Isopropyl Alcohol

NP323-20

Version 2.0 Revision Date 05/29/2019 Print Date 10/17/2019

SECTION 1. IDENTIFICATION

Product name	:	Isopropyl Alcohol
Number	:	000000011380
Product Use Description	:	Solvent
Manufacturer or supplier's details	:	Honeywell International Inc. 1953 South Harvey Street Muskegon, MI 49442
For more information call	:	1-800-368-0050 +1-231-726-3171(Monday-Friday, 9:00am-5:00pm)
In case of emergency call	:	**Medical: 1-800-498-5701 or +1-303-389-1414**
	:	**Transportation (CHEMTREC): 1-800-424-9300 or +1-703-527-3887**
	:	
	:	(24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Form	:	liquid
Color	:	colourless
Odor	:	slight alcohol-like

Classification of the substance or mixture

Classification of the substance or mixture	:	Flammable liquids, Category 2 Eye irritation, Category 2A Specific target organ toxicity - single exposure, Category 3, Central nervous system

GHS Label elements, including precautionary statements

Symbol(s)	:	

Signal word	:	Danger
Hazard statements	:	Highly flammable liquid and vapour. Causes serious eye irritation. May cause drowsiness or dizziness.
Precautionary statements	:	**Prevention:** Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ ventilating/ lighting/ equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/ eye protection/ face protection. **Response:** IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER/doctor if you feel unwell. If eye irritation persists: Get medical advice/ attention. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. **Storage:** Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up. **Disposal:** Dispose of contents/ container to an approved waste disposal plant.

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

Formula : C3H8O

Chemical nature : Substance

Chemical name	CAS-No.	Concentration
Isopropanol	67-63-0	100.00 %

SECTION 4. FIRST AID MEASURES

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 if irritation develops or persists.

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. Immediate medical attention is required. Never give anything by mouth to an unconscious person. Call a physician.

Notes to physician

Indication of immediate medical attention and special treatment needed, if necessary : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical Cool closed containers exposed to fire with water spray.
Unsuitable extinguishing media	:	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards during firefighting	:	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)
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus and protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	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. Avoid breathing vapours, mist or gas. Avoid contact with skin, eyes and clothing.
Environmental precautions	:	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Discharge into the environment must be avoided. Do not flush into surface water or sanitary sewer system. Do not allow run-off from fire fighting to enter drains or water courses.
Methods and materials for	:	Ventilate the area.

containment and cleaning up	No sparking tools should be used. Use explosion-proof equipment. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Handling

Precautions for safe handling	:	Wear personal protective equipment. Use only in well-ventilated areas. Keep container tightly closed. Do not smoke. Do not swallow. Avoid breathing vapours, mist or gas. 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

Conditions for safe storage, including any incompatibilities	:	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 vapour 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 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. Avoid breathing vapours, mist or gas. Avoid contact with skin, eyes and clothing.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis

Isopropanol	67-63-0	TWA : Time weighted average	(200 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values
Isopropanol	67-63-0	STEL : Short term exposure limit	(400 ppm)	2008	ACGIH:US. ACGIH Threshold Limit Values
Isopropanol	67-63-0	REL : Recommended exposure limit (REL):	980 mg/m3 (400 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Isopropanol	67-63-0	STEL : Short term exposure limit	1,225 mg/m3 (500 ppm)	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards
Isopropanol	67-63-0	PEL : Permissible exposure limit	980 mg/m3 (400 ppm)	02 2006	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Isopropanol	67-63-0	TWA : Time weighted average	980 mg/m3 (400 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)
Isopropanol	67-63-0	STEL : Short term exposure limit	1,225 mg/m3 (500 ppm)	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	liquid
Color	:	colourless
Odor	:	slight alcohol-like
Odor threshold	:	Note: no data available
pH	:	Note: Not applicable
Melting point/range	:	-88 °C
Boiling point/boiling range	:	82.3 °C
Flash point	:	54 °F (12 °C) Method: closed cup
Evaporation rate	:	Note: no data available
Lower explosion limit	:	2.0 %(V)
Upper explosion limit	:	12.0 %(V)
Vapor pressure	:	44 hPa at 20 °C(68 °F)
Vapor density	:	2.1 Note: (Air = 1.0)
Density	:	0.785 g/cm3 at 20 °C
Water solubility	:	Note: completely soluble

Partition coefficient: n-octanol/water	:	Note: no data available
Ignition temperature	:	399 °C
Decomposition temperature	:	Note: no data available
Viscosity, dynamic	:	2.1 mPa.s at 25 °C
Viscosity, kinematic	:	Note: no data available
Molecular weight	:	60.11 g/mol

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	Hazardous polymerisation does not occur.
Conditions to avoid	:	Heat, flames and sparks. Keep away from direct sunlight.
Incompatible materials	:	Strong acids Strong oxidizing agents Keep away from metals. Acetaldehyde Aluminium Chlorine Ethylene oxide Isocyanates Oxygen 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 (CO2)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	:	LD50: 5,045 mg/kg Species: Rat
Acute inhalation toxicity	:	LC50: 16000 ppm Exposure time: 8 h Species: Rat
Acute dermal toxicity	:	LD50: 12,800 mg/kg Species: Rabbit
Skin irritation	:	Species: Rabbit Result: slight irritation
Eye irritation	:	Species: Rabbit Result: Severe eye irritation

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to fish	:	LC50: > 5 g/l Exposure time: 24 h Species: Carassius auratus (goldfish)
	:	LC50: 8,970 mg/l Exposure time: 48 h Species: Leuciscus idus (Golden orfe)
	:	LC50: 10,400 mg/l Exposure time: 96 h

Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates	:	EC50: > 100 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea)
Toxicity to algae	:	LC50: > 2,000 mg/l Exposure time: 72 h Species: Desmodesmus subspicatus (green algae)
Toxicity to bacteria	:	EC50: 35,390 mg/l Exposure time: 5 min Species: Photobacterium phosphoreum

Elimination information (persistence and degradability)

Biodegradability	:	Biochemical Oxygen Demand (BOD) Biochemical oxygen demand within 5 days Value: 58 %

Further information on ecology

Additional ecological information	:	Accumulation in aquatic organisms is unlikely.

SECTION 13. DISPOSAL CONSIDERATIONS

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

SECTION 14. TRANSPORT INFORMATION

DOT	UN/ID No.	:	UN 1219
	Proper shipping name	:	Isopropanol
	Class		3
	Packing group		II
	Hazard Labels		3

IATA	UN/ID No.	:	UN 1219
	Description of the goods	:	Isopropanol
	Class	:	3
	Packaging group	:	II
	Hazard Labels	:	3
	Packing instruction (cargo aircraft)	:	364
	Packing instruction (passenger aircraft)	:	353
	Packing instruction (passenger aircraft)	:	Y341
IMDG	UN/ID No.	:	UN 1219
	Description of the goods	:	Isopropanol
	Class	:	3
	Packaging group	:	II
	Hazard Labels	:	3
	EmS Number	:	F-E, S-D
	Marine pollutant	:	no

SECTION 15. REGULATORY INFORMATION

Inventories

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)	:	All components of this product are on the Canadian DSL
Japan. Kashin-Hou Law List	:	On the inventory, or in compliance with the inventory
Korea. Existing Chemicals Inventory (KECI)	:	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

National regulatory information

SARA 302 Components : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components : The following components are subject to reporting levels established by SARA Title III, Section 313:
: Isopropanol 67-63-0

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

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

Massachusetts RTK : Isopropanol 67-63-0

New Jersey RTK : Isopropanol 67-63-0

Pennsylvania RTK : Isopropanol 67-63-0

SECTION 16. OTHER INFORMATION

		HMIS III	NFPA
Health hazard	:	2*	1
Flammability	:	3	3

Physical Hazard	:	0
Instability	:	0

* - Chronic health hazard
Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.
Previous Issue Date: 03/27/2014
Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group