### Safety Data Sheet



### Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

#### 1.1 Product identifier

Product Name

• Cu BTA Dilution, 1:200

Synonyms

• IPA/1-H Benzotriazole Mixture

Product Code • 70026

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s) • Copper CMP

#### 1.3 Details of the supplier of the safety data sheet

Manufacturer • Air Liquide

2700 Post Oak Blvd. Houston, TX 77056 United States www.us.airliquide.com

www.us.airliquide.com sds@airliquide.com

Telephone (Technical) • 713-896-2896 Telephone (Technical) • 800-819-1704

### 1.4 Emergency telephone number

Manufacturer 800-424-9300 - CHEMTREC

Manufacturer +1 703-527-3887 - Outside United States

#### Section 2: Hazards Identification

#### EU/EEC

According to Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010] According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

### 2.1 Classification of the substance or mixture

CLP
 Not classified - Classification criteria not met
 Not classified - Classification criteria not met

### 2.2 Label Elements

**CLP** 

Hazard statements . No label element(s) required

DSD/DPD

Risk phrases . No label element(s) required

### 2.3 Other Hazards

 According to Regulation (EC) No. 1272/2008 (CLP) this material is not considered hazardous.

**DSD/DPD**• According to European Directive 1999/45/EC this preparation is not considered

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#### dangerous.

### **United States (US)**

According to OSHA 29 CFR 1910.1200 HCS

#### 2.1 Classification of the substance or mixture

**OSHA HCS 2012** 

Not classified - Classification criteria not met

#### 2.2 Label elements

**OSHA HCS 2012** 

Hazard statements . No label element(s) required

#### 2.3 Other hazards

**OSHA HCS 2012** 

 This product is not considered hazardous under the U.S. OSHA 29 CFR 1910.1200 Hazard Communication Standard.

#### Canada

**According to WHMIS** 

### 2.1 Classification of the substance or mixture

**WHMIS** 

Not classified - Classification criteria not met

#### 2.2 Label elements

WHMIS

No label element(s) required

#### 2.3 Other hazards

**WHMIS** 

 In Canada, the product mentioned above is not considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

#### 2.4 Other information

**NFPA** 



# Section 3 - Composition/Information on Ingredients

#### 3.1 Substances

 Material does not meet the criteria of a substance in accordance with Regulation (EC) No 1272/2008.

#### 3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	H D50/LC50	Classifications According to Regulation/Directive	Comments

Isopropyl alcohol	CAS:67-63-0 EC Number:200- 661-7 EU Index:603- 117-00-0	1%	Inhalation-Rat LC50 • 16000 ppm 8 Hour(s) Skin-Rabbit LD50 • 12800 mg/kg Ingestion/Oral-Rat LD50 • 5000 mg/kg	EU DSD/DPD: Annex I: F; R11 Xi; R36 R67 EU CLP: Annex VI: Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3: Narc., H336 OSHA HCS 2012: Flam. Liq. 2; Eye Irrit. 2; Skin Irrit. 2; STOT SE 3: Narc.	NDA
Deionized Water and other components	NDA	99%	NDA	EU DSD/DPD: Not Hazardous EU CLP: Not Hazardous OSHA HCS 2012: Not Hazardous	NDA

None of the other components contribute significant additional hazards at the concentrations present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards, Canadian Workplace Hazardous Materials Identification System Standards (CPR 4), EU Directive 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010] and EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD).

See Section 16 for full text of H-statements and R-phrases.

#### Section 4 - First Aid Measures

### 4.1 Description of first aid measures

Inhalation

 Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing.

Skin

 In case of contact with substance, immediately flush skin with running water for at least 20 minutes.

Eye

 In case of contact with substance, immediately flush eyes with running water for at least 20 minutes.

Ingestion

• If swallowed, rinse mouth with water (only if the person is conscious) If large quantities are swallowed, call a physician immediately.

### 4.2 Most important symptoms and effects, both acute and delayed

• Refer to Section 11 - Toxicological Information.

# 4.3 Indication of any immediate medical attention and special treatment needed

**Notes to Physician** 

 All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

# Section 5 - Firefighting Measures

# 5.1 Extinguishing media

Suitable Extinguishing Media • LARGE FIRE: Water spray, fog or regular foam.

SMALL FIRES: Dry chemical, CO2, water spray or regular foam.

Unsuitable Extinguishing Media

No data available.

### 5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards

Some may burn but none ignite readily.

**Hazardous Combustion Products** 

No data available.

# 5.3 Advice for firefighters

Move containers from fire area if you can do it without risk.
 Wear positive pressure self-contained breathing apparatus (SCBA).
 Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection.

#### **Section 6 - Accidental Release Measures**

### 6.1 Personal precautions, protective equipment and emergency procedures

**Personal Precautions** 

 Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact.

**Emergency Procedures** 

Keep unauthorized personnel away. Stay upwind.

### 6.2 Environmental precautions

Avoid run off to waterways and sewers.

### 6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

Stop leak if you can do it without risk.
 SMALL SPILLS: Take up with sand or other non-combustible absorbent material and place into containers for later disposal.
 LARGE SPILLS: Dike far ahead of liquid spill for later disposal.

#### 6.4 Reference to other sections

 Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

### Section 7 - Handling and Storage

### 7.1 Precautions for safe handling

Handling

Use only with adequate ventilation. Use good safety and industrial hygiene practices.
 Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

### 7.2 Conditions for safe storage, including any incompatibilities

Storage

Store in a cool, dry, well-ventilated place.

### 7.3 Specific end use(s)

Refer to Section 1.2 - Relevant identified uses.

# Section 8 - Exposure Controls/Personal Protection

### 8.1 Control parameters

	Exposure Limits/Guidelines						
	Result	ACGIH	Canada Ontario	Canada Quebec	China	France	
Isopropyl alcohol	STELs	400 ppm STEL	400 ppm STEL	500 ppm STEV; 1230 mg/m3 STEV	700 mg/m3 STEL	400 ppm STEL [VLCT]; 980 mg/m3 STEL [VLCT]	
(67-63-0)	TWAs	200 ppm TWA	200 ppm TWA	400 ppm TWAEV; 985 mg/m3 TWAEV	350 mg/m3 TWA	Not established	
		E	xposure Limits/Gu	idelines (Con't.)			
	Result	Germany DFG	Germany TRGS	Ireland	Israel	NIOSH	
	STELs	Not established	Not established	400 ppm STEL	400 ppm STEL	500 ppm STEL; 1225 mg/m3 STEL	
			200 ppm TWA AGW (The risk of damage to the embryo or fetus can be				

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Isopropyl alcohol (67-63-0)	TWAs	Not established	excluded when AGW and BGW values are observed, exposure factor 2); 500 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2)	200 ppm TWA	200 ppm TWA	400 ppm TWA; 980 mg/m3 TWA
	Ceilings	400 ppm Peak; 1000 mg/m3 Peak	Not established	Not established	Not established	Not established
	MAKs	200 ppm TWA MAK; 500 mg/m3 TWA MAK	Not established	Not established	Not established	Not established
Exposure Limits/Guidelines (Con't.)						
	Result	OSHA	OSHA Vacated	Portugal	Spain	Sweden
	STELs	Not established	500 ppm STEL; 1225 mg/m3 STEL	400 ppm STEL [VLE- CD	400 ppm STEL [VLA- EC]; 1000 mg/m3 STEL [VLA-EC]	250 ppm STV; 600 mg/m3 STV
Isopropyl alcohol (67-63-0)	TWAs	400 ppm TWA; 980 mg/m3 TWA	400 ppm TWA; 980 mg/m3 TWA	200 ppm TWA [VLE- MP]	200 ppm TWA [VLA-ED] (it is prohibited the partial or complete commercialization or use of this substance as a phytosanitary or biocide compound); 500 mg/m3 TWA [VLA-ED] (it is prohibited the partial or complete commercialization or use of this substance as a phytosanitary or biocide compound)	150 ppm LLV; 350 mg/m3 LLV
	Biologica Limit Values (BLV)	Not established	Not established	Not established	40 mg/L urine end of workweek Acetone (1,F,I)	Not established

#### **Exposure Control Notations**

**Portugal** 

•Isopropyl alcohol (67-63-0): Carcinogens: (A4 - Not Classifiable as a Human Carcinogen)

Ireland

•Isopropyl alcohol (67-63-0): **Skin:** (Potential for cutaneous absorption)

**Germany DFG** 

•Isopropyl alcohol (67-63-0): Pregnancy: (no risk to embryo/fetus if exposure limits adhered to)

### 8.2 Exposure controls

Engineering Measures/Controls

 Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

# Personal Protective Equipment Respiratory

• In case of insufficient ventilation, wear suitable respiratory equipment.

### Eye/Face Skin/Body

#### **Environmental Exposure** Controls

- Wear safety glasses.
- No protective clothing expected to be needed.
- Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

#### Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

= Limit Level Value is the exposure limit for 8-hour work day

Maximale Arbeitsplatz Konzentration is the maximum permissible

= concentration

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

Short Term Exposure Limits are based on 15-minute STEL = exposures

STEV = Short Term Exposure Value

TWAEV = Time-Weighted Average Exposure Value

Time-Weighted Averages are based on 8h/day, 40h/week

= exposures

### Section 9 - Physical and Chemical Properties

### 9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Clear, colorless liquid with a faint characteristic odor (like rubbing alcohol)
Color	Colorless	Odor	faint characteristic odor (like rubbing alcohol)
Odor Threshold	3.3 to 610 detection [Isopropyl Alcohol]		
General Properties			
Boiling Point	100 C(212 F)	Melting Point	0 C(32 F)
Decomposition Temperature	Data lacking	рН	Data lacking
Specific Gravity/Relative Density	< 1 Water=1	Density	Data lacking
Water Solubility	Miscible	Solvent Solubility	Data lacking
Viscosity	Data lacking	Explosive Properties	Not relevant.
Oxidizing Properties:	Not relevant.		
Volatility		-	•
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking		
Flammability		•	•
Flash Point	Not relevant	UEL	Not relevant
LEL	Not relevant	Autoignition	Not relevant
Flammability (solid, gas)	Not relevant.		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

### 9.2 Other Information

No additional physical and chemical parameters noted.

### Section 10: Stability and Reactivity

### 10.1 Reactivity

No dangerous reaction known under conditions of normal use.

### 10.2 Chemical stability

Stable

### 10.3 Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4 Conditions to avoid

No data available.

## 10.5 Incompatible materials

 This product would be incompatible with those materials that are incompatible with water.

### 10.6 Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

# **Section 11 - Toxicological Information**

### 11.1 Information on toxicological effects

Components					
Isopropyl alcohol (1%)	67- 63-0	Acute Toxicity: Ingestion/Oral-Rat LD50 • 5000 mg/kg; Behavioral:General anesthetic; Inhalation-Rat LC50 • 16000 ppm 8 Hour(s); Skin-Rabbit LD50 • 12800 mg/kg; Irritation: Eye-Rabbit • 100 mg • Severe irritation; Skin-Rabbit • 500 mg • Mild irritation; Reproductive: Inhalation-Rat TCLo • 3500 ppm 7 Hour(s)(1-19D preg); Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus)			

GHS Properties	Classification
Acute toxicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Aspiration Hazard	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Carcinogenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Germ Cell Mutagenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Skin corrosion/Irritation	EU/CLP   Classification criteria not met  OSHA HCS 2012   Classification criteria not met
Skin sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
STOT-RE	EU/CLP   Classification criteria not met  OSHA HCS 2012   Classification criteria not met
STOT-SE	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Toxicity for Reproduction	EU/CLP   Classification criteria not met  OSHA HCS 2012   Classification criteria not met
Respiratory sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met

Coming our domain all multation	EU/CLP    Classification criteria not met
Serious eye damage/Irritation	OSHA HCS 2012 • Classification criteria not met

### **Potential Health Effects**

#### Inhalation

Acute (Immediate)

**Chronic (Delayed)** 

Under normal conditions of use, no health effects are expected.

No data available.

#### Skin

Acute (Immediate)

**Chronic (Delayed)** 

Under normal conditions of use, no health effects are expected.

No data available.

### Eye

Acute (Immediate)

**Chronic (Delayed)** 

Ingestion

Acute (Immediate)

**Chronic (Delayed)** 

• Under normal conditions of use, no health effects are expected.

No data available.

### Key to abbreviations

LC = Lethal Concentration

LD = Lethal Dose

TC = Toxic Concentration

#### Under normal conditions of use, no health effects are expected.

#### . No data available.

# **Section 12 - Ecological Information**

### 12.1 Toxicity

Material data lacking.

# 12.2 Persistence and degradability

Material data lacking.

# 12.3 Bioaccumulative potential

Material data lacking.

# 12.4 Mobility in Soil

Material data lacking.

### 12.5 Results of PBT and vPvB assessment

No PBT and vPvB assessment has been conducted.

### 12.6 Other adverse effects

No studies have been found.

# **Section 13 - Disposal Considerations**

### 13.1 Waste treatment methods

#### **Product waste**

 Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

#### Packaging waste

Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

# **Section 14 - Transport Information**

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA
TDG	NDA	Not Regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

14.6 Special precautions for user

- None known.
- 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
- Not relevant.

# **Section 15 - Regulatory Information**

# 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications . None

State Right To Know				
Component	CAS	MA	NJ	PA
Isopropyl alcohol	67-63-0	Yes	Yes	Yes

Inventory						
Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
Isopropyl alcohol	67-63-0	Yes	No	Yes	Yes	No
			Inventory (Co	n't.)		
Component			CAS	TS	CA .	
Isopropyl alcohol		67	7-63-0	Y	es	

#### Canada

Canada - WHMIS - Classifications of Substances  • Isopropyl alcohol	67-63-0	B2, D2B (including 70%)
Canada - WHMIS - Ingredient Disclosure List  • Isopropyl alcohol	67-63-0	1 %

#### Environment<sup>-</sup>

Canada - CEPA - Priority Substances List

• Isopropyl alcohol 67-63-0 Not Listed

#### China

### **Environment**

China - Ozone Depleting Substances - First Schedule

• Isopropyl alcohol 67-63-0 Not Listed

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China - Ozone Depleting Substances - Second Schedule  • Isopropyl alcohol	67-63-0	Not Listed
China - Ozone Depleting Substances - Third Schedule  • Isopropyl alcohol	67-63-0	Not Listed
Other		
China - Annex I & II - Controlled Chemicals Lists  • Isopropyl alcohol	67-63-0	Not Listed
China - Dangerous Goods List  • Isopropyl alcohol	67-63-0	
China - Export Control List - Part I Chemicals  • Isopropyl alcohol	67-63-0	Not Listed
urope		
Other EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification • Isopropyl alcohol	67-63-0	F; R11 Xi; R36 R67
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits • Isopropyl alcohol	67-63-0	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling  • Isopropyl alcohol	67-63-0	F Xi R:11-36-67 S:(2)-7-16- 24/25-26
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations • Isopropyl alcohol	67-63-0	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases  • Isopropyl alcohol	67-63-0	S:(2)-7-16-24/25-26
Germany		
Environment Germany - TA Luft - Types and Classes Isopropyl alcohol	67-63-0	Not Listed
Germany - Water Classification (VwVwS) - Annex 1 • Isopropyl alcohol	67-63-0	Not Listed
Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes		
Isopropyl alcohol	67-63-0	ID Number 135, hazard class - low hazard to waters
Germany - Water Classification (VwVwS) - Annex 3 • Isopropyl alcohol	67-63-0	Not Listed
Other		
Germany - Specifically Regulated Chemicals in TRGS  • Isopropyl alcohol	67-63-0	Not Listed

# **Portugal**

ortaga.		
Other Portugal - Prohibited Substances • Isopropyl alcohol	67-63-0	Not Listed
Jnited Kingdom		
- Environment		
United Kingdom - Pollution Inventory - Schedule 1 - Thresholds for Releases to A  • Isopropyl alcohol	<b>Air</b> 67-63-0	Not Listed
Other		
United Kingdom - Workplace Exposure Limits (WELs) - Substances in Review  • Isopropyl alcohol	67-63-0	Not Listed
United Kingdom - List of Dangerous Substances in Water  • Isopropyl alcohol	67-63-0	Not Listed
Jnited States		
Labor		
U.S OSHA - Process Safety Management - Highly Hazardous Chemicals  • Isopropyl alcohol	67-63-0	Not Listed
U.S OSHA - Specifically Regulated Chemicals  • Isopropyl alcohol	67-63-0	Not Listed
Environment		
U.S CAA (Clean Air Act) - 1990 Hazardous Air Pollutants  • Isopropyl alcohol	67-63-0	Not Listed
U.S CERCLA/SARA - Hazardous Substances and their Reportable Quantities  • Isopropyl alcohol	67-63-0	Not Listed
U.S CERCLA/SARA - Radionuclides and Their Reportable Quantities  • Isopropyl alcohol	67-63-0	Not Listed
U.S CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs • Isopropyl alcohol	67-63-0	Not Listed
U.S CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs • Isopropyl alcohol	67-63-0	Not Listed
U.S CERCLA/SARA - Section 313 - Emission Reporting		
Isopropyl alcohol	67-63-0	1.0 % de minimis concentration (only if manufactured by the strong acid process, no supplier notification)
U.S CERCLA/SARA - Section 313 - PBT Chemical Listing  • Isopropyl alcohol	67-63-0	Not Listed

# **United States - California**

- Environment		
U.S California - Proposition 65 - Carcinogens List  • Isopropyl alcohol	67-63-0	Not Listed
U.S California - Proposition 65 - Developmental Toxicity  • Isopropyl alcohol	67-63-0	Not Listed
U.S California - Proposition 65 - Maximum Allowable Dose Levels (MADL)  • Isopropyl alcohol	67-63-0	Not Listed
<ul><li>U.S California - Proposition 65 - No Significant Risk Levels (NSRL)</li><li>Isopropyl alcohol</li></ul>	67-63-0	Not Listed
U.S California - Proposition 65 - Reproductive Toxicity - Female  • Isopropyl alcohol	67-63-0	Not Listed
U.S California - Proposition 65 - Reproductive Toxicity - Male  • Isopropyl alcohol	67-63-0	Not Listed

### United States - Pennsylvania

Labor U.S Pennsylvania - RTK (Right to Know) - Environmental Hazard List		
Isopropyl alcohol	67-63-0	
U.S Pennsylvania - RTK (Right to Know) - Special Hazardous Substances  • Isopropyl alcohol	67-63-0	Not Listed

# 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out.

### Section 16 - Other Information

#### Relevant Phrases (code & full text)

H319 - Causes serious eye irritation

H225 - Highly flammable liquid and vapour H336 - May cause drowsiness or dizziness

R11 - Highly flammable.

R36 - Irritating to eyes.

R67 - Vapours may cause drowsiness and dizziness.

**Last Revision Date** 

### **Preparation Date**

### Disclaimer/Statement of Liability

08/September/2014

08/September/2014

To the best of Air Liquide's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this gas mixture is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.

### Key to abbreviations

NDA = No Data Available