SAFETY DATA SHEET

Isopropyl Alcohol 70%

BDH1131

Version 1.5 | Revision Date 03/23/2015 | Print Date 05/08/2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Isopropyl Alcohol 70%
MSDS Number	:	000000011699
Product Use Description	:	Solvent
Manufactured for	:	VWR International LLC Radnor Corporate Center Building One Suite 200 100 Matsonford Road Radnor PA 19087
For more information call	:	(Monday-Friday,8.00am-5:00pm) 1-800-932-5000
In case of emergency call	:	(24 hours/day, 7 days/week) 1-800-424-9300(USA Only) **For Transportation Emergencies:** 1-800-424-9300 (CHEMTREC - Domestic) 1-613-996-6666 (CANUTEC - Canada)

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Form	:	liquid, clear
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 and 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 or doctor/ physician 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 in accordance with local, state & federal regulations.

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 : Mixture

Chemical Name	CAS-No.	Concentration
Isopropanol	67-63-0	70.00 %
Water	7732-18-5	30.00 %

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

Treatment	:	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 : 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.
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.
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 : 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

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 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, clear

Color : colourless

Odor : slight alcohol-like

pH	:	Note: Not applicable
Melting point/freezing point	:	-62.1 °C
Boiling point/boiling range	:	87.7 °C
Flash point	:	53.1 °F (11.7 °C) Method: closed cup
Evaporation rate	:	1.3 Method: Compared to Butyl acetate.
Lower explosion limit	:	2 %(V)
Upper explosion limit	:	12.0 %(V)
Vapor pressure	:	Note: no data available
Vapor density	:	2.1 Note: (Air = 1.0)
Density	:	0.785 g/cm3 at 25 °C Note: The information regarding the density is that of the pure substance.
Water solubility	:	Note: completely soluble
Ignition temperature	:	399 °C Note: Information regarding ignition temperature applies only to the solvent.

Molecular weight	:	60.11 g/mol

SECTION 10. STABILITY AND REACTIVITY

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 to avoid	:	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 Isopropanol	:	LD50: 5,045 mg/kg Species: Rat

Acute inhalation toxicity
Isopropanol : LC50: 39.36 mg/l 16000 ppm
Exposure time: 8 h
Species: Rat

Acute dermal toxicity
Isopropanol : LD50: 12,800 mg/kg
Species: Rabbit

Skin irritation
Isopropanol : Species: Rabbit
Result: slight irritation

Eye irritation
Isopropanol : Species: Rabbit
Result: Severe eye irritation

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to fish
Isopropanol : LC50: > 5,000 mg/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

Isopropanol	:	EC50: > 100 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea)

Toxicity to algae

Isopropanol	:	LC50: > 2,000 mg/l Exposure time: 72 h Species: Desmodesmus subspicatus (green algae)

Toxicity to bacteria

Isopropanol	:	EC50: 35,390 mg/l Exposure time: 5 min Species: Photobacterium phosphoreum

Biodegradability

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

Further information on ecology

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods	:	Dispose of contents/ container in accordance with local, state, and federal regulations.

SECTION 14. TRANSPORT INFORMATION

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

IATA	UN/ID No.	:	UN 1219
	Description of the goods	:	ISOPROPANOL SOLUTION
	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 SOLUTION
	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. 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

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
WHMIS Classification	:	B2: Flammable liquid D2B: Toxic Material Causing Other Toxic Effects 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*	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: 06/20/2012
Prepared by Honeywell Performance Materials and Technologies Product Stewardship Group