

# Safety Data Sheet

## 1. IDENTIFICATION

<b>Product Name:</b>	<b>Methanol</b>
<b>Other Names:</b>	Methyl Alcohol, alcool methylique, alcool metilico (italian), carbinol, colonial spirit, columbian spirit, columbian spirits, metanolo (italian), methylol, methylalkohol (german), methyl hydroxide, metylowy alkohol (polish), monohydroxymethane, pyroxylic spirit, wood alcohol, wood naphtha, wood spirit
<b>Recommended Use:</b>	Manufacture of substances
<b>Supplier:</b>	Global Chemie ASCC Limited.
<b>Street Address:</b>	88/123 Moo 2 Bangpoo Industrial Estate (North), Phraek Sa Mai, Mueang Samutprakan, Samutprakan 10280
<b>Telephone:</b>	+66 2324 6888
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## 2. HAZARDS IDENTIFICATION

### Hazardous Nature

This product is classified as hazardous under GHS criteria.

### Hazardous Classification

Not available.

### Hazardous Statement

FLAMMABLE LIQUIDS - Category 2

Acute Toxicity: ORAL - Category 3

Acute Toxicity: SKIN - Category 3

Acute Toxicity: INHALATION - Category 3

Specific Target Organ Toxicity (SINGLE EXPOSURE) - Category 1

### GHS Pictograms



### Hazard Statements

H225: Highly flammable liquid and vapor.

H301: Toxic if swallowed.

H311: Toxic in contact with skin.

H331: Toxic if inhaled.

H370: Causes damage to organs.

### Precautionary Statements

P210: Keep away from heat/sparks/open flames/hot surfaces and non-smoking.

P233: Keep container tightly closed.

P240: Ground/Bond container and receiving equipment.

P241: Use explosion-proof electrical/ventilating/lighting/equipment.

P242: Use only non-sparking tools.

P243: Take action to prevent static discharges.

P260: Do not breathe dust/fume/gas/mist/ vapours/spray.

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P264: Wash hand

P270: Do not eat, drink or smoke when using this product.

P271: Use only outdoors or in a well-ventilated area.

P280: Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P370+P378: In case of fire: Use manufacturer/supplier or the competent authority to specify appropriate media for extinction.

#### **If on skin**

P302 + P352: IF ON SKIN: Wash with plenty of water.

P303+P361+P353: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P362 + P364: Take off contaminated clothing and wash it before reuse.

#### **If in eyes**

P308 + P316: IF exposed or concerned: Get emergency medical help immediately.

P321: Specific treatment (see ... on this label)

#### **If inhaled**

P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

#### **If swallow**

P301 + P316: IF SWALLOWED: Get emergency medical help immediately.

P316: Get emergency medical help immediately.

P317: Get medical help.

P330: Rinse mouth.

#### **Storage Statements**

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

P403+P235: Store in a well-ventilated place. Keep cool.

P405: Store locked up.

#### **Disposal Statements**

P501: Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied.

**Signal Word** DANGER

### **3. COMPOSITION: Information on Ingredients**

Chemical Ingredient	CAS No.	UN No.	Proportion (%v/v)
Methanol	67-56-1	1230	>99.80

Molecular Weight: 32.04 g/mol

Molecular Formula: CH<sub>3</sub>OH

### **4. FIRST AID MEASURES**

**For advice, contact Poisons Information Centre (Phone Australia: 13 1126) or a doctor.**

## Ingestion

Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

## Eye Contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.

## Skin Contact

Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

## Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

## First Aid facilities

Provide eye baths and safety showers.

## Medical Attention

Treat according to symptoms. Avoid gastric lavage: risk of aspiration of product to the lungs with the potential to cause chemical pneumonitis.

## **5. FIRE FIGHTING MEASURES**

Shut off product that may 'fuel' a fire if safe to do so. Allow trained personnel to attend a fire in progress, providing firefighters with this Safety Data Sheet. Prevent extinguishing media from escaping to drains and waterways.

### Suitable extinguishing media

Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

### Precautions for fire fighters and special protective equipment

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

### Unsuitable extinguishing media

Do not use water jet.

### Specific hazards arising from the chemical

Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

### Hazardous thermal decomposition products

Decomposition products may include the following materials: carbon dioxide carbon monoxide.

### Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

## 6. ACCIDENTAL RELEASE MEASURES

### For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

### For emergency responders

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel"

### Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment

**Small Spill:** Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

**Large Spill:** Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosionproof electrical (ventilating, lighting and material handling) equipment. Use only nonsparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse.

### Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and wellventilated area, away from incompatible materials (see section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

**8. EXPOSURE CONTROLS: PERSONAL PROTECTION****Control parameters**

Occupational exposure limits.

<u>Ingredient name</u>	<u>Exposure limits</u>
methanol	Ministry of Interior (Thailand, 7/1977). TLV-TWA: 260 mg/m <sup>3</sup> 8 hour(s) TLV-TWA: 200 ppm 8 hour(s)

**Recommended monitoring procedures**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**Appropriate engineering controls**

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Environmental exposure controls.**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures****Hygiene measures.**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection.**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: full-face mask.

**Skin protection.**

**Hand protection:** Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. >8 hours (breakthrough time): butyl rubber.

**Body protection:** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection:** Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory Protection:** Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: self-contained breathing apparatus (SCBA)

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Property</b>	<b>Unit of Measurement</b>	<b>Typical Value</b>
Appearance	-	Colorless Liquid
Odour	-	Pungent

Property	Unit of Measurement	Typical Value
pH	-	No data available
Boiling point	°C	64.7
Melting point	°C	-97.8
Flash point	°C	9.7 (Closed cup)
Autoignition Temperature	°C	455
Decomposition Temperature	°C	No data available
Lower/Upper Flammability Limits	%V	6-36.5
Density @ 20°C	g/cm <sup>3</sup>	0.790-0.792
Specific Gravity @ 20°C	-	0.791-0.793
Viscosity @ 20°C	mPa·s	0.544 - 0.59
Vapor pressure	kPa	16.9
Vapor density	kPa (Air = 1)	1.11
Evaporation Rate	(n-Butyl acetate = 1)	2.1
Water Solubility	-	Miscible
Solubility in other solvents Partition coefficient	(n-octanol/water)	No data available
Coefficient of Thermal Expansion	per Deg °C	No data available

The values listed are indicative of this product's physical and chemical properties. For a full product specification, please consult the Product Data Sheet.

## 10. STABILITY AND REACTIVITY

### **Reactivity**

No specific test data related to reactivity available for this product or its ingredients.

### **Chemical stability.**

The product is stable.

### **Possibility of hazardous reactions**

Under normal conditions of storage and use, hazardous reactions will not occur.

### **Conditions to avoid**

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

### **Incompatible materials**

Reactive or incompatible with the following materials: oxidizing materials

### **Hazardous decomposition products**

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11. TOXICOLOGICAL INFORMATION

### **Acute toxicity**

- ◆ LC<sub>50</sub> Acute Inhalation Toxicity : 64,000 mg/kg / 4 hours (rat)
- ◆ LC<sub>50</sub> Acute Inhalation Toxicity : 85,400 mg/kg / 4.5 hours (cat)
- 43,700 mg/kg / 6 hours (cat)
- 128,200 mg/kg / 4 hours (rat)

- ◆ LC<sub>50</sub> Acute Inhalation Toxicity : 16,000 ppm/4 hours (rat)
- ◆ LD<sub>50</sub> Acute oral toxicity : 1187 to 2769 mg/kg (rat)
- ◆ LD<sub>50</sub> Acute dermal toxicity : 17100 mg/kg (rabbit)
- ◆ LD<sub>50</sub> Unreported : 868 mg/kg (Man - Male)

### **Eye Contact**

Irritating to eyes.

### **Skin Contact**

Irritating to skin. Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.

### **Reproductive toxicity**

Suspected of damaging the unborn child.

### **Aspiration hazard**

May be fatal if swallowed and enters airways.

### **Specific target organ toxicity following single exposure**

May cause damage to organs.

### **Specific target organ toxicity following repeated exposure**

May cause damage to organs.

### **Reproductive toxicity**

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
methanol	Negative	-	-	Rat-Female	Inhalation: 0.00133 mg/m <sup>3</sup>	-

### **Teratogenicity**

Product/ingredient name	Result	Species	Dose	Exposure
methanol	Negative-Inhalation	Rat	0.000133 mg/m <sup>3</sup>	-

### **Specific target organ toxicity (single exposure)**

Not available.

### **Specific target organ toxicity (repeated exposure)**

Not available.

### **Aspiration hazard**

Not available.

**Information on the likely routes of exposure:** Routes of entry anticipated: Oral, Dermal, Inhalation.

### **Potential acute health effects**

**Eye contact:** No known significant effects or critical hazards

**Inhalation:** Toxic if inhaled.

**Skin contact:** Toxic in contact with skin.

**Ingestion:** Toxic if swallowed

### **Symptoms related to the physical, chemical and toxicological characteristics**

**Skin contact:** No specific data.

**Ingestion:** No specific data.

**Inhalation:** No specific data.

**Eye contact:** No specific data.

### **Delayed and immediate effects and also chronic effects from short- and long-term exposure**

#### **Short term exposure**

**Potential immediate effects:** Not available.

Potential delayed effects: Not available.

**Long term exposure**

Potential delayed effects: Not available

Potential immediate effects: Not available.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Aquatic Toxicity**

Micro-organism	EC50 20000 mg/l Fresh water	15 hours
Daphnia	Acute EC50 >10000 mg/l Fresh water	48 hours
Crustaceans - Crangon crangon - Adult	Acute LC50 2500000 ug/L Marine water	48 hours
Daphnia - Daphnia magna Neonate - <24 hours	Acute LC50 3289 to 4395 mg/L Fresh water	48 hours
Fish - Lepomis macro chirus	Acute LC50 15400 mg/l Fresh water	96 hours
Algae - Selenastrum capricornutum	Chronic EC50 22000 mg/l Fresh water	96 hours
Micro-organism - Tubiflex tubiflex	Chronic EC50 71700 mg/l	3 minutes
Fish - Oryzias latipes	Chronic NOEC 7900 mg/l Fresh water	-

**Persistence/ degradability**

This product readily biodegrades on exposure to light and air.

**Mobility**

Soil/water partition coefficient (KOC): 0.13 to 1

## 13. DISPOSAL CONSIDERATIONS

**Disposal Methods**

The generation of waste should be avoided or minimized wherever possible.

Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled.

Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## 14. TRANSPORT INFORMATION

Road and Rail Transport		Marine Transport		Air Transport	
UN No.	1230	UN No.	1230	UN No.	1230
Proper Shipping Name	METHANOL	Proper Shipping Name	METHANOL	Proper Shipping Name	METHANOL
Transport hazard class (es)	3	Transport hazard class (es)	3	Transport hazard class (es)	3
Pack Group	II	Pack Group	II	Pack Group	II



Additional information	-	Additional information	<p><b>Emergency schedules (Ems) F-E,S-D</b></p> <p><b>Remark</b> This product is being carried under the scope of Annex II (MARPOL)</p>	Additional information	<p><b>Passenger and cargo Aircraft</b> Quantity limitation: 1 L Packaging instruction:352</p> <p><b>Cargo Aircraft Only</b> Quantity limitation: 60 L Packaging instruction:364</p> <p><b>Passenger Aircraft</b> Quantity limitation: 1L Packaging instruction: Y341</p>
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## Dangerous Goods Segregation

This product is classified as Dangerous Goods Class 3, packing group II. Please consult the Australian Dangerous Goods Code for Transport by Road and Rail for information.

## 15. REGULATORY INFORMATION

### National Inventory List

**Australia inventory (AICS):** All components are listed or exempted.

**China inventory (IECSC):** All components are listed or exempted.

**Japan inventory:** All components are listed or exempted.

**Korea inventory:** All components are listed or exempted.

**New Zealand Inventory of Chemicals (NZIC):** All components are listed or exempted.

**Philippines inventory (PICCS):** All components are listed or exempted.

**United States inventory (TSCA 8b):** All components are listed or exempted.

**Europe inventory:** All components are listed or exempted.

**Canada inventory:** All components are listed or exempted.

## 16. OTHER INFORMATION

### **Key to abbreviations**

ADN/ADNR = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

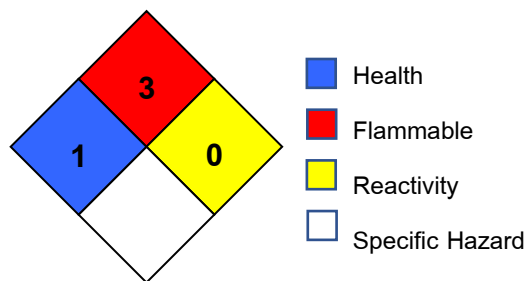
MARPOL 73/78 = International Convention for the Prevention of Pollution From

Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

UN = United Nations

Log Pow = logarithm of the octanol/water partition coefficient

National Fire Protection Association  
(USA)



MSDS Distribution : The information in this document should be made available to all who may handle the product.

Prepared By : Quality Control Department / Global Chemie ASCC Limited

**Reasons for Issue:** New document; merged supplier information in all sections

#### Abbreviations:

AICS: Australian Inventory of Chemical Substances

CAS Number: Chemical Abstracts Number

IARC: International Agency for Research on Cancer

NOHSC: National Occupational Health and Safety Council

#### References:

- Supplier Safety Data Sheets
- <http://chem.sis.nlm.nih.gov/chemidplus> (September 23)
- <http://hsis.safework.gov.au/SearchHS.aspx> (September 23)
- Ecotoxicology data: [http://cfpub.epa.gov/ecotox/quick\\_query.htm](http://cfpub.epa.gov/ecotox/quick_query.htm) (historical)
- *Sax's Dangerous Properties of Industrial Materials*, Richard J. Lewis Snr., pub. Canada (2000)

The information sourced for the preparation of this document was correct and complete at the time of writing to the best of the writer's knowledge. The document represents the commitment to the company's responsibilities surrounding the supply of this product, undertaken in good faith. This document should be taken as a safety guide for the product and its recommended uses, but is in no way an absolute authority. Please consult the relevant legislation and regulations governing the use and storage of this type of product. For further information, please contact Australasian Solvents and Chemicals Company Pty. Ltd.