

## **Safety Data Sheet (SDS)**

### **1 Identification**

**Product Identifier:** Technikote

**Product description:** Water soluble surface protectant and temporary adhesive.

**Relevant Product Use:** Surface splatter protectant commonly used for laser cutting microelectronic materials and as a temporary jig adhesive.

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

**Manufacturer/Supplier:**

Questech Services Corporation

2201 Executive Drive

Garland, Texas 75041 USA

[www.questlaser.com](http://www.questlaser.com)

[sales@questlaser.com](mailto:sales@questlaser.com)

972-278-8006

**Emergency telephone number:** 972-278-8006

### **2 Hazard identification**

**Classification of the solution:** Mild eye irritant and mild respiratory tract irritant.

**Routes of entry:**      **Eye Contact**                      **Inhalation**                      **Ingestion**

**Eye contact** may cause eye irritation. Symptoms of exposure may include eye irritation or burning sensation.

**Inhalation** of dry powdered residue may irritate respiratory tract. Symptoms of exposure may include: nasal discharge, hoarseness, coughing, chest pain and breathing difficulty.

**Ingestion:** essentially non-toxic based on components. Symptoms of exposure may include: inflammation of mouth, throat, esophagus and/or stomach.

### **3 Composition/Information on ingredients**

**Chemical characterization:** aqueous solution

**Description:** Mixture of substances listed below by weight

**Polyvinyl alcohol**                      8.2%                      **CAS # 25213-24-5**

**Deionized water**                      91.6%

**Proprietary ingredients**              0.2%

## 4 First Aid Measures

### Description of first aid measures:

**Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

**Inhalation:** Remove to fresh air. If breathing is difficult, give oxygen and get medical attention.

**Ingestion:** If a large quantity of this material is swallowed, get medical attention.

### Information for doctor:

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

No further relevant information is available.

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

No further relevant information available.

## 5 Fire-fighting Measures

The material is not flammable

## 6 Accidental Release Measures

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

Wear appropriate personal protective equipment, particularly chemical protective eyewear and chemical protective gloves.

### Methods and materials for containment:

Contain spill by application of non-flammable absorbent to minimize contaminated area.

### Method for cleanup:

Gather by sweeping. Cleanup small spills with absorbent wipes.

## 7 Handling and Storage

### Precautions for safe handling:

Handle with adequate personal protective equipment particularly chemical protective eyewear and chemical protective gloves. Avoid breathing the dried residue powder.

### Information about protection against explosions and fires:

#### Flammable properties:

Flammable limits in air, % volume: Upper: Not Applicable, Lower: Not Applicable. Auto ignition temperature: Not Applicable. Flash point: None

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

**Requirements to be met by storerooms and receptacles:** Store in the original container.

**Information about storage in one common storage facility:** Not required.

## 8 Exposure controls/Personal Protection

### Control parameters:

#### Components with occupational exposure limits:

**Polyvinyl alcohol** (Airborne dry residue from product)

OSHA PEL Permissible Exposure Limit:

15 mg/m<sup>3</sup> total dust, 5 mg/m<sup>3</sup> respirable fraction for nuisance dusts

ACGIH TLV Threshold Limit Value:

10 Mg/m<sup>3</sup> total dust containing no asbestos and < 1% crystalline silica Particulates Not Otherwise Classified (PNOC).

**Additional Information:** The lists that were valid during the creation of this SDS were used as basis.

### Exposure controls:

#### General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs and beverages.

Immediately remove all soaked and contaminated clothing and wash before reuse.

Wash hands before breaks and at the end of work.

Avoid contact with eyes.

Avoid contact with the skin.

#### Personal protective equipment:

**Breathing equipment:** Not required for handling the product as aqueous solution.

**Protection of hands:** Protective gloves.

The glove material has to be impermeable and resistant to the product.

**Eye protection:** Chemical safety goggles.

## 9 Physical and Chemical Properties

### Information on basic physical and chemical properties

#### General Information

##### Appearance:

<b>Form:</b>	Liquid
<b>Color:</b>	Colorless unless supplied with optional dye
<b>Odor:</b>	Slightly pungent
<b>Odor threshold:</b>	Not determined
<b>Ph-value @ 20 degrees C</b>	5.5

##### Change in condition

<b>Melting point/Melting range:</b>	Not applicable
<b>Boiling point/Boiling range:</b>	Not determined
<b>Flash point:</b>	None
<b>Flammability</b>	Not applicable
<b>Ignition temperature</b>	Not applicable
<b>Decomposition temperature:</b>	Not determined
<b>Auto igniting:</b>	Product is not self-igniting

<b>Danger of explosion:</b>	Product does not present an explosion hazard
<b>Explosion limits:</b>	
<b>Lower:</b>	0.0 Vol %
<b>Upper:</b>	0.0 Vol %
<b>Vapor pressure @ 20 degrees</b>	Not determined
<b>Specific gravity @ 20 degrees C</b>	1.017
<b>Vapor density</b>	Not determined
<b>Evaporation rate</b>	Not determined
<b>Solubility in / Miscibility with:</b>	
<b>Water:</b>	Slightly miscible
<b>Partition coefficient</b>	
<b>(n-octanol/water):</b>	Not determined
<b>Viscosity:</b>	6.5-7.5 Cp
<b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0%
<b>Water</b>	91.6%
<b>Solids content</b>	8.2%
<b>Other information:</b>	No further relevant information available

## 10 Stability and Reactivity

**Reactivity:** No further information available.

**Chemical stability:** Stable under normal conditions.

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**Possibility of hazardous reactions:** No dangerous reactions known.

**Conditions to avoid:** No further relevant information available.

**Incompatible materials:** No further relevant information available.

**Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological Information

**Information on toxicological effects:**

**Acute toxicity:**

**Oral rat LD50:** >5000 gm/kg; practically nontoxic to animals by ingestion.

**Inhalation LC50 (dry powder residue) :** >20 mg/l (rats; dust with 3-5 micron particle size; 1 hr. exposure); practically nontoxic to animals by acute inhalation exposure.

**Skin:** In powder form Polyvinyl Alcohol was nonirritating to rabbit skin. In aqueous solution, slight irritation to rabbit skin was noted. Not a skin sensitizer in guinea pigs when dosed as a 10% aqueous solution. Practically nontoxic to animals (LD50, rabbits: >1,000 mg/kg).

**Eye:** The powder and aqueous solutions are slightly irritating to rabbit eyes; irritation subsided by 48 hrs. after exposure.

**Carcinogenicity:** Polyvinyl Alcohol is not classifiable as to (its) carcinogenicity in humans.

**Reproductive/Developmental Effects:** No information is available.

**Repeated Exposure:** A review of Polyvinyl Alcohol studies by the Cosmetic Ingredient Expert Panel is available in the published literature (Int. J. Toxicology, 17 (Suppl. 5):67-92 (1998)). The Panel concluded that Polyvinyl Alcohol is safe as used in cosmetic formulations.

## 12 Ecological Information

### **Toxicity:**

#### **Aquatic toxicity:**

Polyvinyl alcohol exhibits low acute toxicity to aquatic species.

Fish (*Pimephales promelas*) 96-hr. LC: > 40,000 ppm.

Fish (*Lepomis macrochirus*) 96-hr. LC50: > 10,000 ppm.

Bacteria (*Photobacterium phosphoreum*), Microtox Method, EC50: > 50,000 ppm.

**Environmental Fate/Biodegradation:** Polyvinyl Alcohol has been reported to be substantially biodegraded in several test systems after a lag time for microbial acclimation. Almost 100% degradation of 30-day BOD with a PVA-acclimated culture can be reached.

## 13 Disposal Considerations

### **Waste treatment methods:**

#### **Recommendation:**

Waste product in absorptive media and absorbent wipes should be managed in an appropriate and approved waste disposal facility. Dispose of as a non-hazardous solid waste.

## 14 Transport Information

**This product is not classified as dangerous goods according to the international regulations for transport by land, inland waterway, sea and air.**

## 15 Regulatory Information

**Safety, health and environmental regulations/legislation specific for the product or components:**

### **SARA (Superfund Amendments and Reauthorization):**

#### **Section 355 (extremely hazardous substances):**

None of the ingredients are listed

#### **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

### **TSCA (Toxic Substances Control Act):**

Polyvinyl Alcohol is listed

### **California Proposition 65:**

#### **Chemicals known to cause cancer:**

None of the ingredients are listed

#### **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed

#### **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed

#### **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed

**Carcinogenic categories:**

**EPA (Environmental Protective Agency):**

None of the ingredients are listed

**TLV (Threshold Limit Value established by ACGIH):**

Polyvinyl Alcohol is listed

**Hazard statements:**

Mild eye irritant and mild respiratory tract irritant.

**Precautionary statements:**

Routes of entry:    Eye Contact                      Inhalation                      Ingestion

Eye contact may cause eye irritation. Symptoms of exposure may include eye irritation or burning sensation.

Inhalation of dry powdered residue may irritate respiratory tract. Symptoms of exposure may include: nasal discharge, hoarseness, coughing, chest pain and breathing difficulty.

Ingestion: essentially non-toxic based on components. Symptoms of exposure may include: inflammation of mouth, throat, esophagus and/or stomach.

**Chemical safety assessment:** A chemical safety assessment has not been carried out.

## 16 Other Information

**The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as to the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.**

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