SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Methyl Isobutyl Ketone (MIBK)
CAS number	108-10-1
Synonyms	Isopropylacetone; Isobutylmethyl ketone; MIBK; isohexanone

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

Identified uses	Laboratory chemicals, solvent

1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids	Category 2
Acute Toxicity, Inhalation	Category 4
Single target organ toxicity - single exposure	Category 3

2.2 GHS Label elements, including precautionary statements

Pictogram 

Signal Word	Danger
Hazard statements	Highly flammable liquid and vapor. Harmful if inhaled. May causes respiratory irritation.
Precautionary statements	Avoid breathing dust/fumes/gas/mist/vapors. Call a POISON CENTER or doctor/physician if you feel unwell. IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water. Keep away from heat, sparks, open flames, and hot surfaces. No smoking. Store in a well-ventilated place. Keep container tightly closed. Wear protective gloves and eye and face protection.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Not information available.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Methyl Isobutyl Ketone	-	108-10-1	100%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	Remove person to fresh air. If signs/symptoms continue, get medical attention. Give oxygen or artificial respiration as needed.
In case of skin contact	Wash skin with soap and copious amounts of water. Seek medical attention.
In case of eye contact	Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.
If swallowed	DO NOT induce vomiting. If vomiting does occur, have victim lean forward to prevent aspiration. Rinse mouth with water. Seek medical attention. Never give anything by mouth to an unconscious indivivdual.

4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media — Use water spray, alchol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media — No information available.

5.2 Specific hazards arising from the substance or mixture

Carbon oxides expected to be the primary hazardous combustion product.

5.3 Special protective equipment and precautions for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Keep unopened containers cool by spraying with water.

5.4 Further information

Flash Point — 18 °C (64 °F)

Autoignition Temperature — 448 °C (840 °F)

Explosion limits

Upper	1.20%
Lower	8.00%
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

NFPA

Health	Flammability	Instability	Physical hazards
1	3	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not inhale vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

6.2 Environmental precautions

Stop leak. Contain spill if possible and safe to do so. Prevent product from entering drains.

6.3 Methods and materials for containment and cleaning up

Contain spill, then collect with an electrically protected vacuum cleaner or by wet-brushing and put the material into a convenient waste disposal container. Keep container closed.

6.4 Reference to other sections

See section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Do not get in skin or in eyes. Do not inhale vapor or mist. Keep away from sources of ignition. No smoking. Take measures to prevent the buildup of electrostatic charge.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a cool, dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Incompatibilities

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Methyl Isobutyl Ketone	TWA	100 ppm 410 mg/m3

US. ACGIH Threshold Limit Values

Component	Type	Value
Methyl Isobutyl Ketone	TWA	50 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Methyl Isobutyl Ketone	STEL	75 ppm

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls
General room or local exhaust ventilation is usually required to meet exposure limit(s). Electrial equipment should be grounded and conformed to applicable electrical code.

Personal protective equipment

Eye/face protection
Use chemical safety goggles and/or a full face shield where splashing is possible. Use equipment approved by appropriate government standards, such a NIOSH (US) or EN166 (EU) Maintain eye wash fountain and quick-drench facilities in work area.

Skin and body protection
Wear impervious, flame retardant, antistatic protective clothing, includibg boots, gloves, lab coat, apron or coveralls, all apropriate, to prevent skin contact.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole mean of protection, use a full-face supplied air respirator. Use respirators and componenets tested and approved under appropriate government standard such a NIOSH (US) or CEN (EU).

Control of environmental exposure
No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless, clear.
Odor	Sweet. Camphor-like.
Odor Threshold	No information available.
pH	No information available.
Freezing Point/Range	-85 °C (-120 °F)
Boiling Point/Range	117 °C (242 °F)
Evaporation Rate	No information available.
Flammability (solid)	No information available.
Flammability or explosive limit	
Upper	1.2 %(V)
Lower	8.0 %(V)
Vapor Pressure	20 hPa (15 mmHg) at 20 °C (68 °F)

Vapor Density	3.46
Density	0.801 g/cm3 at 25 °C (77 °F)
Solubility	Not soluble
Partition coefficient; n-octanol/water	No information available
Autoignition Temp	448 °C (840 °F)
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	C6H12O
Molecular Weight	100.16 g/mol
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information
No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity
No information available.

10.2 Chemical stability
No information available

10.3 Possibility of hazardous reactions
Vapors may form explosive mixture with air.

10.4 Conditions to avoid
Heat, flames, and sparks. Extremes of temperature and direct sunlight. Product reacts with air to form peroxides.

10.5 Incompatible materials
Strong oxidizing agents, strong bases.

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions: Carbon oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methyl Isobutyl Ketone	16.4 mg/m3 (rat)	> 16000 mg/kg (rabbit)	2080 mg/kg (rat)

Skin corrosion/irritation
Skin irritation (rabbit) 24 h

Serious eye damage/eye irritation
Can be irritating to the eyes.

Respiratory or skin sensitization
Can be harmful, causing respiratory tract irritation, if inhaled. Can be harmful, causing irritation, if absorbed through the skin.

Germ cell mutagenicity
No information available

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Methyl Isobutyl Ketone	108-10-1	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure
No information available

Specific target organ toxicity - repeated exposure
No information available

Reproductive toxicity
No information available

Chronic effects
No information available

11.2 Additional Information
Laboratory tests have shown teratogenic effects. Methyl Isobutyl Ketone is teratogenic. Fetal death and developmental abnormalities occurred in the babies of mice that Methyl isobutyl ketone.

SECTION 12: Ecological information

12.1 Toxicity

Product		Species	Test Results
Methyl Isobutyl Ketone	LC50	Leuciscus idus melanotus	480 mg/L
	EC50	Green algae	2000 mg/L

12.2 Persistence and degradability
Biotic/Aerobic

12.3 Bio accumulative potential
No data available

12.4 Mobility in soil
No information available

12.5 Results of PBT and vPvB assessment
No information available

12.6 Endocrine disrupting properties
No information available

12.7 Other adverse effects
No information available

SECTION 13: Disposal considerations

13.1 Waste Disposal 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

DOT (US)

UN-No	UN1245
Proper Shipping Name	METHYL ISOBUTYL KETONE
Hazard Class	3
Packing Group	II

IMDG

UN-No	UN1245
Proper Shipping Name	METHYL ISOBUTYL KETONE
Hazard Class	3
Packing Group	II

IATA

UN-No	UN1245
Proper Shipping Name	METHYL ISOBUTYL KETONE
Hazard Class	3
Packing Group	II

SECTION 15: Regulatory information

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

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification

Not listed

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Listed, Flammable liquid, Irritant, Target organ effect.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

Listed, Acute Health Hazard, Chronic Health Hazard, Fire Hazard

SARA 313 (TRI reporting)

Listed

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed

US state regulations

US. Massachusetts RTK - Substance List

Listed.

US. New Jersey Worker and Community Right-to-Know Act

Listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Listed.

California Proposition 65

Not listed

SECTION 16: Other information

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SECTION 17: Disclaimer

The information provided on 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 a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.