According to Canadian Hazardous Products Regulations and WHMIS 2015

Initial preparation date: 12.12.2017

IsoPentyl Alcohol

SECTION 1: Identification

Product identifier

Product name: IsoPentyl Alcohol Product code: S25710

Recommended use of the product and restriction on use

Relevant identified uses: Not determined or not applicable. Uses advised against: Not determined or not applicable. Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer: Supplier:

AquaPhoenix Scientific 860 Gitts Run Road	Fisher Science Education 6771 Silver Crest Road
Hanover	Nazareth
PA 17331	PA 18064
(717) 632-1291	800 955-1177

Emergency telephone number: United States

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazard identification

GHS classification:

Flammable liquids, category 3 Acute toxicity (inhalation), category 4 Skin irritation, category 2 Eye irritation, category 2A Specific target organ toxicity - single exposure, category 3, respiratory irritation

Label elements

Hazard pictograms:



Signal word: Warning

Hazard statements:

H226 Flammable liquid and vapor H332 Harmful if inhaled H315 Causes skin irritation H319 Causes serious eye irritation H335 May cause respiratory irritation

Precautionary statements:

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P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking P233 Keep container tightly closed P240 Ground/bond container and receiving equipment P241 Use explosion-proof electrical/ventilating/light/equipment P242 Use only non-sparking tools P243 Take precautionary measures against static discharge P280 Wear protective gloves/protective clothing/eye protection/face protection P261 Avoid breathing dust/fume/gas/mist/vapors/spray P271 Use only outdoors or in a well-ventilated area P264 Wash skin thoroughly after handling P303+P361+P353 If on skin (or hair): Immediately remove/take off all contaminated clothing. Rinse skin with water/shower P370+P378 In case of fire: Use agents recommended in section 5 for extinction P304+P340+P312 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell P321 Specific treatment (see supplemental first aid instructions on this label). P362 Take off contaminated clothing and wash before reuse P302+P352 If on skin: Wash with soap and water P332+P313 If skin irritation occurs: Get medical advice/attention P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing P405 Store locked up P403+P233 Store in a well ventilated place. Keep container tightly closed P501 Dispose of contents and container as instructed in Section 13

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 123-51-3	3-Methylbutan-1-ol	100

Additional Information: None

SECTION 4: First-aid measures

Description of first-aid measures

General notes:

Not determined or not available.

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position Maintain an unobstructed airway Get medical advice/attention if you feel unwell Move to fresh air Call a POISON CONTROL CENTER or seek medical attention if you feel unwell

After skin contact:

Rinse affected area with soap and water If symptoms develop or persist, seek medical attention Wash affected area with soap and water

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Seek medical attention if symptoms develop or persist

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes If symptoms develop or persist, seek medical attention Remove contact lens(es) if able to do so during rinsing Seek medical attention if irritation persists or if concerned

After ingestion:

Rinse mouth thoroughly Seek medical attention if irritation, discomfort, or vomiting persists

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not available.

Delayed symptoms and effects:

Not determined or not available.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not available.

Notes for the doctor:

Not determined or not available.

SECTION 5: Fire-fighting measures

Extinguishing media

Suitable extinguishing media:

Use Water (fog only), dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors Vapors can flow to distant ignition sources and flashback Liquid is volatile and may generate an explosive atmosphere

Special protective equipment for firefighters:

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:

Shut off sources of ignition Carbon monoxide and carbon dioxide may form upon combustion Heating causes a rise in pressure, risk of bursting and combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation Ensure air handling systems are operational Wear protective eye wear, gloves and clothing Beware of vapors accumulating to form explosive concentrations Vapors can accumulate in low areas

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Environmental precautions:

Should not be released into the environment Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing Use spark-proof tools and explosion-proof equipment Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay), acid binders, universal binders) Dispose of contents / container in accordance with local regulations

Reference to other sections:

Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

Use only with adequate ventilation. Avoid breathing mist or vapor. Do not eat, drink, smoke or use personal products when handling chemical substances. Take precautionary measures against electrostatic discharges. Use only non-sparking tools.

Conditions for safe storage, including any incompatibilities:

Keep container tightly sealed. Protect from freezing and physical damage. Store in a cool, well-ventilated area. Store away from all ignition sources (open flames, hot surfaces, direct sunlight, spark sources).

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	3-Methylbutan-1-ol	123-51-3	ACGIH TLV TWA 100 ppm
	3-Methylbutan-1-ol	123-51-3	ACGIH TLV STEL 125 ppm
United States (OSHA)	3-Methylbutan-1-ol	123-51-3	OSHA PEL TWA 100 ppm
	3-Methylbutan-1-ol	123-51-3	OSHA PEL TWA 360.0 mg/m ³

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. Biological monitoring may also be appropriate for some substances.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

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Use explosion-proof ventilation equipment.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.

Wear appropriate clothing to prevent any possibility of skin contact.

Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

General hygienic measures:

Avoid contact with skin, eyes and clothing. Wash hands before breaks and at the end of work. Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Annonrance (physical state scler);	Clear, colorless liguid
Appearance (physical state, color):	
Odor:	Characteristic
Odor threshold:	Not determined or not available.
pH-value:	7 at 25g/L
Melting/Freezing point:	-117°C
Boiling point/range:	130°C
Flash point:	43°C
Evaporation rate:	Not determined or not available.
Flammability (solid, gaseous):	Flammable liquid
Explosion limit upper:	8 vol.%
Explosion limit lower:	1.2 vol. %
Vapor pressure:	3 - 4hPa (2 - 3 mmHg) at 20°C
Vapor density:	3.04 (Air =1)
Density:	Not determined or not available.
Relative density:	0.809 g/cm³ at 25°C
Solubilities:	Soluble in water.
Partition coefficient (n-octanol/water):	log Pow= 1.28
Auto/Self-ignition temperature:	365°C
Decomposition temperature:	Not determined or not available.
Dynamic viscosity:	Not determined or not available.
Kinematic viscosity:	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

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SECTION 10: Stability and reactivity

Reactivity:

Does not react under normal conditions of use and storage.

Chemical stability:

Test for peroxide formation before distillation or evaporation. Test for peroxide formation or discard after 1 year. Stable under recommended storage conditions.

Possibility of hazardous reactions:

None under normal conditions of use and storage.

Conditions to avoid:

Incompatible materials. Heat, flames, and sparks.

Incompatible materials:

Strong oxidizing agents, Acid chlorides, Acid anhydrides, Reducing agents. Fluorine. Oxygen.

Hazardous decomposition products:

Carbon oxides.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Harmful if inhaled

Product data: No data available.

Substance data:

Name	Route	Result
3-Methylbutan-1-ol	inhalation	LC50 - Rat - > 14.0 mg/L - 6 h

Skin corrosion/irritation

Assessment: Causes skin irritation

Product data: No data available.

Substance data:

Name	Result
3-Methylbutan-1-ol	Irritating to the skin.

Serious eye damage/irritation

Assessment: Causes serious eye irritation

Product data: No data available.

Substance data:

Name	Result
3-Methylbutan-1-ol	Corrosive effect on the eyes.

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

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International Agency for Research on Cancer (IARC): None of the ingredients are listed. **National Toxicology Program (NTP):** None of the ingredients are listed.

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: May cause respiratory irritation

Product data: No data available.

Substance data:

Name	Result
3-Methylbutan-1-ol	May cause respiratory tract irritation.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Information on likely routes of exposure: No data available.

Symptoms related to the physical, chemical and toxicological characteristics: No data available.

Other information: No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met. Product data: No data available. Substance data: No data available.

Chronic (long-term) toxicity

Product data: No data available. Substance data: No data available.

Persistence and degradability

Product data: No data available. **Substance data:** No data available.

Bioaccumulative potential

Product data: No data available. **Substance data:** No data available.

Mobility in soil

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Product data: No data available. **Substance data:** No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information

Canadian Transportation of Dangerous Goods (TDG)

UN number	UN1105	
UN proper shipping name	Pentanols	
UN transport hazard class(es)	3	
Packing group		
Environmental hazards	None	
Special precautions for user	None	

International Maritime Dangerous Goods (IMDG)

UN number	UN1105	
UN proper shipping name	Pentanols	
UN transport hazard class(es)	3	Commercial State
Packing group		
Environmental hazards	None	
Special precautions for user	None	

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	UN1105	
UN proper shipping name	Pentanols	
UN transport hazard class(es)	3	Commercian Commercian
Packing group		
Environmental hazards	None	
Special precautions for user	None	

SECTION 15: Regulatory information

Canada regulations

According to Canadian Hazardous Products Regulations and WHMIS 2015

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Domestic substances list (DSL):

123-51-3 3-Methylbutan-1-ol

Non-domestic substances list (NDSL): Not determined.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with the Canadian Hazardous Products Regulations and WHMIS 2015. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal 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, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 2-2-0

HMIS: 2-2-0-X

Initial preparation date: 12.12.2017

End of Safety Data Sheet

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