

50% Methanol / 50% Water (400)

Version 1

Revision Date 10/31/2007

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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 50% Methanol / 50% Water
MSDS Number : 000000011287
Product Use Description : Solvent

Company : Honeywell International Inc.
1953 South Harvey Street
Muskegon, MI 49442

For more information call : 1-800-368-0050
(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : Medical: 1-800-498-5701
: **Transportation: 1-800-424-9300 or 703-527-3887**
: (24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : liquid, clear

Color : colourless

Odor : slight alcoholic

Hazard Summary : Flammable. In use, may form flammable/explosive vapour-air mixture. May be fatal if swallowed. May be fatal if inhaled. May be harmful if absorbed through skin. Irritating to eyes, respiratory system and skin. Causes headache, drowsiness or other effects to the central nervous system. May cause blindness. The product may be absorbed through the skin. Repeated exposure may cause skin dryness or cracking. Do not swallow. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. This product may cause adverse reproductive effects. Possible risk of harm to the unborn child. Avoid exposure to pregnant women especially.

Potential Health Effects

Skin : Irritating to skin.
The product may be absorbed through the skin.
May cause systemic poisoning with symptoms paralleling those of inhalation.
Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering.

50% Methanol / 50% Water (400)

Version 1

Revision Date 10/31/2007

Print Date 01/25/2008

- Eyes** : Irritating to eyes.
Causes itching, burning, redness and tearing.
May cause blindness.
May cause irreversible eye damage.
- Ingestion** : May be fatal if swallowed.
Causes headache, drowsiness or other effects to the central nervous system.
May cause blindness if swallowed.
Repeated or prolonged exposure to the substance can produce liver damage.
Repeated or prolonged exposure to the substance can produce kidney damage.
- Inhalation** : May be fatal if inhaled.
Causes respiratory tract irritation.
Causes headache, drowsiness or other effects to the central nervous system.
Vapours may cause drowsiness and dizziness.
Inhalation of high vapour concentrations can cause CNS-depression and narcosis.
May cause blindness.
Repeated or prolonged exposure to the substance can produce liver damage.
Repeated or prolonged exposure to the substance can produce kidney damage.
- Chronic Exposure** : Causes damage to the kidneys/liver/eyes/brain/respiratory system/central nervous system through prolonged or repeated exposure.
Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering.
This product may cause adverse reproductive effects.
Possible risk of harm to the unborn child.
- Aggravated Medical Condition** : Liver disorders
Eye disorders
Skin disorders
Neurological disorders
Kidney disorders
Do not use if pregnant.
- Target Organs** : Eyes
Skin
Liver
Kidney
Respiratory system
Central nervous system
Gastrointestinal tract

50% Methanol / 50% Water (400)

Version 1

Revision Date 10/31/2007

Print Date 01/25/2008

Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight %
Water	7732-18-5	55.80
Methanol	67-56-1	44.20

SECTION 4. FIRST AID MEASURES

- Inhalation : Call a physician immediately. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present.
- Skin contact : Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician.
- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician.
- Ingestion : Call a physician immediately. Do NOT induce vomiting. Immediate medical attention is required. Never give anything by mouth to an unconscious person.

Notes to physician

- Treatment : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

- Flash point : 29 °C (84 °F)
- Ignition temperature : 464 °C (867 °F)
- Lower explosion limit : 6 %(V)
- Upper explosion limit : 36 %(V)

50% Methanol / 50% Water (400)

Version 1

Revision Date 10/31/2007

Print Date 01/25/2008

Suitable extinguishing media	:	Alcohol-resistant foam Carbon dioxide (CO ₂) Dry chemical
Extinguishing media which shall not be used for safety reasons	:	Water may be ineffective. Do not use a solid water stream as it may scatter and spread fire.
Specific hazards during fire fighting	:	Flammable. Vapours may form explosive mixtures with air. Vapours are heavier than air and may spread along floors. Vapors may travel to areas away from work site before igniting/flashing back to vapor source. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. In case of fire hazardous decomposition products may be produced such as: Carbon monoxide Carbon dioxide (CO ₂) Formaldehyde
Special protective equipment for fire-fighters	:	In the event of fire and/or explosion do not breathe fumes. Wear self-contained breathing apparatus and protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions	:	Immediately evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Wear personal protective equipment. Unprotected persons must be kept away. Ensure adequate ventilation. Remove all sources of ignition. Vapors may travel to areas away from work site before igniting/flashing back to vapor source. Do not swallow. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing.
Environmental precautions	:	Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided. Do not flush into surface water or sanitary sewer system. Prevent product from entering drains. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Methods for cleaning up	:	Ventilate the area. No sparking tools should be used. Use explosion-proof equipment.

50% Methanol / 50% Water (400)

Version 1

Revision Date 10/31/2007

Print Date 01/25/2008

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13).

SECTION 7. HANDLING AND STORAGE**Handling**

Handling : Handle with care.
Wear personal protective equipment.
Use only in well-ventilated areas.
Keep container tightly closed.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep away from fire, sparks and heated surfaces.
Take precautionary measures against static discharges.
Ensure all equipment is electrically grounded before beginning transfer operations.
No sparking tools should be used.
Use explosion-proof equipment.
Do not smoke.
Do not swallow.
Do not breathe vapours or spray mist.
Avoid contact with skin, eyes and clothing.

Advice on protection against fire and explosion : Vapours may form explosive mixture with air.
Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits.
Vapours are heavier than air and may spread along floors.
Vapors may travel to areas away from work site before igniting/flashing back to vapor source.
Container hazardous when empty.
Keep product and empty container away from heat and sources of ignition.
Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Take measures to prevent the build up of electrostatic charge.
To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded.
Electrical equipment should be protected to the appropriate standard.
No sparking tools should be used.
Use explosion-proof equipment.
No smoking.

Storage

50% Methanol / 50% Water (400)

Version 1

Revision Date 10/31/2007

Print Date 01/25/2008

Requirements for storage areas and containers : Storage rooms must be properly ventilated. Keep containers tightly closed in a dry, cool and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep away from heat and sources of ignition. Keep away from direct sunlight. Store in area designed for storage of flammable liquids. Protect from physical damage. Store away from incompatible substances.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
Do not swallow.
Do not breathe vapours or spray mist.
Avoid contact with skin, eyes and clothing.

Engineering measures : Use with local exhaust ventilation.
Prevent vapor buildup by providing adequate ventilation during and after use.

Eye protection : Do not wear contact lenses.
Wear as appropriate:
Safety glasses with side-shields
If splashes are likely to occur, wear:
Goggles or face shield, giving complete protection to eyes

Hand protection : Solvent-resistant gloves
Gloves must be inspected prior to use.
Replace when worn.

Skin and body protection : Wear as appropriate:
Solvent-resistant apron and boots
Flame retardant antistatic protective clothing
If splashes are likely to occur, wear:
Protective suit

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
For rescue and maintenance work in storage tanks use self-contained breathing apparatus.
Use NIOSH approved respiratory protection.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
When using, do not eat, drink or smoke.
Wash hands before breaks and immediately after handling the

50% Methanol / 50% Water (400)

Version 1

Revision Date 10/31/2007

Print Date 01/25/2008

product.
 Keep working clothes separately.
 Do not swallow.
 Do not breathe vapours or spray mist.
 Avoid contact with skin, eyes and clothing.

Exposure Guidelines

Methanol	67-56-1	ACGIH	TWA	200 ppm
		ACGIH	STEL	250 ppm

Skin designation:
 Can be absorbed through the skin.

NIOSH	REL	200 ppm	260 mg/m3
NIOSH	STEL	250 ppm	325 mg/m3

Skin designation:
 Can be absorbed through the skin.

US CA OEL	TWA PEL	200 ppm	260 mg/m3
US CA OEL	Ceiling		1,000 ppm
US CA OEL	STEL	250 ppm	325 mg/m3

Skin designation:
 Can be absorbed through the skin.

OSHA Z1	PEL	200 ppm	260 mg/m3
OSHA Z1A	TWA	200 ppm	260 mg/m3
OSHA Z1A	STEL	250 ppm	325 mg/m3

Skin designation (Final Rule Limit applies):
 Can be absorbed through the skin.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: liquid, clear
Color	: colourless
Odor	: slight alcoholic
pH	: not determined

50% Methanol / 50% Water (400)

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Melting point/range	: not determined
Boiling point/boiling range	: not determined
Vapor pressure	: 129 hPa
Relative vapour density	: 1.11 (Air = 1.0)
Density	: 0.9264 g/cm ³ at 25 °C (77 °F)
Water solubility	: completely soluble

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	: Heat, flames and sparks. Keep away from direct sunlight.
Materials to avoid	: Strong oxidizing agents Aluminium Magnesium May attack many plastics, rubbers and coatings.
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: Carbon monoxide Carbon dioxide (CO ₂) Formaldehyde
Hazardous reactions	: Hazardous polymerisation does not occur. Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity (Component)	Component: 67-56-1 Methanol LD50 rat Dose: 5,628 mg/kg
Acute dermal toxicity (Component)	Component: 67-56-1 Methanol LD50 rabbit Dose: 15,800 mg/kg
Acute inhalation toxicity (Component)	Component: 67-56-1 Methanol LC50 rat Dose: 83.8 mg/l Exposure time: 4 h

50% Methanol / 50% Water (400)

Version 1

Revision Date 10/31/2007

Print Date 01/25/2008

Skin irritation (Component) Component: 67-56-1 Methanol
rabbit
irritating
Exposure time: 24 h

Eye irritation (Component) Component: 67-56-1 Methanol
rabbit eye
irritating

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to fish (Component) : Component: 67-56-1 Methanol
LC50
Species: Fathead minnow
Dose: 29,400 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates. (Component) : Component: 67-56-1 Methanol
LC50
Species: Daphnia
Dose: 10 g/l
Exposure time: 24 h

Additional ecological information : Accumulation in aquatic organisms is unlikely.
The product is readily degradable in the environment.
Do not flush into surface water or sanitary sewer system.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Information: Avoid contact of spilled material and runoff with soil and surface waterways. Consult an environmental professional to determine if local, regional or national regulations would classify spilled or contaminated materials as hazardous waste. Use only approved transporters, recyclers, treatment, storage or disposal facilities. Dispose of according to all federal, state and local applicable regulations.

Other Disposal Considerations: Observe all Federal, State, and Local Environmental regulations.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

SECTION 14. TRANSPORT INFORMATION

DOT Proper shipping name : Methanol solution

50% Methanol / 50% Water (400)

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Revision Date 10/31/2007

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	UN-Number	: 1230
	Class	: 3
	Packing group	: II
IATA	UN Number	: 1230
	Description of the goods	: Methanol solution
	Class	: 3
	Packaging group	: II
	Hazard Label	: 3 (6.1)
	Packing instruction (cargo aircraft)	: 307
	Packing instruction (passenger aircraft)	: 305
	Packing instruction (passenger aircraft)	: Y305
IMDG	Substance No.	: UN 1230
	Description of the goods	: Methanol solution
	Class	: 3
	Packaging group	: II
	Hazard Label	: 3 (6.1)
	EmS Number	: F-E
	Marine pollutant	: no

SECTION 15. REGULATORY INFORMATION
Inventories

EU. EINECS	: On or in compliance with the inventory
US. Toxic Substances Control Act	: On TSCA Inventory
Australia. Industrial Chemical (Notification and Assessment) Act	: On or in compliance with the inventory
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	: All components of this product are on the Canadian DSL list.
Japan. Kashin-Hou Law List	: On or in compliance with the inventory
Korea. Toxic Chemical Control Law (TCCL) List	: On or in compliance with the inventory
Philippines. The Toxic Substances and Hazardous	: On or in compliance with the inventory

50% Methanol / 50% Water (400)

Version 1

Revision Date 10/31/2007

Print Date 01/25/2008

and Nuclear Waste Control
Act

China. Inventory of Existing Chemical Substances : On or in compliance with the inventory

Switzerland. Consolidated Inventory : On or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand : On or in compliance with the inventory

National regulatory information

SARA 313 Components : Methanol 67-56-1

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Chronic Health Hazard

CERCLA Reportable Quantity : 11312 lbs

California Prop. 65 : This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

Massachusetts RTK : Methanol 67-56-1

New Jersey RTK : Water 7732-18-5
: Methanol 67-56-1

Pennsylvania RTK : Water 7732-18-5
: Methanol 67-56-1

WHMIS Classification : D1B
D2A
D2B
B2

50% Methanol / 50% Water (400)

Version 1

Revision Date 10/31/2007

Print Date 01/25/2008

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health Hazard	: 2*	1
Flammability	: 3	3
Physical Hazard	: 0	
Instability	:	0

Further information

* - Chronic health hazard