Your Dreams, Our Challenge

Safety Data Sheet

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

1.1 Product identifier

Product Name • **N4000-29 Copper Clad Laminate**

Synonyms • N4000-29 Laminate

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

Relevant identified use(s) • Consumer and industrial electronics

Use(s) advised against • Consumer goods in direct contact with food stuffs, potable water, or continuous skin contact

1.3 Details of the supplier of the safety data sheet

	North America	Asia	Europe
Manufacturer	AGC Multi Material America, Inc. 1420 W. 12th Place Tempe, AZ 85281 United States www.agc-multimaterial.com agc-ml.digital-po@agc.com	AGC Multi Material Singapore PTE, Ltd 4 Gul Crescent Jurong, Singapore 629520	AGC Multi Material Europe S.A. Route des Usines, BP25 65303, Lannemezan, Cedex, France

1.4 Emergency telephone number

1-480-967-5600- (8AM - 5PM CST) M-F 1-800-424-9300 - CHEMTREC (US and Canada only)	+65 6861 7117 - Asia	+33-5-62-98-52-90- Europe (8AM-4PM M-F)

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

DSD/DPD • Not classified

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

CLP • This material is exempt from CLP/REACH obligations as an article as specified in REACH (1907/2006) and related ECHA guidance.

DSD/DPD • Under European Directive 1999/45/EC these product(s) are exempt and considered manufactured article(s) under stated normal conditions of use.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012 • Not classified

2.2 Label elements

OSHA HCS 2012

Hazard statements • No label element(s) required

2.3 Other hazards

OSHA HCS 2012 • Under United States Regulations (29 CFR 1910.1200(c) - Hazard Communication Standard), the product(s) listed above are exempt as article(s) under stated normal conditions of use.

Canada

According to: WHMIS

2.1 Classification of the substance or mixture

WHMIS • Not classified

2.2 Label elements

WHMIS • No label element(s) required.

2.3 Other hazards

WHMIS • Under Canadian regulations (Workplace Hazardous Materials Information System (WHMIS) - Hazardous Products Act (HPA), Section 11(1)), these product(s) are exempt and considered manufactured article(s) under stated normal conditions of use.

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance.

3.2 Mixtures

Composition		
Chemical Name	**Identifiers**	**%**
Copper	**CAS:**7440-50-8 **EC Number:**231-159-6	30% TO 70%
Cured epoxy resin	NDA	15% TO 35%
Glass, oxide, chemicals	**CAS:**65997-17-3 **EC Number:**266-046-0	14.985% TO 34.965%
Boric acid	**CAS:**10043-35-3 **EC Number:**233-139-2 **EU Index:**005-007-00-2	< 0.2%
2-Propanol, 1-methoxy-	**CAS:**107-98-2 **EC Number:**203-539-1 **EU Index:**603-064-00-3	< 0.1%
2-(2-Ethoxyethoxy)-ethanol	**CAS:**111-90-0 **EC Number:**203-919-7	< 0.1%
1-Propanol, 2-methoxy-	**CAS:**1589-47-5 **EC Number:**216-455-5 **EU Index:**603-106-00-0	< 0.0005%

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation
- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If signs/symptoms develop, move person to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.

Skin
- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. Wash skin with soap and water. If signs/symptoms develop, get medical attention.

Eye
- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If contact with material occurs flush eyes with water. If signs/symptoms develop, get medical attention.

Ingestion
- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If signs/symptoms develop, get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

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

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician
- No specific actions or treatments recommended related to exposure to this material.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media
- In case of fire use media as appropriate for surrounding fire.

Unsuitable Extinguishing Media
- No data available.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards
- Hazardous decomposition will occur at elevated temperatures.

Hazardous Combustion Products
- Nitrous Oxides, Aldehydes, Carbon Monoxide, Various Acids.

5.3 Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions
- No special precautions are expected to be necessary if material is used under ordinary conditions and as recommended. Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Emergency Procedures
- No emergency procedures are expected to be necessary if material is used under ordinary conditions as recommended. Use normal clean up procedures.

6.2 Environmental precautions

- Avoid release to the environment.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures
- Carefully shovel or sweep up spilled material and place in suitable container.

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
- Avoid contact with heat and ignition sources. Minimize dust generation and accumulation. Use only with adequate ventilation. Wear appropriate personal protective equipment, avoid direct contact. Do not breathe dust. Avoid contact with skin, eyes or clothing. Avoid breathing fumes generated during processing. 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
- Keep away from heat, sparks and flame. Store in a well-ventilated place. Keep container tightly closed. Avoid generating dust. Store at 25°C (77ºF) or below.

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**	**Australia**	**Canada Alberta**	**Canada British Columbia**	**Canada Manitoba**
1-Propanol, 2-methoxy- (1589-47-5)	STELs	Not established	Not established	Not established	40 ppm STEL	Not established
	TWAs	Not established	Not established	Not established	20 ppm TWA	Not established
2-Propanol, 1-methoxy- (107-98-2)	STELs	100 ppm STEL	150 ppm STEL; 553 mg/m3 STEL	150 ppm STEL; 553 mg/m3 STEL	75 ppm STEL	100 ppm STEL
	TWAs	50 ppm TWA	100 ppm TWA; 369 mg/m3 TWA	100 ppm TWA; 369 mg/m3 TWA	50 ppm TWA	50 ppm TWA
Boric acid (10043-35-3)	STELs	6 mg/m3 STEL (inhalable fraction, listed under Borate compounds, inorganic)	Not established	Not established	6 mg/m3 STEL (inhalable, listed under Borate compounds, inorganic)	6 mg/m3 STEL (inhalable fraction, listed under Borate compounds, inorganic)
	TWAs	2 mg/m3 TWA (inhalable fraction, listed under Borate compounds, inorganic)	Not established	Not established	2 mg/m3 TWA (inhalable, listed under Borate compounds, inorganic)	2 mg/m3 TWA (inhalable fraction, listed under Borate compounds, inorganic)
Glass, oxide, chemicals as Glass wool fiber	TWAs	1 fiber/cm3 TWA (respirable fibers: length >5 µm, aspect ratio >=3:1, as determined by the membrane filter method at 400-450X magnification [4-mm objective], using phase-contrast illumination, listed under Synthetic vitreous fibers) *as Glass wool fiber*	Not established	1 fibre/cm3 TWA *as Glass wool fiber*	1 fibre/cm3 TWA (fibres >5 µm, with an aspect ratio of >=3:1, as determined by the membrane filter method at 400-450 times magnification (4 mm objective), using phase-contrast illumination, listed under Synthetic vitreous fibres) *as Glass wool fiber*	1 fiber/cm3 TWA (length >5 µm, aspect ratio >=3:1, as determined by the membrane filter method at 400-450X magnification [4-mm objective], using phase-contrast illumination, respirable fibers, listed under Synthetic vitreous fibers) *as Glass wool fiber*
Copper as Copper compounds	TWAs	0.2 mg/m3 TWA (fume)	1 mg/m3 TWA (dust and mist); 0.2 mg/m3 TWA (fume)	0.2 mg/m3 TWA (fume); 1 mg/m3 TWA (dust and mist)	1 mg/m3 TWA (dust and mist); 0.2 mg/m3 TWA (fume)	0.2 mg/m3 TWA (fume)

Exposure Limits/Guidelines (Con't.)						
	Result	**Canada New Brunswick**	**Canada Northwest Territories**	**Canada Nova Scotia**	**Canada Nunavut**	**Canada Ontario**
2-Propanol, 1-methoxy- (107-98-2)	STELs	150 ppm STEL; 553 mg/m3 STEL	150 ppm STEL; 540 mg/m3 STEL	100 ppm STEL	150 ppm STEL; 540 mg/m3 STEL	150 ppm STEL
	TWAs	100 ppm TWA; 369 mg/m3 TWA	100 ppm TWA; 360 mg/m3 TWA	50 ppm TWA	100 ppm TWA; 360 mg/m3 TWA	100 ppm TWA
2-(2-Ethoxyethoxy)-ethanol (111-90-0)	TWAs	Not established	Not established	Not established	Not established	30 ppm TWA; 165 mg/m3 TWA
Boric acid (10043-35-3)	STELs	Not established	Not established	6 mg/m3 STEL (inhalable fraction, listed under Borate compounds, inorganic)	Not established	6 mg/m3 STEL (inhalable, listed under Borate compounds, inorganic)
	TWAs	Not established	Not established	2 mg/m3 TWA (inhalable fraction, listed under Borate compounds,	Not established	2 mg/m3 TWA (inhalable, listed under Borate compounds,

				inorganic)		inorganic)
Glass, oxide, chemicals as Glass wool fiber	TWAs	1 fibre/cm3 TWA (fibres >5 µm with a diameter <3 µm, aspect ratio >5:1) *as Glass wool fiber*	3 fibre/cm3 TWA (with a diameter <=3.5 µm and a length >=10 µm); 5 mg/m3 TWA (total mass) *as Glass wool fiber*	1 fiber/cm3 TWA (length >5 µm, aspect ratio >=3:1, as determined by the membrane filter method at 400-450X magnification [4-mm objective], using phase-contrast illumination, respirable fibers, listed under Synthetic vitreous fibers) *as Glass wool fiber*	3 fibre/cm3 TWA (with a diameter <=3.5 µm and a length >=10 µm); 5 mg/m3 TWA (total mass) *as Glass wool fiber*	1 fibre/cm3 TWA (fibres >5 µm in length and an aspect ratio >=3:1 as determined by the membrane filter method at 400-450 times magnification (4-mm objective), using phase-contrast illumination, respirable, listed under Synthetic Vitreous Fibres (Man Made Mineral Fibres)) *as Glass wool fiber*
Copper (7440-50-8)	TWAs	0.2 mg/m3 TWA (fume); 1 mg/m3 TWA (dust and mist)	0.2 mg/m3 TWA (fume); 1 mg/m3 TWA (dust and mist)	0.2 mg/m3 TWA (fume)	0.2 mg/m3 TWA (fume); 1 mg/m3 TWA (dust and mist)	0.2 mg/m3 TWA (fume); 1 mg/m3 TWA (dust and mist)
	STELs	Not established	0.6 mg/m3 STEL (fume); 2 mg/m3 STEL (dust and mist)	Not established	0.6 mg/m3 STEL (fume); 2 mg/m3 STEL (dust and mist)	Not established

Exposure Limits/Guidelines (Con't.)

	Result	Canada Quebec	Canada Saskatchewan	Canada Yukon	China	Czech Republic
2-Propanol, 1-methoxy- (107-98-2)	Ceilings	Not established	Not established	Not established	Not established	550 mg/m3 Ceiling
	TWAs	100 ppm TWAEV; 369 mg/m3 TWAEV	100 ppm TWA	100 ppm TWA; 360 mg/m3 TWA	Not established	270 mg/m3 TWA
	STELs	150 ppm STEV; 553 mg/m3 STEV	150 ppm STEL	150 ppm STEL; 450 mg/m3 STEL	Not established	Not established
Boric acid (10043-35-3)	STELs	Not established	6 mg/m3 STEL (inhalable fraction, listed under Borate compounds, inorganic)	Not established	Not established	Not established
	TWAs	Not established	2 mg/m3 TWA (inhalable fraction, listed under Borate compounds, inorganic)	Not established	Not established	Not established
Glass, oxide, chemicals as Glass wool fiber	TWAs	1 fibre/cm3 TWAEV (respirable, listed under Fibres - Artificial Vitreous Mineral Fibres) *as Glass wool fiber*	1 fibre/cm3 TWA (respirable fibres, listed under Synthetic vitreous fibres) *as Glass wool fiber*	30 mppcf TWA (dust or fibrous); 10 mg/m3 TWA (dust or fibrous)	Not established	Not established
	STELs	Not established	3 fibre/cm3 STEL (respirable fibres, listed under Synthetic Vitreous Fibres) *as Glass wool fiber*	Not established	Not established	Not established
Copper (7440-50-8)	STELs	Not established	0.6 mg/m3 STEL (fume); 3 mg/m3 STEL (dust and mist)	0.2 mg/m3 STEL (fume); 2 mg/m3 STEL (dust and mist)	2.5 mg/m3 STEL (dust); 0.6 mg/m3 STEL (fume)	Not established

	TWAs	0.2 mg/m3 TWAEV (fume); 1 mg/m3 TWAEV (dust and mist)	0.2 mg/m3 TWA (fume); 1 mg/m3 TWA (dust and mist)	0.2 mg/m3 TWA (fume); 1 mg/m3 TWA (dust and mist)	1 mg/m3 TWA (dust); 0.2 mg/m3 TWA (fume)	1 mg/m3 TWA (dust); 0.1 mg/m3 TWA (fume)
	Ceilings	Not established	Not established	Not established	Not established	2 mg/m3 Ceiling (dust); 0.2 mg/m3 Ceiling (fume)

Exposure Limits/Guidelines (Con't.)

	Result	Denmark	France	Germany DFG	Germany TRGS	Greece
1-Propanol, 2-methoxy- (1589-47-5)	TWAs	20 ppm TWA; 75 mg/m3 TWA	Not established	Not established	5 ppm TWA AGW (The risk of damage to the embryo or fetus cannot be excluded even when AGW and BGW values are observed, exposure factor 8); 19 mg/m3 TWA AGW (The risk of damage to the embryo or fetus cannot be excluded even when AGW and BGW values are observed, exposure factor 8)	Not established
	Ceilings	Not established	Not established	40 ppm Peak; 152 mg/m3 Peak	Not established	Not established
	MAKs	Not established	Not established	5 ppm TWA MAK; 19 mg/m3 TWA MAK	Not established	Not established
2-Propanol, 1-methoxy- (107-98-2)	TWAs	50 ppm TWA; 185 mg/m3 TWA	50 ppm TWA [VME] (restrictive limit); 188 mg/m3 TWA [VME] (restrictive limit)	Not established	100 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 2); 370 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)	100 ppm TWA; 360 mg/m3 TWA
	STELs	Not established	100 ppm STEL [VLCT] (restrictive limit); 375 mg/m3 STEL [VLCT] (restrictive limit)	Not established	Not established	300 ppm STEL; 1080 mg/m3 STEL
	Ceilings	Not established	Not established	200 ppm Peak; 740 mg/m3 Peak	Not established	Not established
	MAKs	Not established	Not established	100 ppm TWA MAK; 370 mg/m3 TWA MAK	Not established	Not established
2-(2-Ethoxyethoxy)-ethanol (111-90-0)	TWAs	Not established	Not established	Not established	6 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are	Not established

					observed, exposure factor 2); 35 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)	
	Ceilings	Not established	Not established	100 mg/m3 Peak (inhalable fraction)	Not established	Not established
	MAKs	Not established	Not established	50 mg/m3 TWA MAK (inhalable fraction)	Not established	Not established
Boric acid (10043-35-3)	TWAs	Not established	Not established	Not established	0.5 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)	Not established
	Ceilings	Not established	Not established	10 mg/m3 Peak (inhalable fraction, as B)	Not established	Not established
	MAKs	Not established	Not established	10 mg/m3 TWA MAK (inhalable fraction, as B)	Not established	Not established
Glass, oxide, chemicals	TWAs	1 fiber/cm3 TWA *as Glass wool fiber*	Not established	Not established	Not established	Not established
Copper (7440-50-8)	TWAs	1.0 mg/m3 TWA (dust and powder); 0.1 mg/m3 TWA (fume)	0.2 mg/m3 TWA [VME] (fume); 1 mg/m3 TWA [VME] (dust, as Cu)	Not established	Not established	0.2 mg/m3 TWA (fume); 1 mg/m3 TWA (dust)
	STELs	Not established	2 mg/m3 STEL [VLCT] (dust, as Cu)	Not established	Not established	2 mg/m3 STEL (dust)
	Ceilings	Not established	Not established	0.02 mg/m3 Peak (respirable fraction)	Not established	Not established
	MAKs	Not established	Not established	0.01 mg/m3 TWA MAK (including inorganic copper compounds, respirable fraction)	Not established	Not established

Exposure Limits/Guidelines (Con't.)

	Result	India	Israel	Italy	Japan	Korea
2-Propanol, 1-methoxy- (107-98-2)	STELs	Not established	100 ppm STEL	150 ppm STEL Breve termine; 568 mg/m3 STEL Breve termine	Not established	150 ppm STEL (Serial No. 672); 540 mg/m3 STEL (Serial No. 672)
	TWAs	Not established	50 ppm TWA	100 ppm TWA; 375 mg/m3 TWA	Not established	100 ppm TWA (Serial No. 672); 360 mg/m3 TWA (Serial No. 672)
Boric acid (10043-35-3)	STELs	Not established	6 mg/m3 STEL (inhalable fraction, listed under Borate compounds, inorganic)	Not established	Not established	Not established
	TWAs	Not established	2 mg/m3 TWA (inorganic, inhalable	Not established	Not established	Not established

			fraction)			
Glass, oxide, chemicals as Glass wool fiber	TWAs	Not established	1 fiber/m3 TWA (length >5 µm, diameter <3 µm, aspect ratio >=3:1, except asbestiform minerals, listed under Synthetic vitreous fibers) *as Glass wool fiber*	Not established	1 fiber/cm3 OEL *as Glass wool fiber*	10 mg/m3 TWA (Serial No. 009) *as Glass wool fiber*
Copper (7440-50-8)	STELs	Not established	Not established	Not established	Not established	2 mg/m3 STEL (dust and mist, as Cu, Serial No. 010)
	TWAs	0.2 mg/m3 TWA (fume)	0.2 mg/m3 TWA (fume)	Not established	Not established	1 mg/m3 TWA (dust and mist, as Cu, Serial No. 010); 0.1 mg/m3 TWA (fume, as Cu, Serial No. 011)

Exposure Limits/Guidelines (Con't.)

	Result	Malaysia	Netherlands	NIOSH	OSHA	Singapore
2-Propanol, 1-methoxy- (107-98-2)	TWAs	100 ppm TWA; 369 mg/m3 TWA	375 mg/m3 TWA	100 ppm TWA; 360 mg/m3 TWA	Not established	100 ppm PEL; 369 mg/m3 PEL
	STELs	Not established	563 mg/m3 STEL	150 ppm STEL; 540 mg/m3 STEL	Not established	150 ppm STEL; 553 mg/m3 STEL
Glass, oxide, chemicals as Glass wool fiber	TWAs	1 fibre/mL TWA (fibres longer than 5 µm and with an aspect ratio equal to or greater than 3:1 as determined by the membrane filter method at 400-500X magnification (4-mm objective), using phase-contrast illumination) *as Glass wool fiber*	Not established	3 fiber/cm3 TWA (fibers <= 3.5 µm in diameter and >= 10 µm in length); 5 mg/m3 TWA (total) *as Glass wool fiber*	Not established	10 mg/m3 PEL *as Glass wool fiber*
Copper (7440-50-8)	TWAs	0.2 mg/m3 TWA (fume); 1 mg/m3 TWA (dust and mist)	0.1 mg/m3 TWA (inhalable fraction)	1 mg/m3 TWA (dust and mist); 0.1 mg/m3 TWA (fume)	0.1 mg/m3 TWA (fume); 1 mg/m3 TWA (dust and mist)	0.2 mg/m3 PEL (fume); 1 mg/m3 PEL (dust and mist)

Exposure Limits/Guidelines (Con't.)

	Result	South Africa	Spain
1-Propanol, 2-methoxy- (1589-47-5)	TWAs	Not established	5 ppm TWA [VLA-ED]; 19 mg/m3 TWA [VLA-ED]
2-Propanol, 1-methoxy- (107-98-2)	STELs	300 ppm STEL; 1080 mg/m3 STEL	150 ppm STEL [VLA-EC]; 568 mg/m3 STEL [VLA-EC]
	TWAs	100 ppm TWA; 360 mg/m3 TWA	100 ppm TWA [VLA-ED] (indicative limit value); 375 mg/m3 TWA [VLA-ED] (indicative limit value)
Boric acid (10043-35-3)	STELs	Not established	6 mg/m3 STEL [VLA-EC]
	TWAs	Not established	2 mg/m3 TWA [VLA-ED] (it is prohibited the partial or complete commercialization or use of this substance as a phytosanitary or biocide compound)
Glass, oxide, chemicals	TWAs	Not established	1 fiber/cm3 TWA [VLA-ED] (Fibers with a random orientation, with a content in Alkaline and Alkali-earth oxide [Na2O+K2O+CaO+MgO+BaO] above 18% in weight; manufacturing, commercialization, and use

			restrictions under REACH, Respirable fibers, length >5 µm, aspect ratio >=3:1, as determined by the membrane filter method at 400-450X magnification [4-mm objective], using phase-contrast illumination) *as Glass wool fiber*
Copper (7440-50-8)	STELs	2 mg/m3 STEL (dust and mist, as Cu)	Not established
	TWAs	0.2 mg/m3 TWA (fume); 1 mg/m3 TWA (dust and mist, as Cu)	0.2 mg/m3 TWA [VLA-ED] (fume); 1 mg/m3 TWA [VLA-ED] (dust and mist, as Cu)

Exposure Control Notations

Czech Republic

•2-Propanol, 1-methoxy- (107-98-2): **Skin:** (Potential for cutaneous absorption)

Denmark

•2-Propanol, 1-methoxy- (107-98-2): **Skin Notations:** (Potential for cutaneous absorption)

Greece

•2-Propanol, 1-methoxy- (107-98-2): **Skin:** (skin - potential for cutaneous absorption)

Italy

•2-Propanol, 1-methoxy- (107-98-2): **Skin:** (skin - potential for cutaneous absorption)

Netherlands

•2-Propanol, 1-methoxy- (107-98-2): **Skin:** (skin notation)

Spain

•Boric acid (10043-35-3): **Reproductive Toxins:** (known or suspected human reproductive toxin with classification from animal data)

•2-Propanol, 1-methoxy- (107-98-2): **Skin:** (skin - potential for cutaneous exposure)

•1-Propanol, 2-methoxy- (1589-47-5): **Reproductive Toxins:** (known or suspected human reproductive toxin with classification from animal data)

ACGIH

•Boric acid (10043-35-3): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen (listed under Borate compounds, inorganic))

•Glass, oxide, chemicals as Glass wool fiber: **Carcinogens:** (A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans (listed under Synthetic vitreous fibers))

•2-Propanol, 1-methoxy- (107-98-2): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)

Germany TRGS

•1-Propanol, 2-methoxy- (1589-47-5): **Skin:** (skin notation)

Germany DFG

•Copper (7440-50-8): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to)

•Boric acid (10043-35-3): **Pregnancy:** (possible risk to embryo/fetus even if exposure limits adhered to (inhalable fraction, calculated as B))

•2-(2-Ethoxyethoxy)-ethanol (111-90-0): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to)

•2-Propanol, 1-methoxy- (107-98-2): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to)

•1-Propanol, 2-methoxy- (1589-47-5): **Pregnancy:** (risk to embryo/fetus probable) | **Skin:** (skin notation)

Exposure Limits Supplemental

Spain

•2-(2-Ethoxyethoxy)-ethanol (111-90-0): **Under Review:** (50 mg/m3 VLA-ED; 100 mg/m3 VLA-EC)

ACGIH

•Copper (7440-50-8): **TLV Basis - Critical Effects:** (metal fume fever (fume))

•Copper as Copper compounds: **TLV Basis - Critical Effects:** (gastrointestinal (dust and mist); irritation (dust and mist))

•Boric acid (10043-35-3): **TLV Basis - Critical Effects:** (upper respiratory tract irritation (listed under Borate compounds, inorganic))

•2-Propanol, 1-methoxy- (107-98-2): **TLV Basis - Critical Effects:** (eye and upper respiratory tract irritation)

Germany TRGS

•2-Propanol, 1-methoxy- (107-98-2): **BELs:** (15 mg/L Medium: urine Time: end of shift Parameter: 1-Methoxypropan-2-ol)

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	• Wear safety glasses.
Skin/Body	• Wear appropriate gloves.
Environmental Exposure Controls	• 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
MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration
NIOSH = National Institute of Occupational Safety and Health
OSHA = Occupational Safety and Health Administration
PEL = Permissible Exposure Level determined by the Occupational Safety and Health Administration (OSHA)
STEL = Short Term Exposure Limits are based on 15-minute exposures
STEV = Short Term Exposure Value
TLV = Threshold Limit Value determined by the American Conference of Governmental Industrial Hygienists (ACGIH)
TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures
TWAEV = Time-Weighted Average Exposure Value

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	Solid yellow sheet with copper cladding on one or both sides.
Color	Yellow	Odor	None
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Not relevant	Melting Point	Data lacking
Decomposition Temperature	> 200 C(> 392 F)	pH	Not relevant
Specific Gravity/Relative Density	1.6 to 2.3 Water=1	Water Solubility	Negligible
Viscosity	Not relevant	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	Not relevant	Vapor Density	Not relevant
Evaporation Rate	Not relevant	VOC (Wt.)	< 0.1 %
VOC (Vol.)	< 0.1 %	Volatiles (Wt.)	< 0.1 %
Volatiles (Vol.)	< 0.1 %		
Flammability			
Flash Point	Data lacking	UEL	Not relevant
LEL	Not relevant	Autoignition	Data lacking
Flammability (solid, gas)	Data lacking		
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 under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous decomposition will occur at elevated temperatures.

10.4 Conditions to avoid

- Excess heat.

10.5 Incompatible materials

- No data available.

10.6 Hazardous decomposition products

- Acrid vapors and fumes, aliphatic and aromatic hydrocarbons of variable composition, CO, CO2, NOx, HBr, HCN.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

GHS Properties	Classification
Acute toxicity	**EU/CLP**•Data lacking **OSHA HCS 2012**•Data lacking
Aspiration Hazard	**EU/CLP**•Data lacking **OSHA HCS 2012**•Data lacking
Carcinogenicity	**EU/CLP**•Data lacking **OSHA HCS 2012**•Data lacking
Germ Cell Mutagenicity	**EU/CLP**•Data lacking **OSHA HCS 2012**•Data lacking
Skin corrosion/Irritation	**EU/CLP**•Data lacking **OSHA HCS 2012**•Data lacking
Skin sensitization	**EU/CLP**•Data lacking **OSHA HCS 2012**•Data lacking
STOT-RE	**EU/CLP**•Data lacking **OSHA HCS 2012**•Data lacking
STOT-SE	**EU/CLP**•Data lacking **OSHA HCS 2012**•Data lacking
Toxicity for Reproduction	**EU/CLP**•Data lacking **OSHA HCS 2012**•Data lacking
Respiratory sensitization	**EU/CLP**•Data lacking **OSHA HCS 2012**•Data lacking
Serious eye damage/Irritation	**EU/CLP**•Data lacking **OSHA HCS 2012**•Data lacking

Potential Health Effects

Inhalation

Acute (Immediate)

- Processes such as cutting, grinding, crushing, or impact may result in generation of excessive amounts of airborne dusts in the workplace. Nuisance dust may affect the lungs but reactions are typically reversible.

Chronic (Delayed)	• No data available
Skin	
Acute (Immediate)	• Under normal conditions of use, no health effects are expected.
Chronic (Delayed)	• No data available
Eye	
Acute (Immediate)	• Under normal conditions of use, no health effects are expected.
Chronic (Delayed)	• No data available
Ingestion	
Acute (Immediate)	• Under normal conditions of use, no health effects are expected.
Chronic (Delayed)	• No data available
Carcinogenic Effects	• This product contains fibrous glass. Following a thorough review of all the medical-scientific data available at a meeting in October 2001, the IARC panel lowered the classification for fibrous glass from a Group 2B classification ("possibly carcinogenic to humans") to a Group 3 classification ("not classifiable as to carcinogenicity to humans"). According to IARC, there is "no evidence of increased risks of lung cancer from occupational exposures during manufacturing of these materials, and inadequate evidence overall of any cancer risk.

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	• DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN SDS SECTION 3: Composition Information. For UNUSED & UNCONTAMINATED PRODUCT, the preferred disposal option includes sending to a licensed, permitted waste handler and disposing with incinerator or other thermal destruction device.

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 specified.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
- Data lacking.

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**
1-Propanol, 2-methoxy-	1589-47-5	No	No	No
2-(2-Ethoxyethoxy)-ethanol	111-90-0	No	No	No
2-Propanol, 1-methoxy-	107-98-2	Yes	Yes	Yes
Boric acid	10043-35-3	No	No	No
Copper	7440-50-8	Yes	Yes	Yes
Glass, oxide, chemicals	65997-17-3	No	No	No

Inventory						
Component	**CAS**	**Canada DSL**	**Canada NDSL**	**China**	**EU EINECS**	**EU ELNICS**
1-Propanol, 2-methoxy-	1589-47-5	Yes	No	Yes	Yes	No
2-(2-Ethoxyethoxy)-ethanol	111-90-0	Yes	No	Yes	Yes	No
2-Propanol, 1-	107-98-2	Yes	No	Yes	Yes	No

methoxy-						
Boric acid	10043-35-3	Yes	No	Yes	Yes	No
Copper	7440-50-8	Yes	No	Yes	Yes	No
Glass, oxide, chemicals	65997-17-3	Yes	No	Yes	Yes	No

Inventory (Con't.)

Component	CAS	Korea KECL	TSCA
1-Propanol, 2-methoxy-	1589-47-5	Yes	Yes
2-(2-Ethoxyethoxy)-ethanol	111-90-0	Yes	Yes
2-Propanol, 1-methoxy-	107-98-2	Yes	Yes
Boric acid	10043-35-3	Yes	Yes
Copper	7440-50-8	Yes	Yes
Glass, oxide, chemicals	65997-17-3	Yes	Yes

Australia

Labor

Australia - Work Health and Safety Regulations - Hazardous Substances Requiring Health Monitoring

•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed

Australia - High Volume Industrial Chemicals List

•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	
•Glass, oxide, chemicals	65997-17-3	Not Listed

Australia - List of Designated Hazardous Substances - Classification

•1-Propanol, 2-methoxy-	1589-47-5	Xi Repr.Cat.2 R10, R61, R37/38, R41
•Copper	7440-50-8	Self classification required (dust, fume and mist)
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	R10, R67
•Boric acid	10043-35-3	Repr.Cat.2 R60, R61
•Glass, oxide, chemicals	65997-17-3	Not Listed

Environment

Australia - National Pollutant Inventory (NPI) Substance List

•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	10 tonne/yr Threshold category 1 (Copper and compounds); 2000 tonne/yr Threshold category 2b (Copper and compounds); 60000 MWH Threshold category 2b (Copper and compounds); 20 MW Threshold category 2b (Copper and compounds)
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed

•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed

Australia - Ozone Protection Act - Scheduled Substances

•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed

Australia - Priority Existing Chemical Program

•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed

Canada

Labor

Canada - WHMIS - Classifications of Substances

•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Uncontrolled product according to WHMIS classification criteria
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	B3, D2B
•2-Propanol, 1-methoxy-	107-98-2	B2
•Boric acid	10043-35-3	D2A
•Glass, oxide, chemicals	65997-17-3	Not Listed

Canada - WHMIS - Ingredient Disclosure List

•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	1 %
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	1 %
•2-Propanol, 1-methoxy-	107-98-2	1 %
•Boric acid	10043-35-3	1 %
•Glass, oxide, chemicals	65997-17-3	Not Listed

Environment

Canada - CEPA - Priority Substances List

•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

•1-Propanol, 2-methoxy-	1589-47-5	R10 Xi; R37/38-41 Repr.Cat.2; R61
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	R10 R67
•Boric acid	10043-35-3	Repr.Cat.2; R60-61
•Glass, oxide, chemicals	65997-17-3	Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed

•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	5.5%<=C: Repr.Cat.2; R:60-61
•Glass, oxide, chemicals	65997-17-3	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling		
•1-Propanol, 2-methoxy-	1589-47-5	T R:61-10-37/38-41 S:53-45
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	R:10-67 S:(2)
•Boric acid	10043-35-3	T R:60-61 S:53-45
•Glass, oxide, chemicals	65997-17-3	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases		
•1-Propanol, 2-methoxy-	1589-47-5	S:53-45
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	S:(2)
•Boric acid	10043-35-3	S:53-45
•Glass, oxide, chemicals	65997-17-3	Not Listed

Germany

Environment

Germany - TA Luft - Types and Classes		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	inorganic dust Substance: 5.2.2, Class III
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed
Germany - TA Luft - Emission Limits for Carcinogenic Substances		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed
Germany - TA Luft - Emission Limits for Fibers		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed
Germany - TA Luft - Emission Limits for Inorganic Dusts		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	5 g/h Mass flow (Class III); 1 mg/m3 Mass concentration (Class III)
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed

•Glass, oxide, chemicals	65997-17-3	Not Listed
Germany - TA Luft - Emission Limits for Inorganic Gases		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed
Germany - TA Luft - Emission Limits for Organic Substances		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed
Germany - Water Classification (VwVwS) - Annex 1		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	ID Number 1443, not considered hazardous to water
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed
Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes		
•1-Propanol, 2-methoxy-	1589-47-5	ID Number 1746, hazard class 1 - low hazard to waters
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	ID Number 101, hazard class 1 - low hazard to waters
•2-Propanol, 1-methoxy-	107-98-2	ID Number 1597, hazard class 1 - low hazard to waters
•Boric acid	10043-35-3	ID Number 315, hazard class 1 - low hazard to waters
•Glass, oxide, chemicals	65997-17-3	Not Listed
Germany - Water Classification (VwVwS) - Annex 3		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed
U.S. - OSHA - Specifically Regulated Chemicals		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed

•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	1.0 % de minimis concentration
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed

•Glass, oxide, chemicals	65997-17-3	Not Listed
U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - Constituents for Detection Monitoring		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	(total)
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - List for Hazardous Constituents		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	(total)
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - TSD Facilities Ground Water Monitoring		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	(total)
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed
U.S. - California - Proposition 65 - Developmental Toxicity		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed
U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed

•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Female		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Male		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed

United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	(dust and fume)
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed
U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances		
•1-Propanol, 2-methoxy-	1589-47-5	Not Listed
•Copper	7440-50-8	Not Listed
•2-(2-Ethoxyethoxy)-ethanol	111-90-0	Not Listed
•2-Propanol, 1-methoxy-	107-98-2	Not Listed
•Boric acid	10043-35-3	Not Listed
•Glass, oxide, chemicals	65997-17-3	Not Listed

15.2 Chemical Safety Assessment

- Chemical Safety Assessment is not required.

15.3 Other Information

- RoHS CERTIFICATION: The Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS), Article 4 of EU Directive (2011/65/EU). We hereby certify that the hazardous substances regulated by the RoHS Directive 2011/65/EU are not used intentionally as ingredient(s) this product. This certification is valid only for this product. Packaging materials were not considered for this certification.

Section 16 - Other Information

Last Revision Date
- 15/July/2021

Preparation Date
- 12/June/2015

Disclaimer/Statement of Liability
- The information and recommendations contained in this Safety Data Sheet (SDS) are supplied pursuant to the Occupational Safety and Health Administration's Hazard Communication Standard as promulgated under 29 CFR 1910.1200 and the United States Environmental Protection Agency's Supplier Notification Rule as promulgated under 40 CFR 372.45. This document is intended only as a guide to the appropriate precautionary handling of the material by a person trained in the proper procedures of safe chemical handling. The information contained herein is provided in good faith with no representation as to its

comprehensiveness or accuracy. No representations or warranties, either express or implied, of merchantability, or fitness for a particular purpose or of any nature are made with respect to the material described in this Safety Data Sheet. Chemical additions or processing or otherwise altering this material may make the safety information presented in this Safety Data Sheet incomplete, inaccurate or otherwise inappropriate. The information listed above does not include all state, federal, and international regulations. The regulatory information supplied may change from time to time. It is the user's responsibility to keep advised of all applicable regulatory requirements.

Key to abbreviations

NDA = No Data Available