Safety Data Sheet
Isopropanol 99%

Version 1.3 Revision Date: 09/03/2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Isopropanol 99%
Product Use Description : Alcohol solvent

Manufacturer or supplier's details

Company : SimChem Corporation
Address 311 Sarasota Center Blvd.
Sarasota, Florida 34240

Emergency telephone number:
Transport North America: CHEMTREC 800.424.9300

Additional Information: : E-Mail: simchem@verizon.net
SDS Requests: 1-941-377-9929
SDS Requests Fax: 1-941-377-9539
Website: www.simchem.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 2

Eye irritation : Category 2A

Specific target organ toxicity - single exposure : Category 3 (Central nervous system)

GHS Label element

Hazard pictograms :

Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements : **Prevention:**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

Carcinogenicity:

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP 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.

Emergency Overview

Appearance	liquid
Colour	Clear, Colorless
Odour	alcohol-like
Hazard Summary	No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Hazardous components

CAS-No.	Chemical Name	Concentration (%)
67-63-0	Isopropyl alcohol	90 - 100

Molecular formula : (CH3)2 CHOH

Synonyms : Isopropanol Anhydrous/Isopropyl Alcohol ACS Grade/Isopropyl Alcohol/TT I 735 Grade A/Velvasol 425/Value Grade Isopropanol, TT I 735A Grade B

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Consult a physician after significant exposure.
If unconscious place in recovery position and seek medical advice.

In case of skin contact : If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed	: Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	: High volume water jet
Specific hazards during firefighting	: Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	: Carbon oxides
Specific extinguishing methods	: Use a water spray to cool fully closed containers.
Further information	: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments.
Special protective equipment for firefighters	: Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

NFPA Flammable and Combustible Liquids Classification:
Flammable Liquid Class IB

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : No smoking.
Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully re-sealed and kept upright to prevent leakage.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

CAS-No.	Components	Value type	Control parame-	Basis

		(Form of exposure)	ters / Permissible concentration	
67-63-0	Isopropyl alcohol	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m3	NIOSH REL
		ST	500 ppm 1,225 mg/m3	NIOSH REL
		TWA	400 ppm 980 mg/m3	OSHA Z-1
		TWA	400 ppm 980 mg/m3	OSHA P0
		STEL	500 ppm 1,225 mg/m3	OSHA P0

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Isopropyl alcohol	67-63-0	Acetone	In urine	End of shift at end of workweek	40 mg/l	ACGIH BEI

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.
In the case of vapour formation use a respirator with an approved filter.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: Clear, Colorless
Odour	: alcohol-like
Odour Threshold	: No data available
pH	: 7 @ 20 - 25 °C (68 - 77 °F)
Freezing Point (Melting point/freezing point)	: -92 - -89 °C (-134 - -128 °F)
Boiling Point (Boiling point/boiling range)	: 82 - 82.3 °C (180 - 180.1 °F)
Flash point	: 12 - 13 °C (54 - 55 °F)
Evaporation rate	: 2 (Butyl Acetate = 1)
Flammability (solid, gas)	: No data available
Burning rate	: No data available
Upper explosion limit	: 12 - 19 %(V)
Lower explosion limit	: 2.0 - 3.3 %(V)
Vapour pressure	: 33 - 45.4 mmHg @ 20 °C (68 °F)
Relative vapour density	: 2.1 @ 15 - 20 °C (59 - 68 °F) (Air = 1.0)
Relative density	: 0.7855 - 0.79 @ 20 °C (68 °F) Reference substance: (water = 1)
Density	: 0.79 g/cm3 @ 20 °C (68 °F)
Bulk density	: No data available
Solubility(ies)	
Water solubility	: completely miscible

Solubility in other sol-	:	No data available

vents

Partition coefficient: n-octanol/water	:	log Pow: 0.05 @ 25 °C (77 °F)
Auto-ignition temperature	:	363 - 425 °C
Thermal decomposition	:	No data available
Viscosity		
Viscosity, dynamic	:	2.4 - 2.43 mPa.s @ 20 °C (68 °F)
Viscosity, kinematic	:	2.6 mm2/s @ 25 °C (77 °F)

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No hazards to be specially mentioned.
Conditions to avoid	:	Keep away from heat, flame, sparks and other ignition sources.
Incompatible materials	:	acetaldehyde Aldehydes aluminum Alkali metals Amines Chlorine Ethylene oxide halogens Iron isocyanates Strong acids Strong oxidizing agents
Hazardous decomposition products	:	Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Components:

67-63-0:

Acute oral toxicity	:	LD50 (Rat): 5,045 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 16000 ppm
Acute dermal toxicity	:	LD50 (Rabbit): 12,800 mg/kg

Skin corrosion/irritation

Product:

Result: Irritating to skin.

Components:

67-63-0:

Species: Rabbit
Result: Mild skin irritation

Serious eye damage/eye irritation

Product:

Result: Irritating to eyes.

Components:

67-63-0:

Species: Rabbit
Result: Irritating to eyes.

Respiratory or skin sensitisation

Germ cell mutagenicity

Components:

67-63-0:

Genotoxicity in vitro	:	Test Type: Ames test Test species: Salmonella typhimurium Result: negative
Genotoxicity in vivo	:	Test Type: In vivo micronucleus test Test species: Mouse Method: OECD Test Guideline 474

Result: negative

Germ cell mutagenicity- Assessment : Did not show mutagenic effects in animal experiments.

Carcinogenicity

Components:

67-63-0: Species: Rat NOAEL: 5,000 ppm

Method: OECD Test Guideline 451

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Reproductive toxicity

Components:

67-63-0:

Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.

STOT - single exposure

Product: No data available

Components:

67-63-0:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Central nervous system	May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.	

STOT - repeated exposure

Product: No data available

Components:

67-63-0: No data available

Aspiration toxicity

Product:
No aspiration toxicity classification

Further information

Product:
Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:
67-63-0:

Toxicity to fish	: LC50 (Pimephales promelas (fathead minnow)): > 1,000 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: LC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h
Toxicity to algae	: Remarks: No data available

Persistence and degradability

Product:

Biodegradability	: Remarks: Readily biodegradable

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
No data available

Product:

Regulation	40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks		This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	:	No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Dispose of in accordance with all applicable local, state and federal regulations.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

IATA (International Air Transport Association): UN1219, Isopropanol, 3, II, Flash Point:12 - 13 °C(54 - 55 °F)

IMDG (International Maritime Dangerous Goods): UN1219, ISOPROPANOL, 3, II

DOT (Department of Transportation): UN1219, Isopropanol, 3, II

SECTION 15. REGULATORY INFORMATION

OSHA Hazards	:	Flammable liquid, Moderate skin irritant, Moderate eye irritant
WHMIS Classification	:	B2: Flammable liquid D2B: Toxic Material Causing Other Toxic Effects

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Fire Hazard
Immediate (Acute) Health Hazard

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

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

67-63-0	Isopropyl alcohol	100 %

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. Clean-Water Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

67-63-0	Isopropyl alcohol	90 - 100 %

Pennsylvania Right To Know

67-63-0	Isopropyl alcohol	90 - 100 %

New Jersey Right To Know

67-63-0	Isopropyl alcohol	90 - 100 %

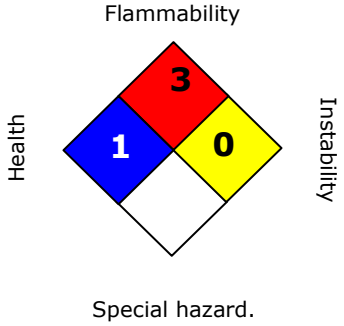
California Prop 65 This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

United States TSCA Inventory	:	y (positive listing) (On TSCA Inventory)
Canadian Domestic Substances List (DSL)	:	y (positive listing) (All components of this product are on the Canadian DSL.)
Australia Inventory of Chemical Substances (AICS)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
New Zealand. Inventory of Chemical Substances	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Japan. ENCS - Existing and New Chemical Substances Inventory	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Korea. Korean Existing Chemicals Inventory (KECI)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	:	y (positive listing) (On the inventory, or in compliance with the inventory)
China. Inventory of Existing Chemical Substances in China (IECSC)	:	y (positive listing) (On the inventory, or in compliance with the inventory)

SECTION 16. OTHER INFORMATION**Further information**

NFPA:



HMIS III:

HEALTH	**1**
FLAMMABILITY	**3**
PHYSICAL HAZARD	**0**

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 =Extreme, * = Chronic

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substanc-	NFPA	National Fire Protection Agency

	es List		
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philipines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Compositon, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50		Lethal Concentration 50%	