

# **METHANOL**

## **1 IDENTIFICATION OF THE PRODUCT AND THE COMPANY**

#### 1.1 IDENTIFICATION OF THE SUBSTANCE / PREPARATION:

GHS product identifier	: Methanol
Chemical name	: Methanol
Other means of identification	: alcool methylique (french); alcool metilico (italian); carbinol colonial spirit; columbian spirit; columbian spirits (dot); methanol (dot); metanolo (italian); methyl alcohol; methyl alcohol (dot); methylol; methylalkohol (german); methyl hydroxide: metylowy alkohol (polish); monohydroxy

#### **Product type**

: Liquid.

wood spirit

methane; pyroxylic spirit; wood alcohol; wood naphtha;

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

Identified uses

Manufacture of substance Distribution of substance Formulation and (re)packing of substances and mixtures Use as a fuel (Industrial use) Use as a fuel (Professional use) Use in Cleaning Agents ( Industrial use) Use in Cleaning Agents (professional use) Use in laboratories (Indsutrial use) Use in laboratories (Indsutrial use) Use in laboratories (Professional use) WasteWater treatment chemicals (Industrial use) Use in Oil field drilling and production operations (SU 22). (Professional use) Use in Cleaning Agents and De-icing and anti-icing applications (no spraying) (Consumer use) Use in Cleaning Agents and De-icing and anti-icing applications (spray application) (Consumer use) Covers consumer uses in liquid fuels. Indoor. Cover consumer uses in liquid fuels. Outside

## 1.2 IDENTIFICATION OF THE COMPANY:

RAR Resin & Chemical Industries JLT11th Floor, Jumeirah Lake Towers, P.O. Box: 47381, Dubai UAETel: +971 4 4356516 / +971 4 4356517Email: info@rarresin.comFax: +971 4 4356518Website: www.rarresin.com

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## 2. HAZARDS IDENTIFICATION

#### Classification of the substance or mixture

FLAMMABLES 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

#### Hazard pictogrmas

#### **GHS** label elemets



#### Signal word

Hazard Statement Danger Toxic flammable liquid and vapor Toxic if swallowed. Toxic in contact and skin. Toxic if inhaled. Causes damage to organs.

#### **Precautionary statements**

**Prevention:** Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Take precautionary measures against static discharge. Use explosion- proof electrical/ventilating/lighting equipment. Keep container tightly closed. Wear protective gloves and eye / face protection.

**Response:** Remove victim to fresh air and kepp at rest in a position comfortable for breathing. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water or shower. Call a POISON CENTER or physian.

Storage: Store in well- ventilated place. Keep cool.

**Disposal:** Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification: not available

## 3. COMPOSITION/ INFORMATION ON INGREDIENTS

Substance/mixture	: Substance
Chemical name	: Methanol

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Other means of identification

: alcool methylique (french); alcool metilico (italian); colonial spirit; columbian spirit; columbian spirits (dot); methanol (dot); metanolo (italian); methyl alcohol; methyl alcohol (dot); methylol; methylalkohol (german); methyl hydroxide; metylowy alkohol (polish); monohydroxy methane; pyroxylic spirit; wood alcohol; wood naphtha; wood spirit

#### CAS number/other identifiers

CAS number		: 67-56-1
EC number		: 200-659-6
CAS number	%	Ingredient name
67-56-1	> 99.85	methanol

There are no additional ingredients present which, within in current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## 4. FIRST AID MEASURE

**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.

**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 not breathing is irregulator 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 collar, tie, belt or waistband.

**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 m inutes. Get medical attention. if necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before use.

**Ingestion:** Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim from fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the qexposed person 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.

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#### Most important symptoms/ effects, acute and delayed

Potential acute health effects

Eye contact	: No known significant effects or crirical hazards.
Inhalation	: Toxic if inhaled
Skin contact	: Toxic in contact skin
Ingestion	: Toxic if swallowed.
Over-exposure signs/ symptoms	
Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.
Ingestion	: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: Treat symptomatically. Contact person treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.
Protection of first- aiders	: No action shall be taken involving personal risk or without suitable training. If it suspected that fumes are still present, the rescuer should wear an appropriate mask or self- contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
See toxicological information (Section 11)	

distanve to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

#### 5. FIRE- FIGHTING MEASURES

#### Suitable extinguishing media : Use dry chemical, CO2, water spray (fog) or foam. Unsuitable extinguishing media : Do not use water jet. Specific hazards arising from : 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 subsequently explosion. The vapor/gas is heavier than air and will along the ground. Vapors may accumulate in low or confined areas or travel a considerable

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Hazardous thermal decomposition products	: Decomposition products may include the folloing materials: - carbon dioxide - carbon monoxide
Special protective actions for fire fighters	: Promptly isolate the scene by removing all persons from the vicinity for fire-fighters 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.
Special protective	: Fire-fighters should wear protective equipment and self-contained equipment for fire-fighters breathing apparatus (SCBA) with a full face- piece operated in positive pressure.

## 6. ACCIDENTAL RELEASE MEASURE

#### Personal precaustions, protective unnecessary equipment and emergency procedures

**For non-emergency personnel:** No action shall be taken involving any personal risk or without suitable training. Evacuate through surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled materials. Shut off all ignition sources. No flares, smoking or flames in hazards 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 specialized 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 pollutuion (sewers, waterways, soil, or air.)

#### Methods and materials for containments and cleaning up

**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 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 containersfrom spill area. Approach release from upwind. Prevent entry to sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceedas follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatimaceous 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.

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## 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 indequate. 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 explosion- proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty cotainers retain product residue and can be hazardous. Do not reuse container.

**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 dr, cool and well-ventilated 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. Cotainers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabe;ed containers. Use appropriate containment to avoid environmental contamination.

## 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

**Control parameters** 

## **Occupational exposure limits**

#### **Exposure limits**

methanol

Ingredient name

ACGIH TLV (United States,2/2010) Absorbed through skin. Notes: Substances for which there is a Biological Exposure Index or Indices STEL: 328 mg/m<sup>3</sup> 15 minute(s) STEL: 250 ppm 15 minute(s) STEL: 262 mg/m<sup>3</sup> 8 hour(s) TWA: 200 ppm 8 hour(s)

**Recommend 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 explosio- 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.

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#### 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 eye wash 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 dust. Recommended: full-face mask.

#### **Skin protection**

**Hand protection:** Chemical -resisatnt, 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 risk involved and should 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 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**

#### Appearance

- Physical state Color Odor Odor Threshold pH Melting point/ freezing point Boiling Point Flash point
- Burning time Burning rate Evaporation rate Flammability( solid, gas) Lower and Upper explosive (flammable) limits Vapor pressure Vapor density Relative density Solubility

: Liquid : Colorless : Pungent [Slight] : Not available : Not available : - 97.8 deg C (-144 deg F) : 64.7 deg C (148.5 deg F) : Closed cup: 9.7 deg C (49.5 deg F) Open cup: 15.85 deg C (60.5 deg F) : Not applicable : Not applicable : 2.1 (butyl acetate= 1) : Not available : Lower: 6% Upper: 36.5 % : 16.9 kPa (127 mmHg) [20 °C) : 1.11 [ Air= 1] : 0.79 to 0.8 : Not available

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Partition coefficient: n- octanol/water Auro-ignition temperature **Decomposition temperature** SADT Viscosity

Not available

: 455 °C (851 °F) : Not available : Not available : Dynamic: 0.544 to 0.59 mPa s (0.544 to 0.59 cP)

#### **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 rections 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

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**

#### Information on toxicological effects

#### Acute toxicity

Exposure	Dose	Species	Result	Product/Ingredient	
4 hours	64000 ppm	Rat	LC50 Inhalation Gas	methanol	
4.5 hours	854000 mg/m3	Cat	LC50 Inhalation Vapor		
6 hours	43700 mg/m3	Cat	LC50 Inhalation Vapor		
4 hours	128200 mg/m3	Rat	LC50 Inhalation Vapor		
-	17100 mg/kg	Rabbit	LD50 Dermal		
-	1187 to 2769	Rat	LD50 Oral		
	mg/kg				
-	868 mg/kg	Man- Male	LDLo Unreported		
Irritation/ Corrosion		: Not a	available		
<b>Conclusion/Summar</b>	У	: Skin:	Non-Irritating to the skin		
		Eyes	: Non- irritating to the eye	es	
Sensitization		: not a	vailable		
Conclusion/ Summar	v	: Skin: Non- sensitizer to skin			
Mutagenicity	-	: Not available			
. ,		Conclusion: No mutagenic effect.			
Carcinogenicity			available		

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## Reproductive toxicity

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

## Teratogenicity

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

## Specific target organ toxicity (single exposure): Not available

## Specific target organ toxicity (repeated exposure): Not available

Aspiration hazards: 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

Eye contact: No specific data

Inhalation: No specific data.

Skin contact: No specific data

Ingestion: 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 immediateeffects: Not available Potential delayed effects: Not available

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#### Potential chronic health effects: Not available

General: No known significant effects or critical hazards.

Carcinogenicity: No known significant effects or critical hazards.

**Mutagenicity:** No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

## Numerical measures of toxicity

Acute toxicity estimates: not available

### **12. ECOLOGICAL INFORMATION**

## Toxicity

Product/Ingredient name	Exposure	Species	Result
methanol	15 hours 48 hours	Micro-organism Daphnia	EC50 20000 mg/l fesh water Acute EC50 > 10000 mg/l fresh water
	48 hours	Crustaceans-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
	96 hours macrochirus	Fish-Lepomis	Acute LC50 15400 mg/l fresh water
	96 hours	Algae- Selenastrum capricornutum	Chronic EC50 22000 mg/l fresh water
	3 minutes	Micro-organism- Tubilex tubilex	Chronic EC50 71700 mg/l
	-	Fish-Oryzias latipes	Chronic NOEC 7900mg/l fresh water

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## Persistence and degradability

Inoculum	Dose	Result			Test		Product/Ingredient name
Fresh Water Sediment	-	83-91%	% - 3days		311Anaerobic Biodegration of organic compor in digested sluc -Method by measurement of Gas producti	unds Ige	methanol
Soil Soil	-	53.4%- 53.4%-	-5 days 5days		Aerobic Anaerobic		
Biodegradabil	ity I	Photolysis		Aquati	c half-life	Produ	ct/ Ingredient name
Readily	ł	50 % ; 17 day(s	5)		-	methar	nol
Bioaccumulat Potential	-	itial BCF	LogPov	N	Product/ Ingre	dient na	ame
low		< 10	< 1		methanol		
Mobility in So	il						
Soil/ water partition coeffecient (Koc)				: 0.13 t		offecte	r critical bazarda
Other adverse effects 13. DISPOSAL CONSIDERATIONS				: No known significant effects or critical hazards.			
		ENATIONS		· The g	operation of was		ld be evolded or minimized
Disposal meth				wherev should suitable recycla Dispose times c waste o require or land This ma out. En Vapor f explosi used co Avoid o	rer possible. Sign not be disposed e effluent treatme ble products via al of this product comply with the re disposal legislation ments. Waste pa fill should only be aterial and its co npty containers of rom product resi ve atmosphere i containers unless	nificant of via the ent plant a licence t, solutio equirem on and a ackaging e consid ntainers or liners idues ma nside the they ha ed mate	Id be avoided or minimized quantites of waste product residues foul sewer but processed in a t. Dispose of surplus and non- sed waste disposal contractor. ns and any by-products should at all ents of environmental protection and any regional local authority g should be recycled. Incineration lered when recycling is not feasible. that have not been cleaned or rinsed may retain some product residues. ay create a highly flammable or e container. Do not cut, weld or grind ve been cleaned thoroughly internally. rial and runoff and contact with soil,

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## 14. TRANSPORT INFORMATION

IATA UN1230 Methanol



II No. Not available. Passenger and Cargo

Aircraft Quantity Limitation: 1L Packaging instructions: 352 Cargo Aircraft Only Quantity limitation: 60 L Packaging instructions: 364 Limited Quantities Passenger Aircraft Quantity limitation: 1L Packaging instructions: Y341 IMDG UN1230 METHANOL



F-E, S-D

II No. Not available. Emergency schedules (EmS)

Remarks This product is being carried under the scope of Annex II (MARPOL) UN1230 METHANOL



II No. Not available. UN number UN proper shipping name

Transport Hazard class(es)

Packing group Environmental Hazards Special precautions for user Additional information

## **15. REGULATORY INFORMATION**

No known specific national and / or regional regulations applicable to this product. (including its ingredients).

: Safety, health and environmental regulations specific for the product

#### **16. OTHER INFORMATION**

No previous validation.

ADN / ADNR = European Provision 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 LogPow = logarithm of the octanol / water partition coefficient IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol / water partition coefficient 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 Not available.

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