

## Safety Data Sheet

Safety Data Sheet (in compliance with Regulation (EC) 1907/2006, Regulation (EC) 1272/2008 and Regulation (EC) 453/2010)

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 Revision Number: 2

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**1.1 Product Identifier:**

Trade Name (as labeled):	<b>Aladdin Total Etch Adhesive</b>
Part/Item Number:	99400

**1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against:**

Recommended Use:	Dental Adhesive
Restrictions on Use:	For professional use only

**1.3 Details of the Supplier of the Safety Data Sheet:**

Manufacturer/Supplier Name:	Sultan Healthcare
Manufacturer/Supplier Address:	1301 Smile Way York, PA, USA
Manufacturer/Supplier Telephone Number:	1-201-871-1232 or 800-637-8582 (Product Information)-
Email address:	<a href="mailto:customer.service@sultanhc.com">customer.service@sultanhc.com</a>

**1.4 Emergency Telephone Number:**

Emergency Contact Telephone Number:	800-535-5053 (INFOTRAC) 1-352-323-3500 (Outside the United States – Call Collect)
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### 2. HAZARD(s) IDENTIFICATION

**2.1 Classification of the Substance or Mixture**

**GHS SDS Classification**

Health	Environmental	Physical
Skin Irritation Category 2 H315 Eye Irritation Category 2 H319 Skin Sensitization Category 1 H317 Specific Target Organ Toxicity Single Exposure Category 3 H335	Aquatic Chronic Toxicity Category 3 H412	Flammable Liquid Category 2 H225

**EU Classification (1999/45/EC as amended):** Highly Flammable (F), Irritant (Xi)

**EU Risk (R) and Safety (S) Phrases:** R11, R36/37/38, R43, R52/53

Refer to Section 16 for the full text of the EU Classifications and R Phrases.

**Labeling Elements:** Contains 2-Hydroxyethyl Methacrylate, t-Butyl alcohol, Methacrylates, Acrylates



**Signal Word: Danger!**

Hazard Statements	Precautionary Statements
<p>H225 Highly flammable liquid and vapor.                      H315 Causes skin irritation.                      H317 May cause an allergic skin reaction.                      H319 Causes serious eye irritation.                      H335 May cause respiratory irritation.                      H412 Harmful to aquatic life with long lasting effects</p>	<p>P210 Keep away from heat, sparks, open flames, and hot surfaces. No smoking.                      P233 Keep container tightly closed.                      P240 Ground and bond container and receiving equipment                      P241 Use explosion-proof electrical, ventilating and lighting equipment.                      P242 Use only non-sparking tools.                      P243 Take precautionary measures against static discharge.                      P261 Avoid breathing mist, vapors or spray.                      P264 Wash thoroughly after handling.                      P271 Use only outdoors or in a well-ventilated area.                      P272 Contaminated work clothing should not be allowed out of the workplace.                      P273 Avoid release to the environment.                      P280 Wear protective gloves, protective e clothing and eye protection.                      P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.                      P333 + P313 If skin irritation or rash occurs: Get medical attention.                      P362 + P364 Take off contaminated clothing and wash it before reuse.                      P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.                      P337 + P313 If eye irritation persists: Get medical attention.                      P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.                      P312 Call a POISON CENTER or doctor if you feel unwell.                      P370 + P378 In case of fire: Use carbon dioxide, alcohol foam or dry chemical to extinguish.                      P403 + P235 + P233 Store in a well-ventilated place. Keep cool. Keep container tightly closed.                      P405 Store locked up.                      P501 Dispose of contents and container in accordance with local and national regulations.</p>

**2.3 Other Hazards:** None

**3. COMPOSITION AND INFORMATION ON INGREDIENTS**

### 3.2 Mixture

Hazardous Components	C.A.S. # EC#	IUPAC Name	Substance Classification 67/548/EEC (EC) No 1272/2008	WT %
2-Hydroxyethyl Methacrylate	868-77-9 / 212-782-2	2-hydroxyethyl methacrylate	Xi R36/38, R43  Eye Irrit. 2 H319 Skin Irrit 2 H315 Skin Sens 1 H317	25-50
t-Butyl alcohol	75-65-0 / 200-889-7	2-methylpropan-2-ol	F, Xi, Xn R11, R20, R36/37  Flam Liq. 2 H225 Acute Tox 4 H332 Eye Irrit. 2 H319 STOT SE 3 H335	10-<25
Methacrylates	Proprietary		Xi R36/38, R43 Eye Irrit. 2 H319 Skin Irrit 2 H315 Skin Sens 1 H317	10-20
Acrylates	Proprietary		Xi, N R36/38, R51/53  Eye Irrit. 2 H319 Skin Irrit 2 H315 Aquatic Chronic 2 H411	10-<25

The exact concentration is being withheld as a trade secret.

Refer to Section 16 for the full text of the GHS and H phrases and EU Classifications and R Phrases.

## 4. FIRST-AID MEASURES

### 4.1 Description of First Aid Measures:

Routes of Exposure	First Aid Instructions
Eye	Flush eyes with water for at least 15 minutes, holding the eyelids apart. Get immediate medical attention.
Skin	Remove contaminated clothing. Wash skin thoroughly with soap and water. If irritation or other symptoms develop, get medical attention. Launder clothing before re-use.
Inhalation	Remove victim to fresh air. If breathing is difficult, have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration. Get immediate medical attention.
Ingestion	Get immediate attention. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious or convulsing person.

### 4.2 Most Important Symptoms and Effects, Both Acute and Delayed:





May cause eye, skin and respiratory tract irritation. Prolonged or repeated contact may cause allergic skin reaction (skin rash). Inhalation of vapors may cause headache, dizziness, muscle weakness, giddiness, incoordination, confusion, and unconsciousness

### 4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed:





Not required under normal conditions of use.

**Note to Physicians (Treatment, Testing, and Monitoring):** Treatment of overexposure should be directed at the control of symptoms and clinical conditions.

## 5. FIRE-FIGHTING MEASURES

<b>5.1 Extinguishing Media</b>			
Use carbon dioxide, alcohol foam or dry chemical.			
<b>5.2 Special Hazards Arising from the Substance or Mixture:</b>			
Vapors are heavier than air and may travel to ignition source and flash back. Closed containers may explode due to pressure build up when exposed to extreme heat.			
<b>5.3 Advice for Fire-Fighters:</b>			
<b>Fire Fighting Procedures:</b>		Use water to cool fire-exposed containers.	
<b>Precautions for Fire Fighters:</b>		Firefighters should wear full emergency equipment and approved positive pressure self-containing breathing apparatus.	
<b>Recommended Protective Equipment for Fire Fighters:</b>			
EYES/FACE	SKIN	RESPIRATORY	THERMAL
			

## 6. ACCIDENTAL RELEASE MEASURES

<b>6.1 Personal Precautions, Protective Equipment and Emergency Procedures:</b>			
Avoid contact with eyes, skin and clothing. Avoid breathing vapors. Wear appropriate protective clothing as described in Section 8. Eliminate all sources of ignition. Ventilate the area.			
<b>Recommended Personal Protective Equipment for Containment and Clean-up:</b>			
EYES/FACE	SKIN	RESPIRATORY	THERMAL
			

<b>6.2 Environmental Precautions:</b>			
Prevent spill from entering sewers and water courses. Report releases as required by local and national authorities.			
<b>6.3 Methods and Material for Containment and Cleaning up:</b>			
Contain and absorb spills with inert material and transfer to a suitable container for disposal.			

**6.4 Reference to Other Sections:**

Refer to Section 8 for Personal Protective Equipment and Section 13 for Disposal information.

## 7. HANDLING AND STORAGE

**7.1 Precautions for Safe Handling:**

Avoid contact with eyes, skin, and clothing. Avoid breathing vapors or mist. Wash thoroughly after handling. Wear protective clothing and equipment as described in Section 8. Use with adequate ventilation. Keep away from heat, sparks, flames and all sources of ignition. Empty containers retain product residues and can be hazardous. Follow all SDS precautions when handling empty containers.

**7.2 Conditions for Safe Storage, Including Any Incompatibilities:**



Store in a cool, dry, well-ventilated area. Keep container tightly closed when not in use. Do not store in direct sunlight. Protect from physical damage. Store in original package.

**7.3 Specific End Use (s):** For professional use only.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 Control Parameters:****Occupational Exposure Limits:**

2-Hydroxyethyl Methacrylate	United States	None Established
	Germany	None Established
	United Kingdom	None Established
	France	None Established
	Spain	None Established
	Italy	None Established
	European Union	None Established
t-Butyl alcohol	United States	100 pm TWA OSHA PEL 100 ppm TWA ACGIH TLV
	Germany	20 ppm TWA DFG MAK , 80 ppm STEL
	United Kingdom	100 ppm TWA UK OEL , 150 ppm STEL
	France	100 ppm TWA
	Spain	100 ppm TWA
	Italy	None Established
	European Union	None Established

Methacrylates	United States	None Established	
	Germany	None Established	
	United Kingdom	None Established	
	France	None Established	
	Spain	None Established	
	Italy	None Established	
	European Union	None Established	
Acrylates	United States	None Established	
	Germany	None Established	
	United Kingdom	None Established	
	France	None Established	
	Spain	None Established	
	Italy	None Established	
	European Union	None Established	
<b>Biological Exposure Limits:</b> None Established			
<b>8.2 Exposure Controls:</b>			
<b>Appropriate Engineering Controls:</b> No special controls required.			
<b>Individual Protection Measures (PPE)</b> <b>Specific Eye/face Protection:</b> Wear chemical safety goggles if splashing is possible. <b>Specific Skin Protection:</b> Wear butyl rubber or other impervious gloves to prevent skin contact. Wear impervious clothing if needed to prevent contact. Recommended glove: Butyl rubber. Contact glove supplier for thickness and breakthrough times. <b>Specific Respiratory Protection:</b> None required under normal use condition. <b>Specific Thermal Hazards:</b> Not applicable			
<b>Recommended Personal Protective Equipment:</b>			
EYES/FACE	SKIN	RESPIRATORY	THERMAL
			

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>9.1 Information on Basic Physical and Chemical Properties:</b>			
<b>Appearance:</b>	Light yellow liquid	<b>Explosive limits:</b>	LEL: 2.4% UEL: 8.0% (t-butyl alcohol)
<b>Odor:</b>	Sweet acrylic ester odor.	<b>Vapor pressure:</b>	40.7 mmHg @ 25°C (t-butyl alcohol)

<b>Odor threshold:</b>	Not available	<b>Vapor density:</b>	2.55 (Air = 1) (t-butyl alcohol)
<b>pH:</b>	2.5	<b>Relative density:</b>	0.9 g/cm <sup>3</sup>
<b>Melting/freezing point:</b>	Not available	<b>Solubility:</b>	Partially
<b>Initial boiling point and range:</b>	180.4 °F (82.41°C) (t-butyl alcohol)	<b>Partition coefficient: n-octanol/water:</b>	Not available
<b>Flash point:</b>	66°F (19°C) CC	<b>Auto-ignition temperature:</b>	Not available
<b>Evaporation rate:</b>	Not available	<b>Decomposition temperature:</b>	Not available
<b>Flammability:</b>	Flammable	<b>Viscosity:</b>	Not available
<b>Explosive Properties:</b>	Vapors may be explosive in confined areas	<b>Oxidizing Properties:</b>	None

**9.2 Other Information:** None available

## 10. STABILITY AND REACTIVITY

**10.1 Reactivity:** Not reactive under normal use conditions.

**10.2 Chemical Stability:** Stable.

**10.3 Possibility of Hazardous Reactions:** None known.

**10.4 Conditions to Avoid:** Avoid heat, sparks, open flame and other ignition sources.

**10.5 Incompatible materials:** Avoid contact with oxidizing and acids.

**10.6 Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, methacrylate and acrylates.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on Toxicological Effects:

**Potential Health Effects:**

Eyes: Liquid and vapors can cause irritation with redness, tearing and blurred vision.

Skin: May cause skin irritation. May cause allergic skin reaction (skin sensitization).

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause kidney and liver damage.

<b>Inhalation:</b> May cause respiratory tract irritation and central nervous system effects with headache, dizziness, muscle weakness, giddiness, confusion, hallucinations, incoordination and unconsciousness.
<b>Chronic Health Effects:</b> Prolonged or repeated overexposure to t-butyl alcohol may cause damage to the central nervous system, kidneys and liver.
<b>Carcinogenicity:</b> In a 2 year carcinogenic study, mice and rats were orally administered t-butyl alcohol in drinking water. There was some evidence of carcinogenicity in male rats, male mice and female mice. There was no evidence of carcinogenicity activity in female rats. None of the components of this product are listed as carcinogens by OSHA, IARC, NTP, ACGIH or the EU Substances Directive.
<b>Mutagenicity:</b> t-Butyl alcohol was negative in the AMES test, chromosome aberration assay and in the sister chromatid exchange assay.
<b>Medical Conditions Aggravated by Exposure:</b> Individuals with pre-existing skin conditions may be at increased risk from exposure.
<b>Acute Toxicity Data:</b> t-Butyl Alcohol: Oral rat LD50 3.5 g/kg 2-Hydroxyethyl Methacrylate: Oral rat LD50 5050 mg/kg
<b>Reproductive Toxicity Data:</b>
<b>Specific Target Organ Toxicity (STOT):</b> <b>Single Exposure:</b> In a study with rats, t-butyl alcohol produced central nervous system depression, narcosis and changes in the liver and kidneys at 108 mg/kg. Contact with unpolymerized methacrylates may cause skin sensitization. 2-Hydroxyethyl methacrylate has produced contact sensitization in workers in the printing industry. <b>Repeated Exposure:</b> None known.

## 12. ECOLOGICAL INFORMATION

<b>12.1 Toxicity:</b> t-Butyl alcohol: 96 hr LC50 fathead minnow >961 mg/L, 48 hr EC50 daphnia magna 933 mg/L 2-Hydroxyethyl Methacrylate: 96 hr LC50 Pimephales promelas (fathead minnows) 990 mg/L Acrylates: No data available. Harmful to aquatic life with long lasting effects.
<b>12.2 Persistence and Degradability:</b> t-Butyl alcohol is inherently biodegradable. 2-Hydroxy-ethyl methacrylate is readily biodegradable.
<b>12.3 Bio-accumulative Potential:</b> The potential for bioaccumulate is expected to be low for t-butyl alcohol. 2-Hydroxyethyl methacrylate has an estimated BCF of 1.3 which suggests the potential for bioaccumulation in aquatic organisms is low.
<b>12.4 Mobility in Soil:</b> t-Butyl alcohol and 2-hydroxy-ethyl methacrylate are expected to have a very high mobility in soil.
<b>12.5 Other Adverse Effects:</b> None known.
<b>12.6 Results of PBT/vPvB Assessment:</b> Not required.

## 13. DISPOSAL CONSIDERATIONS

<b>13.1 Waste Treatment Methods:</b>
<b>Regulations:</b> Dispose in accordance with local and national environmental regulations.
<b>Properties (Physical/Chemical) Affecting Disposal:</b> Empty containers retain product residues and can be hazardous.



Follow all SDS precautions when handling empty containers.

**Waste Treatment Recommendations:** Dispose in accordance with national and local regulations.

## 14. TRANSPORT INFORMATION

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Hazard Class(s)	14.4 Packing Group	14.5 Environmental Hazards
<b>DOT</b>	UN1993	Flammable Liquid n.o.s. (2-Methylpropanol-2, Acrylate, mixture)	3	PG II	No
<b>ADR/RID</b>	UN1993	Flammable Liquid n.o.s. (2-Methylpropanol-2, Acrylate, mixture)	3	PG II	No
<b>IMDG</b>	UN1993	Flammable Liquid n.o.s. (2-Methylpropanol-2, Acrylate, mixture)	3	PG II	Marine Pollutant-No
<b>IATA/ICAO</b>	UN1993	Flammable Liquid n.o.s. (2-Methylpropanol-2, Acrylate, mixture)	3	PG II	No

**14.6 Special precautions for user:** Flammable Liquid

**14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable – product is transported only in packaged form.

## 15. REGULATORY INFORMATION

### **15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture:**

#### **U.S. Federal Regulations**

**Comprehensive Environmental Response and Liability Act of 1980 (CERCLA):** This product is not subject to CERCLA reporting requirements. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

**Toxic Substances Control Act (TSCA):** This product is a medical device and not subject to chemical notification requirements.

**Clean Water Act (CWA):** This material is not regulated under the Clean Water Act

**Clean Air Act (CAA):** This material is not regulated under the Clean Air Act.

#### **Superfund Amendments and Reauthorization Act (SARA) Title III Information:**

##### **SARA Section 311/312 (40 CFR 370) Hazard Categories:**

<b>Immediate Hazard:</b>	Yes	<b>Pressure Hazard:</b>	No
<b>Delayed Hazard:</b>	Yes	<b>Reactivity Hazard:</b>	No

<b>Fire Hazard:</b>	<b>Yes</b>
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**This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372):**

<b>Components</b>	<b>C.A.S. #</b>	<b>WT %</b>
t-butyl alcohol	75-65-0	10-25

**State Regulations**

**California:** This product contains the following chemicals(s) known to the State of California to cause cancer, birth defects or reproductive harm:

<b>Components</b>	<b>C.A.S. #</b>	<b>WT %</b>
None		

**International Regulations**

**EU REACH:** The substances in this product comply with the EU REACH regulation as applicable.

<b>16. OTHER INFORMATION</b>
<p>Full text of Classification abbreviations used in Section 2 and 3:</p> <p>F Highly Flammable  N Dangerous for the Environment  Xi Irritant  Xn Harmful  R11 Highly flammable.  R22 Harmful if swallowed.  R36/37 Irritating to eyes and respiratory system.  R36/38 Irritating to eyes and skin.  R43 May cause sensitization by skin contact.  R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</p> <p>Flam Liq 2 Flammable Liquid Category 2  Acute Tox 4 Acute Toxicity Category 4  Eye Irrit. 2 Eye Irritation Category 2  Skin Irrit. 2 Skin Irritation Category 2  Skin Sens 1 Skin Sensitization Category 1  STOT SE 3 Specific Target Organ Toxicity -Single Exposure Category 3  Aquatic Acute 2 Aquatic Acute Category 2</p> <p>H225 Highly flammable liquid and vapor.  H315 Causes skin irritation.  H317 May cause an allergic skin reaction.  H319 Causes serious eye irritation.  H332 Harmful if inhaled.  H335 May cause respiratory irritation.  H412 Harmful to aquatic life with long lasting effects</p> <p>Supersedes: 17 January 2011</p>

Revision Summary: Comprehensive review, new format.

Date of SDS Preparation/Revision: 06 October 2014

Data Sources: US NLM ChemID Plus and HSDB, Substance SDS for components, IUCLID Dataset EU Chemical Bureau, ESIS, Country websites for occupational exposure limits.