

SAFETY DATA SHEET

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020 Isopropyl Alcohol 99.8%

1. SUBSTANCE AND COMPANY IDENTIFICATION

Substance Identification:

Synonym

Recommended use:

Restriction on use:

Supplier:

Emergency Telephone Numbers:

Isopropyl Alcohol 99.8%

Isopropanol 99.8

Laboratory chemical

Laboratory analytical use

Manufacture of substances

Industrial use

Do not use for products in contact with foodstuff.

Do not use for private purposes.

iSolvents

Plot 62

Kameelfontein

Pretoria

0075

South Africa

Tel +27(0)12 012 5157

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
Specific target organ toxicity – narcotic effects	3	STOT – single exposure 3	H336

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

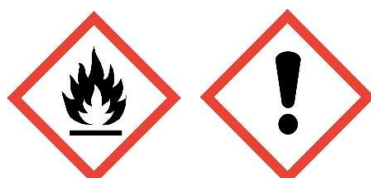
Label elements according to the Global Harmonized System

Signal word

Danger

Pictograms

GHS02,GHS07



Hazard statements

H225	Highly flammable liquid and vapour
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness

Precautionary statements

Prevention statements

P210	Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking
P240+P241+P242+P243	Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use non-sparking tools. Take precautionary measures against static discharge.
P261+P271	Avoid breathing gases and vapours. Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P403+P233+P235	Store in a well-ventilated space. Keep container tightly closed. Keep cool.

Response statements

P303+P361+P353	IF ON SKIN: Take off all contaminated clothing immediately. Rinse skin with water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P319	Get medical help if you feel unwell.
P501	Dispose of contents and container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Chemical identity	Common name	EC-No	CAS-No	Index-No	Reach Reg. No
1) 99.8% volume	Propan-2-ol	Isopropyl Alcohol	200-661-7	67-63-0	603-117-00-0	01-2119457558-25-xxxx
2) 0.2% Volume	H2O	Water	231-791-2	7732-18-5	-	-

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.

Skin Contact

Wash off the skin immediately with plenty of water for at least 15 minutes. If skin irritation persists 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, Drowsiness, Narcosis

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 (CO₂) fire extinguishers, dry extinguishing powder, alcohol resistant foam, water spray.

Unsuitable extinguishing media

Water jet

Special hazards arising from the substance

Combustible. Release of carbon oxides. 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.

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:

Advice on safe handling

Work under fume hood. Do not inhale the substance mixture. Avoid generation of vapour/aerosols.

Measures to prevent fire as well as aerosol generation

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

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 15-25°C

Incompatible substances or mixtures

Observe hints for combined storage

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	Isopropyl Alcohol	67-63-0	200	400

TWA: Time-weighted average (long-term exposure limit) measured with 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

Eye protection: safety goggles with side protection

Skin protection: suitable gloves made out of butyl rubber of 0.7mm thickness

Wear flame retardant protective clothing

Respiratory protection: only necessary to wear when the substance forms an aerosol or mist. Then wear an N95 mask or respirator.

Other protection measures

Take recovery periods for skin regeneration if the skin is damaged. Wash hands before breaks and at the end of the day. Use creams as a barrier to exposure

Environmental exposure Control

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 alcoholic
pH	7 (20°C)
Melting point / freezing point	-89°C
Initial boiling point and boiling range	82 - 83°C at 1.013 hPa
Flash point	12°C (closed cup)
Evaporation rate	2.2 – 2.6 times higher than water
Flammability	Flammable liquid in accordance with GHS criteria
Upper and lower explosive limits	13,4 vol% (UEL) and 2,0 vol% (LEL)
Vapour pressure	43 hPa at 20°C
Vapour density	Heavier than air
Density	0.789 kg/dm ³ at 20°C
Partition coefficient	0.05 (log value)
Auto-ignition temperature	425°C
Decomposition temperature	Not Relevant
Viscosity	2,2 mPa s at 20°C

10. STABILITY AND REACTIVITY

Reactivity	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.
Chemical stability	The material is stable under normal temperature and pressure, in ambient, anticipated storage and handling conditions.
Possibility of hazardous reactions	Exothermic reaction with strong oxidizers, Iron, Nitric acid, Strong acids, Aldehydes, Aluminium and Amines. Might explode with chlorates, hydrogen peroxide and phosgene.
Conditions to avoid	Keep away from heat, hot surfaces, sparks and open flames. No smoking
Incompatible materials	Plastic and rubber
Hazardous decomposition products	Peroxides

11. TOXICOLOGY

Hazard classification according to GHS

Acute toxicity

Shall not be classified as acutely toxic

Isopropyl Alcohol Toxicity	
Exposure route	Toxicity value
Oral	5.045mg per kg
Vapour inhalation	37.5mg every 8 hours
Dermal toxicity	12.800mg per kg

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

Shall not be classified as germ cell mutagen

Carcinogenicity

Shall not be classified as carcinogenic

Reproductive toxicity

Shall not be classified as a reproductive toxicant

Single exposure for specific target organ

May cause drowsiness or dizziness

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	
If swallowed	Vomiting and nausea.
If in eyes	Causes serious eye irritation
If inhaled	Dizziness, fatigue, and narcosis.
If on skin	Prolonged or repeated skin contact may cause skin dryness and cracking

12. ECOLOGY

Toxicity classification according to GHS

Toxicity Shall not be classified as hazardous to the aquatic environment

Aquatic toxicity of Isopropyl Alcohol		
Toxicity value	Species	Exposure time
9.6mg per litre	fish	96 hours
13.3mg per litre	Aquatic invertebrates	48 hours
1.0mg per litre	algae	72 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 treatment methods The material and containers must be disposed of in accordance with local and national regulations.

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

Isopropyl Alcohol (IPA)

UN number or ID number

ADRIDD	UN1219
IMDG-Code	UN1219
ICAO-TI	UN1219

UN proper shipping name

ADRIDD	ISOPROPANOL
IMDG-Code	ISOPROPANOL
ICAO-TI	isopropanol

Transport hazard class(es)

ADRIDD	3
IMDG-Code	3
ICAO-TI	3

Packaging group

ADRIDD	II
IMDG-Code	II
ICAO-TI	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
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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.
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