

512B NPF 125ml L5S

Version 1

Revision Date 05/01/2008

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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : ACCUGLASS® T-12B (312B, 412B, 512B) Spin-On Glass
MSDS Number : 000000011637
Product Use Description : Electronic Materials

Company : Honeywell EM
15128 East Euclid Avenue
SPOKANE, WA 99216

For more information call : 1-480-293-9800
1-509-252-2200
(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 : alcoholic ketone-like

Hazard Summary : Flammable. In use, may form flammable/explosive vapour-air mixture. Harmful if inhaled. May be harmful if swallowed. May be harmful if absorbed through skin. Irritating to eyes, respiratory system and skin. Causes severe digestive tract burns. Causes headache, drowsiness or other effects to the central nervous system. The product may be absorbed through the skin. Repeated exposure may cause skin dryness or cracking. Do not swallow. Avoid contact with skin, eyes and clothing. May cause birth defects.

Potential Health Effects

Skin : May be harmful if absorbed through skin.
Irritating to 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.

Eyes : Irritating to eyes.

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	Causes itching, burning, redness and tearing.
Ingestion	: May be harmful if swallowed. 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. Inhalation of high vapour concentrations can cause CNS-depression and narcosis.
Chronic Exposure	: Causes headache, drowsiness or other effects to the central nervous system. Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering. May cause Causes damage to the following organs: liver, kidneys.
Aggravated Medical Condition	: Skin disorders Respiratory disorder
Target Organs	: Eyes Skin Respiratory system Central nervous system Liver

Carcinogenicity

IARC: Ethanol 64-17-5

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight %
Ethanol	64-17-5	28.00 - 42.00
Propan-2-ol	67-63-0	20.00 - 35.00
Acetone	67-64-1	8.00 - 19.00
Methyl Siloxane Polymer	-	8.00 - 17.00
Water	7732-18-5	<=5.00

SECTION 4. FIRST AID MEASURES

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- Inhalation : 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. Call a physician.
- 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 : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician.

Notes to physician

- Treatment : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

- Flash point : -2.2 - -1.1 °C (28.0 - 30.0 °F)
closed cup
Acetone
- Ignition temperature : 537 °C (999 °F)
- Lower explosion limit : 2.6 %(V)
- Upper explosion limit : 12.8 %(V)
- Suitable extinguishing media : Water spray
Alcohol-resistant foam
Dry chemical
Carbon dioxide (CO₂)
- 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

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produced such as:
Carbon dioxide (CO₂)
Carbon monoxide
Silicon oxides

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. No unprotected exposed skin areas.

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. Avoid breathing vapors, mist or gas. 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. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Shovel into suitable container for disposal.

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.

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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.
Avoid breathing vapors, mist or gas.
Avoid contact with skin, eyes and clothing.

Advice on protection against fire and explosion : Vapours may form explosive mixtures 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

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 refrigerated.
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.

Storage temperature : 0 - 4 °C (32 - 39 °F)

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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- Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
Do not swallow.
Avoid breathing vapors, mist or gas.
Avoid contact with skin, eyes and clothing.
- Engineering measures : Use product only in closed system.
Provide adequate 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 (butyl-rubber)
Gloves must be inspected prior to use.
Replace when worn.
- Skin and body protection : impervious clothing
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 product.
Keep working clothes separately.
Remove and wash contaminated clothing before re-use.
Do not swallow.
Avoid breathing vapors, mist or gas.
Avoid contact with skin, eyes and clothing.

Exposure Guidelines

Ethanol	64-17-5	ACGIH	TWA		1,000 ppm
		NIOSH	REL	1,000 ppm	1,900 mg/m3
		OSHA Z1	PEL	1,000 ppm	1,900 mg/m3

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Isopropanol	67-63-0	OSHA Z1A	TWA	1,000 ppm	1,900 mg/m ³
		US CA OEL	TWA PEL	1,000 ppm	1,900 mg/m ³
		NIOSH	REL	400 ppm	980 mg/m ³
		NIOSH	STEL	500 ppm	1,225 mg/m ³
		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
Acetone	67-64-1	ACGIH	STEL		400 ppm
		ACGIH	TWA		500 ppm
		ACGIH	STEL		750 ppm
		NIOSH	REL	250 ppm	590 mg/m ³
		OSHA Z1	PEL	1,000 ppm	2,400 mg/m ³
		OSHA Z1A	TWA	750 ppm	1,800 mg/m ³
		OSHA Z1A	STEL	1,000 ppm	2,400 mg/m ³
		US CA OEL	TWA PEL	750 ppm	1,780 mg/m ³
		US CA OEL	Ceiling		3,000 ppm
		US CA OEL	STEL	1,000 ppm	2,400 mg/m ³

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: liquid, clear
Color	: colourless
Odor	: alcoholic ketone-like
pH	: no data available

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Boiling point/boiling range : 74 - 78 °C (165 - 172 °F)

Vapor pressure : 243 hPa

Density : 0.8 - 0.9 g/cm³**SECTION 10. STABILITY AND REACTIVITY**Conditions to avoid : Heat, flames and sparks.
Keep away from direct sunlight.Materials to avoid : Oxidizing agents
Halogens
alkaline materials
Strong acids
MetalsHazardous decomposition products : In case of fire hazardous decomposition products may be produced such as:
Carbon monoxide
Carbon dioxide (CO₂)
Silicon oxidesHazardous reactions : Hazardous polymerisation does not occur.
Stable under recommended storage conditions.**SECTION 11. TOXICOLOGICAL INFORMATION**Acute oral toxicity (Component) : Component: 64-17-5 Ethanol
LD50 rat
Dose: 7,060 mg/kgAcute oral toxicity (Component) : Component: 67-63-0 Isopropanol
LD50 rat
Dose: 5,045 mg/kgAcute oral toxicity (Component) : Component: 67-64-1 Acetone
LD50 mouse
Dose: 3 g/kg
LD50 rat
Dose: 5,800 mg/kgAcute dermal toxicity (Component) : Component: 67-63-0 Isopropanol
LD50 rabbit
Dose: 12,800 mg/kg

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Acute dermal toxicity (Component)	Component: 67-64-1 Acetone LD50 rabbit Dose: 20 g/kg
Acute inhalation toxicity (Component)	Component: 64-17-5 Ethanol LC50 mouse Dose: 39 mg/l Exposure time: 4 h LC50 rat Dose: 38.3 mg/l Exposure time: 10 h
Acute inhalation toxicity (Component)	Component: 67-63-0 Isopropanol LC50 rat Dose: 39.36 mg/l Exposure time: 8 h
Acute inhalation toxicity (Component)	Component: 67-64-1 Acetone LC50 Dose: 76 mg/l Exposure time: 4 h
Skin irritation (Component)	Component: 64-17-5 Ethanol rabbit Exposure time: 24 h irritating
Skin irritation (Component)	Component: 67-63-0 Isopropanol rabbit Mild skin irritation
Eye irritation (Component)	Component: 64-17-5 Ethanol rabbit irritating
Eye irritation (Component)	Component: 67-63-0 Isopropanol rabbit Severe eye irritation
Eye irritation (Component)	Component: 67-64-1 Acetone rabbit irritating

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to fish (Component)	:	Component: 64-17-5 Ethanol LC0 Species: Leuciscus idus (Golden orfe)
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		Dose: 8,140 mg/l Exposure time: 48 h
Toxicity to fish (Component)	:	Component: 64-17-5 Ethanol flow-through test LC50 Species: Oncorhynchus mykiss Dose: 12,900 mg/l Exposure time: 96 h
Toxicity to fish (Component)	:	Component: 64-17-5 Ethanol LC50 Species: Pimephales promelas (fathead minnow) Dose: 14,200 mg/l Exposure time: 96 h
Toxicity to fish (Component)	:	Component: 67-63-0 Isopropanol LC50 Species: Pimephales promelas (fathead minnow) Dose: 10,400 mg/l Exposure time: 96 h
Toxicity to fish (Component)	:	Component: 67-64-1 Acetone static test LC50 Species: Oncorhynchus mykiss (rainbow trout) Dose: 5,540 mg/l
Toxicity to fish (Component)	:	Component: 67-64-1 Acetone flow-through test LC50 Species: Pimephales promelas (fathead minnow) Dose: 6,210 mg/l
Toxicity to fish (Component)	:	Component: 67-64-1 Acetone static test LC50 Species: Lepomis macrochirus Dose: 8,300 mg/l
Toxicity to daphnia and other aquatic invertebrates. (Component)	:	Component: 64-17-5 Ethanol EC50 Species: Daphnia magna (Water flea) Dose: 9,268 mg/l Exposure time: 48 h
Toxicity to daphnia and other aquatic invertebrates. (Component)	:	Component: 64-17-5 Ethanol EC50 Species: Daphnia magna (Water flea) Dose: 10,800 mg/l Exposure time: 24 h
Toxicity to daphnia and other aquatic invertebrates. (Component)	:	Component: 67-63-0 Isopropanol EC50 Species: Daphnia magna (Water flea)

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		Dose: > 100 mg/l Exposure time: 48 h
Toxicity to daphnia and other aquatic invertebrates. (Component)	:	Component: 67-64-1 Acetone EC50 Species: Daphnia magna (Water flea) Dose: 0.0039 mg/l Exposure time: 48 h
Toxicity to daphnia and other aquatic invertebrates. (Component)	:	Component: 67-64-1 Acetone EC50 Species: Daphnia magna (Water flea) Dose: 12,700 mg/l Exposure time: 48 h
Toxicity to daphnia and other aquatic invertebrates. (Component)	:	Component: 67-64-1 Acetone EC50 Species: Daphnia magna (Water flea) Dose: 12,600 mg/l Exposure time: 48 h
Toxicity to algae (Component)	:	Component: 64-17-5 Ethanol LC0 Species: Scenedesmus quadricauda Dose: 5,000 mg/l
Toxicity to algae (Component)	:	Component: 67-63-0 Isopropanol LC50 Species: Scenedesmus subspicatus Dose: > 2 g/l Exposure time: 72 h
Toxicity to algae (Component)	:	Component: 67-64-1 Acetone LC50 Species: Dose: > 1 g/l
Toxicity to bacteria (Component)	:	Component: 64-17-5 Ethanol LC0 Species: Pseudomonas putida Dose: 6,500 mg/l
Toxicity to bacteria (Component)	:	Component: 64-17-5 Ethanol EC50 Species: Photobacterium phosphoreum Dose: 35,470 mg/l Exposure time: 5 min
Toxicity to bacteria (Component)	:	Component: 64-17-5 Ethanol EC50 Species: Photobacterium phosphoreum

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	Dose: 34,634 mg/l Exposure time: 30 min
Toxicity to bacteria (Component)	: Component: 67-63-0 Isopropanol EC50 Species: Photobacterium phosphoreum Dose: 35,390 mg/l Exposure time: 5 min
Toxicity to bacteria (Component)	: Component: 67-64-1 Acetone EC50 Species: Photobacterium phosphoreum Dose: 14,500 mg/l Exposure time: 15 min

SECTION 13. DISPOSAL CONSIDERATIONS

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

SECTION 14. TRANSPORT INFORMATION

DOT	UN-Number	: 1993
	Proper shipping name	: FLAMMABLE LIQUID, N.O.S. (Ethanol , Isopropanol , Acetone)
	Class	: 3
	Packing group	: II
	Hazard Label	: 3
IATA	UN Number	: 1993
	Description of the goods	: FLAMMABLE LIQUID, N.O.S. (Ethanol, Isopropanol , Acetone)
	Class	: 3
	Packaging group	: II
	Hazard Label	: 3
	Packing instruction (cargo aircraft)	: 307
	Packing instruction (passenger aircraft)	: 305
	Packing instruction (passenger aircraft)	: Y305
IMDG	Substance No.	: UN 1993

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Description of the goods : FLAMMABLE LIQUID, N.O.S.
(ETHANOL
, ISOPROPANOL
, ACETONE
)
Class : 3
Packaging group : II
Hazard Label : 3
EmS Number : F-E
Marine pollutant : no

SECTION 15. REGULATORY INFORMATION**Inventories**

EU. EINECS : On the inventory, or in compliance with the inventory

US. Toxic Substances Control Act : Subject to low volume exemption

Australia. Industrial Chemical (Notification and Assessment) Act : Not in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133) : Not in compliance with the inventory

Japan. Kashin-Hou Law List : Not in compliance with the inventory

Korea. Toxic Chemical Control Law (TCCL) List : Not 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

National regulatory information

SARA 313 Components : Isopropanol 67-63-0

SARA 311/312 Hazards : Fire Hazard

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Acute Health Hazard

CERCLA Reportable Quantity : 238 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 : Ethanol 64-17-5
: Isopropanol 67-63-0
: Acetone 67-64-1

New Jersey RTK : Ethanol 64-17-5
: Isopropanol 67-63-0
: Acetone 67-64-1

Pennsylvania RTK : Ethanol 64-17-5
: Isopropanol 67-63-0
: Acetone 67-64-1

WHMIS Classification : B2
D2B

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health Hazard	: 0	0
Flammability	: 3	4
Physical Hazard	: 0	
Instability	:	0