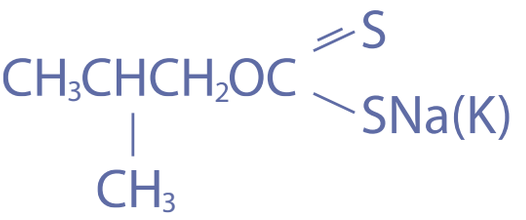

MIBC

Identification of product and company

Identification of the substance

Product name: Methyl isobutyl carbinol

Other names: 4-Methyl-2-pentanol; MIBC; Isobutyl methyl carbinol; 2-Methyl-4-pentanol; 4-Methylpentane-2-ol; 1,3-Dimethylbutanol; Methyl amyl alcohol; Isobutyl methyl methanol

CAS Number: 108-11-2

EC Number: 203-551-7

Molecular formula: C6H14O

Description/Recommended Use: Methyl isobutyl carbinol (MIBC), a high boiling, colourless, stable liquid, is a solvent for ethyl cellulose and certain phenolics as well as many oils, dyes, gums, and natural resins. It is a latent solvent for nitrocellulose. Methyl isobutyl carbinol is miscible with organic solvents, but has only limited solubility in water.

Company/Undertaking Identification

Company name: VictoriaFortress

Address: Unit 2108. CC Wu Build. 308 Hennessy Road Wanchai HONG Kong

Telephone: +852-54892941

Fax: +852-39544488

E-mail: info@vf-hk.com

Http: www.vf-chem.com

For Emergency Assistance, please call 86 24 74570273

Hazards Identification

This material is hazardous according to criteria of NOHSC; HAZARDOUS SUBSTANCE.

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

Risk Phrases: Flammable. Irritating to respiratory system.

Poisons Schedule: None allocated.

Composition/information on ingredients

Name	*CAS#*	*Proportion*
Methyl isobutyl carbinol	108-11-2	99%

First aid measures

Inhalation: Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice

Ingestion: Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek medical advice.

Skin Contact: If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.

Eye Contact: If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes.

Notes to physician: Treat symptomatically

Firefighting measures

Hazards from combustion products: Flammable liquid. Avoid all ignition sources. All potential sources of ignition (open flames, pilot lights, furnaces, spark producing switches and electrical equipment etc) must be eliminated both in and near the work area. Do NOT smoke. May form flammable vapour mixtures with air. Vapour may travel a considerable distance to source of ignition and flash back.

Fire-fighting advice: On burning will emit toxic fumes, including those of oxides of carbon. Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. If safe to do so, remove containers from the path of fire. Keep containers cool with water spray. If safe to do so, remove containers from path of fire. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

Suitable Extinguishing Media: Foam, dry agent (carbon dioxide, dry chemical powder).

Accidental release measure

Shut off all possible sources of ignition. Clear area of all unprotected personnel. Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Use a spark-free shovel. Collect and seal in properly labelled containers or drums for disposal. If contamination of sewers or waterways has occurred advise local emergency services.

Handling and storage

Precautions for safe handling: ***Avoid skin and eye contact and breathing in vapor. All potential sources of ignition (open flames, pilot lights, furnaces, spark producing switches and electrical equipment etc.) must be eliminated both in and near the work area. Do NOT smoke.***

Conditions for safe storage: Store in a cool, dry, well ventilated place and out of direct sunlight. Store away from sources of heat or ignition. Store away from incompatible materials. Keep containers closed when not in use - check regularly for leaks.

Exposure Controls/Personal Protection

Engineering Controls: ***Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Exposure Standards. Vapour heavier than air - prevent concentration in hollows or sumps. DO NOT enter confined spaces where vapor may have collected. If inhalation risk exists: Use with local exhausts ventilation or while wearing organic vapor respirator. Keep containers closed when not in use.***

Personal protective equipment: Orica Personal Protection Guide No. 1, 1998: G - OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES, RESPIRATOR.

Wear overalls, safety glasses and impervious gloves. Use with adequate ventilation. If inhalation risk exists wear organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

Exposure Limits: ***Methyl isobutyl carbinol: 8hr TWA = 104 mg/m3 (25 ppm), 15 min STEL = 167 mg/m3 (40 ppm), Sk***

As published by the National Occupational Health and Safety Commission.

TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

STEL (Short Term Exposure Limit) – the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health or, not cause undue discomfort to, nearly all workers.

`Sk' Notice – absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Physical and Chemical Properties

Physical state: Liquid
Colour: Colourless
Odour: Mild
Molecular Formula: C6H14O
Molar mass: 102.174 g/mol
Solubility: Slightly soluble in water.
Density: 0.8075 g/cm3 at 20 °C
Relative Vapour Density (air=1): 3.5
Vapour Pressure (20 °C): 3.7 mm Hg
Specific Gravity: 0.8075
Melting point: -90°C
Boiling point: 131.6°C
Flash point: 41°C
Flammability Limits: 1-5.5%

Stability and Reactivity Data

Stability: Stable

Conditions to avoid: Avoid exposure to heat, sources of ignition, and open flame.

Incompatible materials: Incompatible with strong inorganic acids, and oxidising agents.

Hazardous Decomposition Products: Oxides of carbon

Toxicological Information

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Skin: Contact with skin may result in irritation. Will have a degreasing action on the skin. Repeated or prolonged skin contact may lead to irritant contact dermatitis. Can be absorbed through the skin with resultant adverse effects.

Eyes: May be an eye irritant

Inhalation: Material is irritant to the mucous membranes of the respiratory tract (airways). Breathing in vapour can result in headaches, dizziness, drowsiness, and possible nausea. Breathing in high concentrations can produce central nervous system depression, which can lead to loss of co-ordination, impaired judgement and if exposure is prolonged, unconsciousness.

Ingestion: Swallowing can result in nausea, vomiting and central nervous system depression. If the victim is showing signs of central system depression (like those of drunkeness) there is greater likelihood of the patient breathing in vomit and causing damage to the lungs.

Ecological Information

Ecotoxicity: Avoid contaminating waterways

Disposal considerations

Product Disposal: Refer to Waste Management Authority. Dispose of material through a licensed waste contractor. Advise flammable nature. Normally suitable for incineration by an approved agent.

Container Disposal: Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Send to drum recoverer or metal reclaimer.

Transport Information

Road and Rail Transport

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail.

UN No: 2053
Class-primary 3 Flammable Liquid
Packing Group: III
Proper Shipping Name: METHYL ISOBUTYL CARBINOL
Hazchem Code: 3[Y]

Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

UN No: 2053
Class-primary: 3 Flammable Liquid
Packing Group: III
Proper Shipping Name: METHYL ISOBUTYL CARBINOL

Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

UN No: 2053
Class-primary: 3 Flammable Liquid
Packing Group: III
Proper Shipping Name: METHYL ISOBUTYL CARBINOL

Other Information

This material is hazardous according to criteria of NOHSC.

Xi: Irritant

Risk Phrase(s): Flammable. Irritating to respiratory system.

Safety Phrase(s): Do not breathe vapour/mist. Avoid contact with skin and eyes. Wear suitable protective clothing and gloves.

Poisons Schedule: None allocated.

This material is listed on the Australian Inventory of Chemical Substances (AICS).

Wear suitable protective clothing, gloves and eye/face protection.

Poisons Schedule: None allocated.

This material is listed on the Australian Inventory of Chemical Substances (AICS).

For Emergency Assistance, please call 86 24 74570273