

SECTION 1: Identification

1.1. Identification

Product form : Mixtures
Product name : Hydrochloric Acid, 0.2N (0.2M) in Isopropanol
Product code : LC15410

1.2. Recommended use and restrictions on use

Use of the substance/mixture : For laboratory and manufacturing use only.
Recommended use : Laboratory chemicals
Restrictions on use : Not for food, drug or household use

1.3. Supplier

LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable liquids Category 2	H225	Highly flammable liquid and vapor
Skin corrosion/irritation Category 1C	H314	Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage
Specific target organ toxicity (single exposure) Category 3	H335	May cause respiratory irritation

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS02

GHS05

GHS07

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H225 - Highly flammable liquid and vapor
H314 - Causes severe skin burns and eye damage
H335 - May cause respiratory irritation

Precautionary statements (GHS-US) :

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
P260 - Do not breathe mist, vapors, spray
P264 - Wash exposed skin thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves, protective clothing, eye protection, face protection
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact

Hydrochloric Acid, 0.2N (0.2M) in Isopropanol

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a poison center or doctor/physician
P363 - Wash contaminated clothing before reuse
P370+P378 - In case of fire: Use carbon dioxide (CO₂), powder, alcohol-resistant foam to extinguish
P403+P235 - Store in a well-ventilated place. Keep cool
P405 - Store locked up
P501 - Dispose of contents/container to comply with local, state and federal regulations
If inhaled: Remove person to fresh air and keep comfortable for breathing

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : None.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Isopropyl Alcohol (2-Propanol)	(CAS-No.) 67-63-0	99.28	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H335
Hydrochloric Acid, 37% w/w	(CAS-No.) 7647-01-0	0.72	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 3, H402

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.
First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Immediately call a poison center or doctor/physician.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : Causes severe skin burns and eye damage.
Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : Burns. Cracking of the skin.
Symptoms/effects after eye contact : Causes serious eye damage.
Symptoms/effects after ingestion : Burns. Central nervous system depression. Dizziness. Drunkenness. Nausea. Vomiting.

4.3. Immediate medical attention and special treatment, if necessary

Hospitalize at once. Doctor: gastric lavage is not recommended.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : Highly flammable liquid and vapor.
Explosion hazard : May form flammable/explosive vapor-air mixture.
Reactivity : Thermal decomposition generates : Corrosive vapors.

Hydrochloric Acid, 0.2N (0.2M) in Isopropanol

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

6.1.1. For non-emergency personnel

- Protective equipment : Safety glasses. Gloves. Protective clothing.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.
- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No naked lights. No smoking. Use only non-sparking tools. Do not breathe mist, vapors, spray. Use only outdoors or in a well-ventilated area.
- Hygiene measures : Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/... equipment. Comply with applicable regulations.
- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Heat sources, Ignition sources, incompatible materials. Keep in fireproof place. Keep container tightly closed.
- Incompatible products : metals. Strong oxidizers. Strong bases.
- Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Hydrochloric Acid, 37% w/w (7647-01-0)		
ACGIH	ACGIH Ceiling (mg/m ³)	2.98 mg/m ³
ACGIH	ACGIH Ceiling (ppm)	2 ppm
OSHA	OSHA PEL (Ceiling) (mg/m ³)	7 mg/m ³
OSHA	OSHA PEL (Ceiling) (ppm)	5 ppm
IDLH	US IDLH (ppm)	50 ppm
NIOSH	NIOSH REL (ceiling) (mg/m ³)	7 mg/m ³
NIOSH	NIOSH REL (ceiling) (ppm)	5 ppm

Hydrochloric Acid, 0.2N (0.2M) in Isopropanol

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Isopropyl Alcohol (2-Propanol) (67-63-0)

ACGIH	ACGIH TWA (ppm)	200 ppm (2-propanol; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	ACGIH STEL (ppm)	400 ppm (2-propanol; USA; Short time value; TLV - Adopted Value)
OSHA	OSHA PEL (TWA) (mg/m ³)	980 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	400 ppm
IDLH	US IDLH (ppm)	2000 ppm
NIOSH	NIOSH REL (TWA) (mg/m ³)	980 mg/m ³
NIOSH	NIOSH REL (TWA) (ppm)	400 ppm
NIOSH	NIOSH REL (STEL) (mg/m ³)	1225 mg/m ³
NIOSH	NIOSH REL (STEL) (ppm)	500 ppm

8.2. Appropriate engineering controls

Appropriate engineering controls : Provide adequate general and local exhaust ventilation. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Chemical resistant apron. Face shield. Gas mask. Gloves. Protective clothing. Safety glasses.



Hand protection:

Wear protective gloves

Eye protection:

Chemical goggles or face shield

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Respiratory protection not required in normal conditions

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear, colorless liquid.
Color	: Colorless
Odor	: Stuffy odour Alcohol odour
Odor threshold	: 3 - 610 ppm 8 - 1499 mg/m ³
pH	: No data available
Melting point	: -88 °C
Freezing point	: No data available
Boiling point	: 82 °C
Critical temperature	: 235 °C

Hydrochloric Acid, 0.2N (0.2M) in Isopropanol

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Flash point	: 12 °C
Relative evaporation rate (butyl acetate=1)	: 2.3
Flammability (solid, gas)	: Highly flammable liquid and vapor.
Vapor pressure	: 44 hPa
Vapor pressure at 50 °C	: 229 hPa
Relative vapor density at 20 °C	: 2.1
Relative density	: 0.79
Relative density of saturated gas/air mixture	: 1.05
Specific gravity / density	: 785 kg/m ³
Solubility	: Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in oils/fats. Soluble in chloroform.
Log Pow	: No data available
Auto-ignition temperature	: 399 °C
Decomposition temperature	: No data available
Viscosity, kinematic	: 2.5316 mm ² /s
Viscosity, dynamic	: No data available
Explosion limits	: 2 - 13 vol %
Explosive properties	: No data available.
Oxidizing properties	: None.

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapors.

10.2. Chemical stability

Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions

Can form explosive mixture with air. Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame.

10.5. Incompatible materials

Strong oxidizers. metals. Halogens. Strong bases.

10.6. Hazardous decomposition products

Hydrogen chloride. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure : Inhalation; Skin and eye contact

Acute toxicity : Not classified

Hydrochloric Acid, 37% w/w (7647-01-0)	
LD50 oral rat	700 mg/kg
LD50 dermal rabbit	5010 mg/kg
ATE US (oral)	700 mg/kg body weight
ATE US (dermal)	5010 mg/kg body weight
Isopropyl Alcohol (2-Propanol) (67-63-0)	
LD50 dermal rabbit	12870 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402; 16.4; Rabbit)
LC50 inhalation rat (mg/l)	73 mg/l/4h (Rat)
ATE US (oral)	5045 mg/kg body weight
ATE US (dermal)	12870 mg/kg body weight
ATE US (vapors)	73 mg/l/4h

Hydrochloric Acid, 0.2N (0.2M) in Isopropanol

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Isopropyl Alcohol (2-Propanol) (67-63-0)	
ATE US (dust, mist)	73 mg/l/4h

Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Hydrochloric Acid, 37% w/w (7647-01-0)	
IARC group	3 - Not classifiable

Isopropyl Alcohol (2-Propanol) (67-63-0)	
IARC group	3 - Not classifiable

Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: May cause respiratory irritation.
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Burns. Cracking of the skin.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Burns. Central nervous system depression. Dizziness. Drunkenness. Nausea. Vomiting.

SECTION 12: Ecological information

12.1. Toxicity

Hydrochloric Acid, 37% w/w (7647-01-0)	
LC50 fish 1	282 mg/l (LC50; 96 h)
EC50 Daphnia 1	< 56 mg/l (EC50; 72 h)

Isopropyl Alcohol (2-Propanol) (67-63-0)	
LC50 fish 2	9640 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Pimephales promelas; Flow-through system; Fresh water; Experimental value)
EC50 Daphnia 2	13299 mg/l (EC50; Other; 48 h; Daphnia magna)
Threshold limit algae 1	> 1000 mg/l (EC50; UBA; 72 h; Scenedesmus subspicatus)

12.2. Persistence and degradability

Hydrochloric Acid, 0.2N (0.2M) in Isopropanol	
Persistence and degradability	Not established.

Hydrochloric Acid, 37% w/w (7647-01-0)	
Persistence and degradability	Biodegradability: not applicable. No test data on mobility of the components available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable

Isopropyl Alcohol (2-Propanol) (67-63-0)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No test data on mobility of the substance available.
Biochemical oxygen demand (BOD)	1.19 g O ₂ /g substance
Chemical oxygen demand (COD)	2.23 g O ₂ /g substance
ThOD	2.4 g O ₂ /g substance

Hydrochloric Acid, 0.2N (0.2M) in Isopropanol

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

12.3. Bioaccumulative potential

Hydrochloric Acid, 0.2N (0.2M) in Isopropanol	
Bioaccumulative potential	Not established.
Hydrochloric Acid, 37% w/w (7647-01-0)	
Log Pow	0.25 (QSAR)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Isopropyl Alcohol (2-Propanol) (67-63-0)	
Log Pow	0.05 (Weight of evidence approach; Other; 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

Hydrochloric Acid, 37% w/w (7647-01-0)	
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.
Isopropyl Alcohol (2-Propanol) (67-63-0)	
Surface tension	0.021 N/m (25 °C)

12.5. Other adverse effects

Effect on the global warming	: No known effects from this product.
GWPmix comment	: No known effects from this product.
Other information	: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.
Additional information	: Handle empty containers with care because residual vapors are flammable.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description	: UN2924 Flammable liquids, corrosive, n.o.s., 3, II
UN-No.(DOT)	: UN2924
Proper Shipping Name (DOT)	: Flammable liquids, corrosive, n.o.s.
Transport hazard class(es) (DOT)	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Packing group (DOT)	: II - Medium Danger
Hazard labels (DOT)	: 3 - Flammable liquid 8 - Corrosive



DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
DOT Symbols	: G - Identifies PSN requiring a technical name

Hydrochloric Acid, 0.2N (0.2M) in Isopropanol

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

DOT Special Provisions (49 CFR 172.102)	: B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable. IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters"
Other information	: No supplementary information available.

SECTION 15: Regulatory information

15.1. US Federal regulations

Hydrochloric Acid, 0.2N (0.2M) in Isopropanol	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Hydrochloric Acid, 37% w/w	CAS-No. 7647-01-0	0.72%
Isopropyl Alcohol (2-Propanol)	CAS-No. 67-63-0	99.28%

Hydrochloric Acid, 37% w/w (7647-01-0)	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

Hydrochloric Acid, 0.2N (0.2M) in Isopropanol

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Revision date : 10/11/2017

Other information : None.

Full text of H-phrases: see section 16:

H225	Highly flammable liquid and vapor
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H402	Harmful to aquatic life

NFPA health hazard

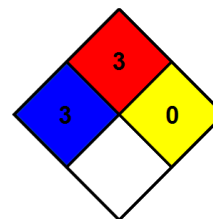
: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard

: 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability

: 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB & IC)

Physical

: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection

: H
H - Splash goggles, Gloves, Synthetic apron, Vapor respirator

SDS US LabChem

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