

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

1.1 Product identifier	
Product Name	D-2 Emulsion
Product Description	White liquid
1.2 Relevant identified us	ses of the substance or mixture and uses advised against
Relevant identified use(s)	Water-based emulsion
1.3 Details of the supplie	r of the safety data sheet
Manufacturer	IKONICS Corporation
	4832 Grand Ave.
	Duluth, MN 55807
	United States
	www.ikonics.com
	sds@ikonics.com
Telephone (General) • (218) 628-2217
Telephone (General) • (800) 328-4261 - Toll free
1.4 Emergency telephone	e number

• 1-800-424-9300 - Within USA and Canada

• +1 703-527-3887 - Outside USA and Canada (collect calls accepted)

Section 2: Hazards Identification

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 2015/830]

2.1 Classification o	of the substance or mixture
CLP	Not classified
2.2 Label Elements	i de la constante d
CLP	
Hazard statements	s Not classified
Precautionary statements	
Preventior	n • P280 - Wear protective gloves/protective clothing/eye protection/face protection.
Response	 P302+P352 - IF ON SKIN: Wash with plenty of soap and water. P304+P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage/Disposa	 P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
2.3 Other Hazards	
CLP	No data available

UN GHS

According to: UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS): Seventh Revised Edition

2.1 Classification of the substance or mixture

UN GHS •	Not classified
2.2 Label elements	
UN GHS	
Hazard statements •	Not classified
Precautionary statements	
Prevention •	P280 - Wear protective gloves/protective clothing/eye protection/face protection.
Response ●	 P302+P352 - IF ON SKIN: Wash with plenty of soap and water. P304+P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage/Disposal •	P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
2.3 Other hazards	
UN GHS •	No data available

United States (US) According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012 • N	Not classified
2.2 Label elements	
OSHA HCS 2012	
Precautionary statements	
Prevention • \	Wear protective gloves/protective clothing/eye protection/face protection P280
I F I	IF ON SKIN: Wash with plenty of soap and water P302+P352 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing P304+P341 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P305+P351+P338
	Dispose of content and/or container in accordance with local, regional, national, and/or international regulations P501
2.3 Other hazards	
OSHA HCS 2012 • N	No data available
Canada	

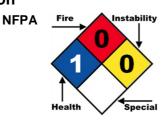
According to WHMIS 2015

2.1 Classification of the substance or mixture

WHMIS 2015 • Not classified 2.2 Label elements WHMIS 2015 Precautionary statements

Prevention •	Wear protective gloves/protective clothing/eye protection/face protection P280
Response •	IF ON SKIN: Wash with plenty of soap and water P302+P352 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing P304+P341 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P305+P351+P338
Storage/Disposal •	Dispose of content and/or container in accordance with local, regional, national, and/or international regulations P501
2.3 Other hazards WHMIS 2015 •	No data available

2.4 Other information



Section 3 - Composition/Information on Ingredients

3.1 Substances

3.2 Mixtures

Hazardous Components				
Chemical Name	Identifiers	%(weight)	LD50/LC50	Classifications According to Regulation/Directive
Isopropyl alcohol	CAS:67-63-0 EC Number:200-661-7 UN:UN1219 EINECS:200-661-7	8.1%	Inhalation-Rat LC50 • 16000 ppm 8 Hour(s) Skin-Rabbit LD50 • 12800 mg/kg Ingestion/Oral-Rat LD50 • 5000 mg/kg	GHS / CLP / OSHA / WHMIS: Flam. Liq. 2; Eye Irrit. 2A; STOT SE 3: Narc.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration and call 911 or emergency medical service.

 Skin

 IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- Ingestion
 If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Rinse mouth. Never give anything by mouth to an unconscious person. If large quantities are swallowed, call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

• No data available

4.3 Indication of any immediate medical attention and special treatment needed

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media	 SMALL FIRES: Dry chemical, CO2, water spray or regular foam. LARGE FIRE: Water spray, fog or regular foam.
Unsuitable Extinguishing Media	No data available
Firefighting Procedures	 Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Keep unauthorized personnel away. Ventilate closed spaces before entering. LARGE FIRES: Use extinguishing agent suitable for type of surrounding fire.
5.2 Special hazards	arising from the substance or mixture

Unusual Fire and Explosion Hazards	Material may burn, but does not ignite readily.
Hazardous Combustion	• Products of combustion include: carbon oxides (COx).
Products	
5.3 Advice for firefig	htore

5.3 Advice for firefighters

 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.

Wear positive pressure self-contained breathing apparatus (SCBA).

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions	 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

• No data available

6.3 Methods and material for containment and cleaning up

Containment/Clean-up
Measures• Use appropriate Personal Protective Equipment (PPE)
Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then 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	• Use good safety and industrial hygiene practices.
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7.2 Conditions for safe storage, including any incompatibilities

- Storage
- Keep container closed when not in use. Store away from extreme heat. Do not freeze. Ventilate enclosed areas.

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	Argentina	Australia	Belgium	Brazil
Isopropyl alcohol	STELs	400 ppm STEL	500 ppm STEL [CMP-CPT]	500 ppm STEL; 1230 mg/m3 STEL	400 ppm STEL; 1000 mg/m3 STEL	Not established
(67-63-0)	TWAs	200 ppm TWA	400 ppm TWA [CMP]	400 ppm TWA; 983 mg/m3 TWA	200 ppm TWA; 500 mg/m3 TWA	310 ppm TWA LT; 765 mg/m3 TWA LT
		Ex	posure Limits/Gu	idelines (Con't.)		
	Result	Canada Alberta	Canada British Columbia	Canada Manitoba	Canada New Brunswick	Canada Northwest Territories
Isopropyl alcohol (67-63-0)	STELs	400 ppm STEL; 984 mg/m3 STEL	400 ppm STEL	400 ppm STEL	500 ppm STEL; 1230 mg/m3 STEL	500 ppm STEL; 1228 mg/m3 STEL
	TWAs	200 ppm TWA; 492 mg/m3 TWA	200 ppm TWA	200 ppm TWA	400 ppm TWA; 983 mg/m3 TWA	400 ppm TWA; 983 mg/m3 TWA
		Ex	posure Limits/Gu	idelines (Con't.)		
	Result	Canada Nova Scotia	Canada Nunavut	Canada Ontario	Canada Quebec	Canada Saskatchewan
Isopropyl alcohol (67-63-0)	STELs	400 ppm STEL	500 ppm STEL; 1228 mg/m3 STEL	400 ppm STEL	500 ppm STEV; 1230 mg/m3 STEV	400 ppm STEL
	TWAs	200 ppm TWA	400 ppm TWA; 983 mg/m3 TWA	200 ppm TWA	400 ppm TWAEV; 985 mg/m3 TWAEV	200 ppm TWA
		Ex	posure Limits/Gu	idelines (Con't.)		
	Result	Canada Yukon	Chile	China	Denmark	Egypt
lsopropyl alcohol	STELs	500 ppm STEL; 1225 mg/m3 STEL	500 ppm STEL LPT; 1230 mg/m3 STEL LPT	700 mg/m3 STEL	Not established	500 ppm STEL; 1230 mg/m3 STEL
(67-63-0)	TWAs	400 ppm TWA; 980 mg/m3 TWA	320 ppm TWA LPP; 786 mg/m3 TWA LPP	350 mg/m3 TWA	200 ppm TWA; 490 mg/m3 TWA	Not established
		Ex	posure Limits/Gu	idelines (Con't.)		
	Result	Finland	France	Germany DFG	Germany TRGS	Hong Kong
	STELs	250 ppm STEL; 620 mg/m3 STEL	400 ppm STEL [VLCT]; 980 mg/m3 STEL [VLCT]	Not established	Not established	500 ppm STEL; 1230 mg/m3 STEL
Isopropyl alcohol (67-63-0)	TWAs	200 ppm TWA; 500 mg/m3 TWA	Not established	Not established	200 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); 500 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when	Not established
					AGW and BGW values are observed, exposure factor 2)	
	Ceilings	Not established	Not established	400 ppm Peak; 1000 mg/m3 Peak	values are observed, exposure	Not established
	Ceilings MAKs	Not established Not established	Not established Not established		values are observed, exposure factor 2)	Not established Not established
		Not established		mg/m3 Peak 200 ppm TWA MAK; 500 mg/m3 TWA MAK	values are observed, exposure factor 2) Not established	
		Not established	Not established	mg/m3 Peak 200 ppm TWA MAK; 500 mg/m3 TWA MAK	values are observed, exposure factor 2) Not established	
lsopropyl alcohol (67-63-0)	MAKs	Not established Ex Indonesia	Not established posure Limits/Gu	mg/m3 Peak 200 ppm TWA MAK; 500 mg/m3 TWA MAK idelines (Con't.)	values are observed, exposure factor 2) Not established Not established	Not established

						mg/m3 STEL [LMPE-CT]	
	TWAs	400 ppm TWA; 983 mg/m3 TWA	200 ppm TWA	Not established	200 ppm TWA; 480 mg/m3 TWA	400 ppm TWA LMPE-PPT; 980 mg/m3 TWA LMPE- PPT	
		Ex	posure Limits/Gu	idelines (Con't.)			
	Result	New Zealand	NIOSH	Norway	OSHA	Philippines	
Isopropyl alcohol			400 ppm TWA; 980 mg/m3 TWA		400 ppm TWA; 980 mg/m3 TWA	400 ppm TWA; 980 mg/m3 TWA	
(67-63-0)			500 ppm STEL; 1225 mg/m3 STEL	Not established	Not established	Not established	
		Ex	posure Limits/Gu	idelines (Con't.)			
	Result	Poland	Portugal	Russia	Singapore	South Africa	
			400 ppm STEL [VLE-CD		500 ppm STEL; 1230 mg/m3 STEL	500 ppm STEL; 1225 mg/m3 STEL	
Isopropyl alcohol (67-63-0)			200 ppm TWA [VLE- MP]		400 ppm PEL; 983 mg/m3 PEL	400 ppm TWA; 960 mg/m3 TWA; 980 mg/m3 TWA (regulated under Propane-2-ol)	
		Ex	posure Limits/Gu	idelines (Con't.)			
	Result	Spain	Sweden	Switzerland	Taiwan	Venezuela	
	MAKs	Not established	Not established	200 ppm TWA [MAK]; 500 mg/m3 TWA [MAK]	Not established	Not established	
	STELs	400 ppm STEL [VLA-EC]; 1000 mg/m3 STEL [VLA- EC]	250 ppm STV; 600 mg/m3 STV	400 ppm STEL [KZW]; 1000 mg/m3 STEL [KZW]	Not established	500 ppm STEL [LEB	
Isopropyl alcohol (67-63-0)	TWAs	200 ppm TWA [VLA ED] (it is prohibited the partial or complete commercialization o use of this substance as a phytosanitary o biocide compound); 500 mg/m3 TWA [VLA-ED] (it is prohibited the partia or complete commercialization o use of this substance as a phytosanitary o biocide compound)	r 150 ppm LLV; 350 mg/m3 LLV I	Not established	400 ppm TWA; 983 mg/m3 TWA	400 ppm TWA [CAP	
	Biologica Limit Values (BLV)	I 40 mg/L urine end o workweek Acetone (1,F,I)	f Not established	Not established	Not established	Not established	

Exposure Control Notations

Switzerland

•Isopropyl alcohol (67-63-0): Developmental Risk Groups: (Developmental Risk Group C)
Portugal
•Isopropyl alcohol (67-63-0): Carcinogens: (A4 - Not Classifiable as a Human Carcinogen)
Singapore
•Isopropyl alcohol (67-63-0): Odour Threshold - High: (490 mg/m3) | Odour Threshold - Low: (8 mg/m3) | Irritation: (490 mg/m3)
South Africa
•Isopropyl alcohol (67-63-0): Skin: (Skin Notation)
Brazil
•Isopropyl alcohol (67-63-0): Skin: (skin designation)
Ireland

Isopropyl alcohol (67-63-0): Skin: (Potential for cutaneous absorption) ACGIH
Isopropyl alcohol (67-63-0): Carcinogens: (A4 - Not Classifiable as a Human Carcinogen) Germany DFG
Isopropyl alcohol (67-63-0): Pregnancy: (no risk to embryo/fetus if exposure limits adhered to)

Exposure Limits Supplemental Switzerland

•Isopropyl alcohol (67-63-0): **Biological Limit Values:** (25 mg/L Medium: urine Time: end of shift Parameter: Acetone; 25 mg/L Medium: whole blood Time: end of shift Parameter: Acetone)

Argentina

•Isopropyl alcohol (67-63-0): BEIs: (2 mg/g Creatinine urine Acetone)

ACGIH

•Isopropyl alcohol (67-63-0): **BEIs:** (40 mg/L Medium: urine Time: end of shift at end of workweek Parameter: Acetone (background, nonspecific)) | **TLV Basis - Critical Effects:** (CNS impairment; eye and upper respiratory tract irritation)

• Wear protective gloves - rubber or neoprene.

Germany TRGS

•Isopropyl alcohol (67-63-0): BELs: (50 mg/L Medium: whole blood Time: end of shift Parameter: Acetone; 50 mg/L Medium: urine Time: end of shift Parameter: Acetone)

8.2 Exposure controls

Engineering Measures/Controls

• Local exhaust is recommended but not required. Provide adequate ventilation as necessary.

Personal Protective Equipment

Pictograms



Respiratory

- Eye/Face
- Hands
- Skin/Body

• Wear protective clothing - apron or other impervious body coverings.

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

- General Industrial Hygiene Considerations
- Wear protective clothing apron or other impervious body covering

• Wear protective eyewear (goggles, face shield, or safety glasses).

• Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling.

Environmental Exposure Controls No data available

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Viscous liquid.
Color	White	Odor	Mild
Taste	Not relevant	Odor Threshold	No data available
Physical and Chemical Properties	Not relevant		
General Properties			
Boiling Point	100 C(212 F)	Melting Point	Not relevant
Decomposition Temperature	Not relevant	рН	No data available
Density	8.7 lbs/gal	Water Solubility	Miscible
Viscosity 5300-7300 Centipoise (cPs, cP) of mPas @ 25 C(77 F)		Explosive Properties	Not relevant
Oxidizing Properties:	Not relevant		
Volatility			
Vapor Pressure	Not relevant	Vapor Density	Not relevant
Evaporation Rate	Not relevant	VOC (Vol.)	81 g/L
Volatiles (Wt.)	80 %		
Flammability			

Flash Point	Not measurable	UEL	Not relevant
LEL	Not relevant	Autoignition	Not relevant
Flammability (solid, gas)	Not relevant		
Environmental			
Half-Life	No data available	Octanol/Water Partition coefficient	No data available
Coefficient of water/oil distribution	No data available	Bioaccumulation Factor	No data available
Bioconcentration Factor	No data available	Biochemical Oxygen Demand BOD/BOD5	No data available
Chemical Oxygen Demand	No data available	Persistence	No data available
Degradation	No data available		

9.2 Other Information

• No data available

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

• Direct sunlight. Excess heat. Avoid freezing.

10.5 Incompatible materials

• Strong oxidizing agents.

10.6 Hazardous decomposition products

• Hazardous decomposition products formed under fire conditions - carbon oxides (COx). No decomposition is expected under normal storage and use conditions.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Component Name	CAS	Data
Isopropyl alcohol (8.1%)	h/-h-11	Acute Toxicity: orl-rat LD50:5000 mg/kg; ihl-rat LC50:16000 ppm/8H; skn-rbt LD50:12800 mg/kg; Irritation: eye-rbt 100 mg/24H MOD

Potential Health Effects

	-
Inhalation	
Acute (Immediate)	 May cause mild irritation.
Chronic (Delayed)	 Repeated and prolonged exposure may cause irritation.
Skin	
Acute (Immediate)	 May cause mild irritation.
Chronic (Delayed)	 Repeated and prolonged exposure may cause irritation.
Eye	
Acute (Immediate)	May cause irritation.
Chronic (Delayed)	 Repeated and prolonged exposure may cause irritation.
Ingestion	
Acute (Immediate)	 Under normal conditions of use, no health effects are expected.
Chronic (Delayed)	 No specific information available.

Section 12 - Ecological Information

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

• No data available

12.4 Mobility in Soil

• No data available

12.5 Results of PBT and vPvB assessment

• No data available

12.6 Other adverse effects

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste

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

13.2 Other Information

• Dispose of wastes in an approved waste disposal facility.

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	NDA	NDA	NDA	NDA
IMO/IMDG	NDA	NDA	NDA	NDA	NDA
IATA/ICAO	NDA	NDA	NDA	NDA	NDA

14.6 Special precautions for user

- None specified.
- Not relevant.

MARPOL 73/78 and the IBC Code 14.8 Other information

DOT • Not regulated.

IMO/IMDG • Not regulated.

IATA/ICAO • Not regulated.

Section 15 - Regulatory Information

14.7 Transport in bulk according to Annex II of

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

SARA Hazard Classifications • Not classified

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

Inventory											
Component		CAS	Aus	stralia AICS	Cana	da DSL	China	l	EU EINECS	Japa	n ENCS
Isopropyl alcohol	67-	63-0	Yes		Yes		Yes		Yes	Yes	
	Inventory (Con't.)										
Component	t CAS		5	Korea KECL		New Zealand		Philippines PICCS		TS	CA
Isopropyl alcohol		67-63-0		Yes		Yes		Yes		Yes	

Australia

Labor

Australia - High Volume Industrial Chemicals List •Isopropyl alcohol 67-63-0 8.1% Australia - List of Designated Hazardous Substances - Classification •Isopropyl alcohol 67-63-0 8.1% F, Xi R11, R36, R67

Environment

Australia - Priority Existing Chemical Program

•Isopropyl alcohol 67-63-0 8.1% Candidate chemical

Canada

Labor

Canada - WHMIS - Classifications of Substances •Isopropyl alcohol 67-63-0 8.1% B2, D2B (including 70%) Canada - WHMIS - Ingredient Disclosure List •Isopropyl alcohol 67-63-0 8.1% 1 %

Canada Alberta

Environment

Canada - Alberta - Ambient Air Quality Objectives

•Isopropyl alcohol 67-63-0 8.1% 3190 ppbv 1 hour average; 7850 µg/m3 1 hour average

China

Other

China - Dangerous Goods List •Isopropyl alcohol 67-63-0 8.1% UN1219 PG = II

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification •Isopropyl alcohol 67-63-0 8.1% F; R11 Xi; R36 R67 EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling •Isopropyl alcohol 67-63-0 8.1% F Xi R:11-36-67 S:(2)-7-16-24/25-26 EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases •Isopropyl alcohol 67-63-0 8.1% S:(2)-7-16-24/25-26 EU - Existing Substance Regulation (793/93/EEC) - Evaluation of Existing HPV Chemicals (REPEALED) •Isopropyl alcohol 67-63-0 8.1%

Germany

Environment

Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes •Isopropyl alcohol 67-63-0 8.1% ID Number 135, hazard class 1 - Iow hazard to waters

Hong Kong

Labor

Hong Kong - Dangerous Substances Regulations - Classification •Isopropyl alcohol 67-63-0 8.1% Flammable Hong Kong - Dangerous Substances Regulations - Particular Risks •Isopropyl alcohol 67-63-0 8.1% R-11 Hong Kong - Dangerous Substances Regulations - Safety Precautions •Isopropyl alcohol 67-63-0 8.1% S-6/8, S-13

Other

Hong Kong - Dangerous Goods - Category 5 - Substances Giving Off Flammable Vapour •Isopropyl alcohol 67-63-0 8.1% Class 1, Division 2

India

Environment

India - Hazardous Chemical Rules - List of Hazardous and Toxic Chemicals •Isopropyl alcohol 67-63-0 8.1%

Japan

Labor

Japan - ISHL Dangerous Substances •Isopropyl alcohol 67-63-0 8.1% Flammable substance Japan - ISHL Harmful Substances Requiring Workers to Subject to Medical Exams •Isopropyl alcohol 67-63-0 8.1% (when produced and handled indoors) Japan - ISHL Harmful Substances Whose Names Are to be Indicated on the Label Isopropyl alcohol 67-63-0 8.1% >1 % weight Japan - ISHL Notifiable Substances •Isopropyl alcohol 67-63-0 8.1% >0.1 % weight [Table 9, 494] (listed under Propyl alcohol) Japan - ISHL Prevention of Organic Solvent Poisoning •Isopropyl alcohol 67-63-0 8.1% Class 2

Environment

Inventory - Japan - Industrial Safety and Health Law Substances (ISHL) •Isopropyl alcohol 67-63-0 8.1% 2-(8)-319

Other

Japan - Chemical Substance Control Law (CSCL) - Examined Existing Chemical Substances •Isopropyl alcohol 67-63-0 8.1% Decomposable Japan - Fire Service Law - Hazardous Materials •Isopropyl alcohol 67-63-0 8.1% Group 4 - Flammable liquids II (listed under Alcohols) Japan - ISHL Working Environment Evaluation Standards - Administrative Control Levels Isopropyl alcohol 67-63-0 8.1% 200 ppm ACL

Mexico

Other

Mexico - Hazard Classifications •Isopropyl alcohol 67-63-0 8.1% Hazard Class = 3 PG = II UN1219 **Mexico - Regulated Substances** •Isopropyl alcohol 67-63-0 8.1% UN1219

Singapore

Environment

Singapore - Petroleum and Flammable Materials - Hazard Classes •Isopropyl alcohol 67-63-0 8.1% Hazard Class = 3 Singapore - Petroleum and Flammable Materials - Regulated Products Isopropyl alcohol 67-63-0 8.1% SCDIPA1219L2

United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List •Isopropyl alcohol 67-63-0 8.1%

15.2 Chemical Safety Assessment

 No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

15.3 Other Information

 California Proposition 65: This product can expose you to chemicals known to the State of California to cause cancer: 1,4-Dioxane

CAS #123-91-1 < 0.00012%

Section 16 - Other Information

Relevant Phrases (code & full text)

- P280 Wear protective gloves/protective clothing/eye protection/face protection.
 - P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 - P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at

	rest in a position comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
Classification method for mixtures	Calculation method.
Last Revision Date	• 22 January 2013
Preparation Date	• 03 August 2018
Other Information	• Approved by: Troy Bergstedt, Director of Chemical Research, (218) 628-2217 ext.142.
Disclaimer/Statement of Liability	f • The information contained herein is based on data available to us and is believed to be correct. Since this information may have been obtained in part from independent laboratories or other sources not under direct supervision, no representation is made that the information is accurate, reliable, complete, or representative and Buyer may rely thereon only at the Buyer's risk. We make no guarantee that the health and safety precautions we have suggested will be adequate for all individuals and / or situations involving its handling and uses. No warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Vendor assumes no responsibility for injury to vendee or third person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet.