

Alcohol SDA 3C (093)

Version 1

Revision Date 11/11/2009

Print Date 11/11/2009

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Alcohol SDA 3C (093)
MSDS Number : 000000011315
Product Use Description : Solvent

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

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

In case of emergency call : **Medical: 1-800-498-5701**
: **Transportation: 1-800-424-9300 or +1-703-527-3887**
: (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. The product may be absorbed through the skin. Repeated exposure may cause skin dryness or cracking. This product may cause adverse reproductive effects. Possible risk of harm to the unborn child. Avoid exposure to pregnant women especially. Cannot be made non-poisonous.

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.

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- Eyes** : Irritating to eyes.
Causes itching, burning, redness and tearing.
May cause irreversible eye damage.
- Ingestion** : Ingestion may cause gastrointestinal irritation, nausea,
vomiting and diarrhoea.
May cause systemic poisoning with symptoms paralleling those
of inhalation.
- Inhalation** : 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.
- 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.
Potential embryo-foetal toxicity and teratogenicity.
Possible risk of harm to the unborn child.
Confirmed animal carcinogen with unknown relevance to
humans.
- Aggravated Medical
Condition** : Liver disorders
Eye disorders
Skin disorders
Neurological disorders
Kidney disorders
Do not use if pregnant.
- Target Organs** : Eyes
Skin
Liver
Kidney
Blood
Respiratory system
Central nervous system
Gastrointestinal tract

Carcinogenicity

ACGIH:

Ethanol

64-17-5

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight percent
Ethanol	64-17-5	95.00
Propan-2-ol	67-63-0	5.00

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 : 17 °C (63 °F)
closed cup
- Ignition temperature : 363 °C (685 °F)
The physical data is that of the main component.
- Lower explosion limit : 3.3 %(V)
The physical data is that of the main component.
- Upper explosion limit : 19 %(V)
The physical data is that of the main component.

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- Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
Cool closed containers exposed to fire with water spray.
- Extinguishing media which shall not be used for safety reasons : 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.
In case of fire hazardous decomposition products may be produced such as:
Carbon monoxide
Carbon dioxide (CO₂)
Formaldehyde
- Special protective equipment for fire-fighters : Wear self-contained breathing apparatus and protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Wear personal protective equipment.
Immediately evacuate personnel to safe areas.
Keep people away from and upwind of spill/leak.
Ensure adequate ventilation.
Remove all sources of ignition.
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.
Do not allow run-off from fire fighting to enter drains or water courses.
- Methods for cleaning up : Ventilate the area.
No sparking tools should be used.
Use explosion-proof equipment.
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).

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SECTION 7. HANDLING AND STORAGE**Handling**

Handling : Wear personal protective equipment.
Use only in well-ventilated areas.
Keep container tightly closed.
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 : Keep away from fire, sparks and heated surfaces.
Take precautionary measures against static discharges.
Ensure all equipment is electrically grounded before beginning transfer operations.
Use explosion-proof equipment.
Keep product and empty container away from heat and sources of ignition.
No sparking tools should be used.
No smoking.

Storage

Requirements for storage areas and containers : Store in area designed for storage of flammable liquids. Protect from physical damage.
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 away from incompatible substances.
Container hazardous when empty.
Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.

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

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- 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
Flame retardant antistatic protective clothing
If splashes are likely to occur, wear:
Protective suit
- Respiratory protection : In case of insufficient ventilation wear suitable respiratory equipment.
For rescue and maintenance work in storage tanks use self-contained breathing apparatus.
Use NIOSH approved respiratory protection.
- Hygiene measures : When using, do not eat, drink or smoke.
Wash hands before breaks and immediately after handling the product.
Keep working clothes separately.
Remove and wash contaminated clothing before re-use.
Do not swallow.
Do not breathe vapours or spray mist.
Avoid contact with skin, eyes and clothing.

Exposure Guidelines

Ethanol	64-17-5	NIOSH	REL	1,000 ppm	1,900 mg/m3
		OSHA Z1	PEL	1,000 ppm	1,900 mg/m3
		OSHA Z1A	TWA	1,000 ppm	1,900 mg/m3
		US CA OEL	TWA PEL	1,000 ppm	1,900 mg/m3
		ACGIH	STEL		1,000 ppm
		TX ESL	ST ESL		18800 ug/m3
		TX ESL	AN ESL		1880 ug/m3
Isopropanol	67-63-0	NIOSH	REL	400 ppm	980 mg/m3
		NIOSH	STEL	500 ppm	1,225 mg/m3

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OSHA Z1	PEL	400 ppm	980 mg/m ³
OSHA Z1A	TWA	400 ppm	980 mg/m ³
OSHA Z1A	STEL	500 ppm	1,225 mg/m ³
US CA OEL	TWA PEL	400 ppm	980 mg/m ³
US CA OEL	STEL	500 ppm	1,225 mg/m ³
ACGIH	TWA		200 ppm
ACGIH	STEL		400 ppm
TX ESL	ST ESL		7850 ug/m ³

Screening levels that have the odor designations represent the levels of constituents in the air at which the odor would be a nuisance.

TX ESL	AN ESL		785 ug/m ³
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Screening levels that have the odor designations represent the levels of constituents in the air at which the odor would be a nuisance.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	liquid, clear
Color	:	colourless
Odor	:	slight alcoholic
pH	:	not applicable
Melting point/range	:	<-114 °C (-173 °F) The physical data is that of the main component.
Boiling point/boiling range	:	78.32 °C (172.98 °F) The physical data is that of the main component.
Vapor pressure	:	59.5 hPa at 20 °C (68 °F) The physical data is that of the main component.
Relative vapour density	:	1.6 (Air = 1.0), The physical data is that of the main component.

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Density : 0.811 g/cm³
at 20 °C (68 °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
Potassium superoxide
Bromine Pentafluoride
Acetyl bromide
Acetyl chloride
Platinum
Sodium

Hazardous decomposition products : In case of fire hazardous decomposition products may be produced such as:
Carbon monoxide
Carbon dioxide (CO₂)
Formaldehyde

Hazardous reactions : Hazardous polymerisation does not occur.
Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50 rat
Dose: 7,060 mg/kg
Test substance: Ethanol

Acute oral toxicity : LD50 rat
Dose: 5,045 mg/kg
Test substance: Isopropanol

Acute dermal toxicity : LD50 rabbit
Dose: 12,800 mg/kg
Test substance: Isopropanol

Acute inhalation toxicity : LC50 rat
Dose: 20000 ppm
Exposure time: 10 h
Test substance: Ethanol

Acute inhalation toxicity : LC50 rat

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		Dose: 16000 ppm Exposure time: 8 h Test substance: Isopropanol
Skin irritation	:	rabbit Exposure time: 24 h irritating Test substance: Ethanol
Skin irritation	:	rabbit Mild skin irritation Test substance: Isopropanol
Eye irritation	:	rabbit irritating Test substance: Ethanol
Eye irritation	:	rabbit Severe eye irritation Test substance: Isopropanol
Additional advice	:	Confirmed animal carcinogen with unknown relevance to humans.

SECTION 12. ECOLOGICAL INFORMATION

Biodegradability	:	Biochemical Oxygen Demand (BOD) Biochemical oxygen demand within 5 days Biodegradation: 58 % Test substance: Isopropanol
Toxicity to fish	:	LC0 Species: Leuciscus idus (Golden orfe) Dose: 8,140 mg/l Exposure time: 48 h Test substance: Ethanol
Toxicity to fish	:	flow-through test LC50 Species: Oncorhynchus mykiss Dose: 12,900 mg/l Exposure time: 96 h Test substance: Ethanol
Toxicity to fish	:	LC50 Species: Pimephales promelas (fathead minnow) Dose: 14,200 mg/l

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Exposure time: 96 h Test substance: Ethanol	
Toxicity to fish	: LC50 Species: goldfish Dose: > 5,000 mg/l Exposure time: 24 h Test substance: Isopropanol
Toxicity to fish	: LC50 Species: Leuciscus idus (Golden orfe) Dose: 8,970 mg/l Exposure time: 48 h Test substance: Isopropanol
Toxicity to fish	: LC50 Species: Pimephales promelas (fathead minnow) Dose: 10,400 mg/l Exposure time: 96 h Test substance: Isopropanol
Toxicity to daphnia and other aquatic invertebrates.	: EC50 Species: Daphnia magna (Water flea) Dose: 9,268 mg/l Exposure time: 48 h Test substance: Ethanol
Toxicity to daphnia and other aquatic invertebrates.	: EC50 Species: Daphnia magna (Water flea) Dose: 10,800 mg/l Exposure time: 24 h Test substance: Ethanol
Toxicity to daphnia and other aquatic invertebrates.	: EC50 Species: Daphnia magna (Water flea) Dose: > 100 mg/l Exposure time: 48 h Test substance: Isopropanol
Toxicity to algae	: LC0 Species: Scenedesmus quadricauda Dose: 5,000 mg/l Test substance: Ethanol
Toxicity to algae	: LC50 Species: Desmodesmus subspicatus (green algae) Dose: > 2,000 mg/l Exposure time: 72 h Test substance: Isopropanol

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Toxicity to bacteria	:	LC0 Species: Pseudomonas putida Dose: 6,500 mg/l Test substance: Ethanol
Toxicity to bacteria	:	EC50 Species: Photobacterium phosphoreum Dose: 35,470 mg/l Exposure time: 5 min Test substance: Ethanol
Toxicity to bacteria	:	EC50 Species: Photobacterium phosphoreum Dose: 34,634 mg/l Exposure time: 30 min Test substance: Ethanol
Toxicity to bacteria	:	EC50 Species: Photobacterium phosphoreum Dose: 35,390 mg/l Exposure time: 5 min Test substance: Isopropanol

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Information: Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT	UN-Number	:	1987
	Proper shipping name	:	Alcohols, n.o.s. (Ethanol, Isopropanol)
	Class	:	3
	Packing group	:	II
	Hazard Labels	:	3
IATA	UN Number	:	1987
	Description of the goods	:	Alcohols, n.o.s. (Ethanol, Isopropanol)
	Class	:	3
	Packaging group	:	II
	Hazard Labels	:	3
	Packing instruction (cargo aircraft)	:	307
	Packing instruction (passenger aircraft)	:	305

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	Packing instruction (passenger aircraft)	: Y305
IMDG	Substance No.	: UN 1987
	Description of the goods	: Alcohols, n.o.s. (ETHANOL, ISOPROPANOL)
	Class	: 3
	Packaging group	: II
	Hazard Labels	: 3
	EmS Number	: F-E
	Marine pollutant	: no

SECTION 15. REGULATORY INFORMATION
Inventories

1907/2006 (EU)	: This mixture contains only ingredients which have been subject to a pre-registration according to Regulation (EC) No. 1907/2006 (REACH).
US. Toxic Substances Control Act	: On TSCA Inventory
Australia. Industrial Chemical (Notification and Assessment) Act	: On the inventory, 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 the inventory, or in compliance with the inventory
Korea. Toxic Chemical Control Law (TCCL) List	: On the inventory, or in compliance with the inventory
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	: On the inventory, or in compliance with the inventory
China. Inventory of Existing Chemical Substances	: On the inventory, or in compliance with the inventory
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	: On the inventory, or in compliance with the inventory

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National regulatory information

SARA 313 Components : Isopropanol 67-63-0

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard

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

Massachusetts RTK : Ethanol 64-17-5
: Isopropanol 67-63-0

New Jersey RTK : Ethanol 64-17-5
: Isopropanol 67-63-0

Pennsylvania RTK : Ethanol 64-17-5
: Isopropanol 67-63-0

WHMIS Classification : B2
D2A
D2B
This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16. OTHER INFORMATION

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

Further information

* - Chronic health hazard

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