations

Overland transport

UN-No. (ANTT)	:	2031
Proper Shipping Name (ANTT)	:	ÁCIDO NÍTRICO
Class (ANTT)	:	8
Subsidiary risk (ANTT)	:	5.1
Risk Number (ANTT)	:	885
Packing group (ANTT)	:	I
Dangerous for the environment	:	No

Transport by sea

UN-No. (IMDG)	:	2031
Proper Shipping Name (IMDG)	:	NITRIC ACID
Class (IMDG)	:	8
Subsidiary hazard (IMDG)	:	5.1
Packing group (IMDG)	:	I
EmS-No. (Fire)	:	F-A
EmS-No. (Spillage)	:	S-Q
Dangerous for the environment	:	No

Air transport

UN-No. (IATA)	:	2031
Proper Shipping Name (IATA)	:	Nitric acid
Class (IATA)	:	8
Subsidiary hazards (IATA)	:	5.1
Packing group (IATA)	:	I
Dangerous for the environment	:	No

14.2 Other information

No additional information available

SECTION 15: Regulatory information

15.1. National regulations

Brazil Local Regulations : Standard ABNT NBR 14725.
Federal Decree no. 10.088, of 5 November 2019 – Promulgates Convention no. 170 of the ILO, relating to Safety in the Use of Chemicals in the Workplace, ratified by the Federative Republic of Brazil.
Ministerial Order no. 2.770, of 5 September 2022 – Approves the new wording of Regulatory Standard No. 26
Federal Decree no. 96.044, of 18 May 1988 - Approves Regulations for Road Transportation of Hazardous Materials
Resolution no. 5998, of 03 November 2022, updates the regulation for road transport of dangerous goods, approves its Complementary Instructions, and other measures.
Law No. 12.305, of August 2, 2010 (National Policy on Solid Waste)

SECTION 16: Other information

Safety Data Sheet (SDS), Brazil

This information is based on our current knowledge and is intended to describe the product solely with regard to health, safety, and environmental requirements. Therefore, it should not be construed as a guarantee of any specific product properties.

Prepared by: ViaBrasil Cafasso Consulting on the Transportation of Dangerous Goods

Signed by:

MARIA CAFASSO

Consultant and specialist in SDS preparation

Member of the ABNT CB10 and CB16 committee

REFERENCES:

[ABNT NBR 14725] – Safety Data Sheet (SDS)

[RESOLUTION No. 5998/22 ANTT] National Land Transportation Agency – Updates the Regulation for the Road Transportation of Dangerous Goods, approves its Supplementary Instructions, and contains other provisions.

[NR-26 (MTE)] – Safety Signage.

[HSNO] NEW ZEALAND. HSNO Chemical Classification and Information Database (CCID)

[ECHA] European Union. ECHA European Chemical Agency

[LAND, RAILWAYS, ROADS]: National Land Transport Agency (ANTT);

WATERWAY (SEA, RIVER, LAKE): International Maritime Dangerous Goods Code (IMDG code); Standard 5 of the Directorate of Ports and Coasts of the Ministry of the Navy (DPC): National Waterway Transport Agency (ANTAQ);

AIR: International Civil Aviation Organization - Technical Instructions (ICAO-TI); International Air Transport Association - Dangerous Goods Regulations (IATA-DGFT); National Civil Aviation Agency (ANAC).

*Abbreviations:

NA: Not Applicable

ND: Not Available

OSHA: Occupational Safety and Health Administration

LD50: Lethal dose to 50% of an infected population

LC50: Lethal concentration to 50% of an infected population

CAS: Chemical Summary Service

TLV-TWA: Allowable time-weighted average concentration for an 8-hour workday

TLV-STEL: Short-term exposure limit-maximum allowable concentration for 15 minutes of continuous exposure

ACGIH: An organization of staff from government agencies or educational institutions engaged in occupational safety and health programs.

ACGIH: Develops and publishes exposure limits for hundreds of chemicals and physical agents.

PEL: Maximum allowable concentration of airborne contaminants to which most workers can be repeatedly exposed 8 hours a day, 40 hours a week, during their workday (30 years) without adverse health effects. OSHA: US federal agency with authority to regulate and enforce safety and health regulations for industries and businesses in the US.

IMDG: International Maritime Code for Dangerous Goods – international code for the transportation of hazardous materials by sea.

DMEL: Derived Minimum Effect Level

DNEL: Derived No-Effect Level

PNEC: Predicted No-Effect Concentration.

ILO - International Labor Organization

MTE - Ministry of Labor and Employment