Material Safety Data Sheet

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

Trade name	Methyl Ethyl Ketone
Synonyms	2-butanone, methyl acetone
Use	Solvent. Raw material for printing inks and printing ink additives. Paint related material. Industrial use.
Company	Sasol Chemicals, a division of Sasol South Africa (Pty) Ltd Sasol Place, 50 Katherine Street Sandton 2090 South Africa +27103445000

Telephone	CHEMTREC North America Transport Emergency (24-hr)	(800) 424-9300
	CHEMTREC World Wide Transport Emergency (24-hr)	(703) 527-3887
	MSDS and Product Information (8:00am-4:30pm CST)	(281) 588-3315
	Sasol LCCC Main Gate Guard	(337) 494-5142
E-mail address	SasolElectronicSDS@us.sasol.com	

SECTION 2 Hazards identification

Classification of the substance or mixture

	According to OSHA 29 CFR 1910.1200 HCS	
Classification	Flammable Liquids	Category 2
	Serious eye damage	Category 2
	Specific target organ toxicity - single exposure	Category 3

Label elements

According to OSHA 29 CFR 1910.1200 HCS

Pictogram

Signal word Danger

Hazard statements

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

Precautionary statements

Prevention

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ ventilating/ lighting equipment.
P242: Use only non-sparking tools.
P280: Wear protective gloves/ eye protection/ face protection.

Response

P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position 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.

Storage

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

Disposal

Dispose of as hazardous waste in compliance with local and national regulations.

Other hazards No data available

SECTION 3 Composition/information on ingredients

Components	CAS-No.	Weight percent
Butanone; Methyl Ethyl Ketone	78-93-3	>= 99.70

Exposure limit(s): See chapter 8

Classification and hazard labelling: See chapter 15

SECTION 4 First aid measures

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before re-use. If skin irritation persists, call a physician.

Inhalation Move to fresh air in case of accidental inhalation of vapours. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.

Ingestion If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

SECTION 5 Firefighting measures

Fire/explosion Vapours may form explosive mixtures with air. Flash back possible over considerable distance.

Hazardous combustion products	Carbon oxides.
Suitable extinguishing media	Water spray. Alcohol-resistant foam. Dry chemical. Carbon dioxide (CO2).
Unsuitable extinguishing media	No information available.
Protection measures and instructions	Wear self-contained breathing apparatus and protective suit.
Further information	Cool containers/tanks with water spray.

SECTION 6 Accidental release measures

Personal precautions	Keep people away from and upwind of spill/leak. Remove all sources of ignition. Do not breathe vapours or spray mist. Material can create slippery conditions.
Environmental precautions	Should not be released into the environment. Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Soak up with inert absorbent material and dispose of as hazardous waste.

Exposure controls/personal protection: See chapter 8

SECTION 7 Handling and storage

Safe handling advice	Provide sufficient air exchange and/or exhaust in work rooms. Wear personal protective equipment. Ensure all equipment is electrically grounded before beginning transfer operations. Take precautionary measures against static discharges.

Advice on protection against fire and explosion Keep away from heat and sources of ignition.Use explosion-proof equipment.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

SECTION 8 Exposure controls/personal protection

Engineering measures

Provide sufficient air exchange and/or exhaust in work rooms.

Personal protective equipment

Eyes Safety glasses with side-shields

Skin Protective suit. Safety shoes.

Inhalation In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection Gloves suitable for permanent contact:
Material: butyl-rubber
Break through time: 4 h
Material thickness: 0.5 mm

Hygiene measures Wash hands before breaks and immediately after handling the product.

Protective measures Wear suitable protective equipment.

Exposure Guidelines

Components	Exposure limit(s)

PEL= Permissible Exposure Limits
TLV= Threshold Limit Value
EL= Excursion Limit
TWA= Time Weighted Average (8 hr.)
STEL= Short Term Exposure Limit (15 min.)
WEEL= Workplace Environmental Exposure Level

SECTION 9 Physical and chemical properties

State of matter	Liquid
Colour	Colourless
Odour	Characteristic
Form	Liquid
Boiling point/boiling range	79.6 ° C
Flash point	-6 ° C closed cup
Lower explosion limit	01.4 %(V)
Upper explosion limit	11.4 %(V)
Vapour pressure	121.323 hPa at 25 ° C
Solubility(ies)	Partly miscible
Viscosity	0.51 mm2/s
Viscosity, dynamic	0.41 mPa.s
Melting point/range	-86.3 ° C
Density	0.805 g/cm3
pH	No data available

SECTION 10 Stability and reactivity

Reactivity Stable under normal conditions.

Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Heat, flames and sparks.
Hazardous decomposition products	Carbon oxides.
Materials to avoid	Strong oxidizing agents Incompatible with acids. Halogenated compounds
Hazardous polymerisation	Hazardous polymerisation does not occur.

SECTION 11 Toxicological information

Acute oral toxicity	Butanone; Methyl Ethyl Ketone: LD50 Rat: 2,000 mg/kg; (literature value)
Acute dermal toxicity	Butanone; Methyl Ethyl Ketone: LD50 Rabbit: > 2,000 mg/kg; (literature value)
Skin irritation	Butanone; Methyl Ethyl Ketone: No data available
Eye irritation	Butanone; Methyl Ethyl Ketone: Rabbit: Highly irritating (literature value)
Sensitisation	Butanone; Methyl Ethyl Ketone: Guinea pig: Not sensitizing; Maximisation Test; (literature value)
Mutagenicity	Butanone; Methyl Ethyl Ketone: Ames test: Salmonella typhimurium; with and without; Not mutagenic; (literature value)

SECTION 12 Ecological information

Ecotoxicity effects

Toxicity to fish	Butanone; Methyl Ethyl Ketone: Leuciscus idus; 48 h; LC50; > 100 mg/l; (literature value);
Toxicity to daphnia and other aquatic invertebrates	Butanone; Methyl Ethyl Ketone: static test; Daphnia magna; 48 h; EC50; > 100 mg/l; (literature value):
Toxicity to algae	Butanone; Methyl Ethyl Ketone: static test; Desmodesmus subspicatus (green algae); 7 d; EC50; > 100 mg/l; (literature value);
Biodegradability	Butanone; Methyl Ethyl Ketone: aerobic; 98 %; 28 d; Readily biodegradable.; (literature value);
Mobility in soil	Butanone; Methyl Ethyl Ketone: No data available
Results of PBT and vPvB assessment	Butanone; Methyl Ethyl Ketone: This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).
Other adverse effects	Butanone; Methyl Ethyl Ketone:

SECTION 13 Disposal considerations

Waste Classification

Waste from residues / unused products	In accordance with local and national regulations.Do not contaminate ponds, waterways or ditches with chemical or used container.The product should not be allowed to enter drains, water courses or the soil.

Uncleaned empty packaging Do not burn, or use a cutting torch on, the empty drum. Triple rinse containers. Can be offered for recycling, re-conditioning or puncture.

Handling and storage: See chapter 7

Exposure controls/personal protection: See chapter 8

SECTION 14 Transport information

DOT/49CFR UN 1193 ETHYL METHYL KETONE, 3, II

IMDG UN 1193 ETHYL METHYL KETONE, 3, II; EmS F-E, S-D

ICAO/IATA UN 1193 METHYL ETHYL KETONE, 3, II

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Methyl ethyl ketone
Ship Type: 3
Pollution Category: Z

Marine pollutant Not a Marine Pollutant

SECTION 15 Regulatory information

U.S. Federal Classifications:

OSHA Hazards Flammable, Harmful

SARA 311/312 Fire Hazard

U.S. Regulated Ingredients:

Hazard information reporting

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)

Components	CAS-No.
Not listed	

Spill reporting

US. EPA CERCLA Hazardous Substances (40 CFR 302)

Components	CAS-No.	Reportable Quantity

Health

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

Components	CAS-No.
Not listed	

Inventories

USA TSCA Inventory	All chemical constituents are listed in: USA TSCA Inventory (See chapter 3)
Canadian Domestic Substances List (DSL)	All chemical constituents are listed in: Canadian Domestic Substances List (DSL) (See chapter 3)
Australian Inv. of Chem. Substances (AICS)	All chemical constituents are listed in: Australian Inv. of Chem. Substances (AICS) (See chapter 3)
New Zealand Inventory of Chemicals (NZIoC)	All chemical constituents are listed in: New Zealand Inventory of Chemicals (NZIoC) (See chapter 3)
Jap. Inv. of Exist. & New Chemicals (ENCS)	All chemical constituents are listed in: Jap. Inv. of Exist. & New Chemicals (ENCS) (See chapter 3)
Japan. Industrial Safety & Health Law (ISHL)	All chemical constituents are listed in: Japan. Industrial Safety & Health Law (ISHL) (See chapter 3)
Korea. Existing Chemicals Inventory (KECI)	All chemical constituents are listed in: Korea. Existing Chemicals Inventory (KECI) (See chapter 3)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	All chemical constituents are listed in: Philippines Inventory of Chemicals and Chemical Substances (PICCS) (See chapter 3)
China Inv. Existing Chemical Substances (IECSC)	All chemical constituents are listed in: China Inv. Existing Chemical Substances (IECSC) (See chapter 3)

Other international regulations

WHMIS Classification B2: Flammable liquid
D2B: Toxic material causing other toxic effects

SECTION 16 Other information

All reasonable efforts were exercised to compile this SDS in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). The SDS only provides information regarding the health, safety and environmental hazards at the date of issue, to facilitate the safe receipt, use and handling of this product in the workplace and does not replace any product information or product specifications. Since Sasol and its subsidiaries cannot anticipate or control all conditions under which this product may be handled, used and received in the workplace, it remains the obligation of each user, receiver or handler to, prior to usage, review this SDS in the context within which this product will be received, handled or used in the workplace. The user, handler or receiver must ensure that the necessary mitigating measures are in place with respect to health and safety. This does not substitute the need or requirement for any relevant risk assessments to be conducted. It further remains the responsibility of the receiver, handler or user to communicate such information to all relevant parties that may be involved in the receipt, use or handling of this product.

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