AP-SILANE 32T

AP-SILANE 32T is a technical grade of N-β(aminooethyl)γ-aminopropyl-trimethoxy silane coupling agent. AP-SILANE 32T is compatible with epoxy, phenolic, melamine and other organic resins. API-SILANE 32T will improve the performance of thermoset and thermoplastic resins when they are used as binders in foundry and abrasive composite applications.

CHEMICAL STRUCTURE

\[ \text{H}_2\text{NCH}_2\text{CH}_2\text{NHC}_3\text{H}_6\text{Si}(-\text{OCH}_3) \]

CHARACTERISTICS

- Improved adhesion.
- Increased composite wet and dry tensile and modulus.
- Increased flexural strength.
- Increased wet and dry compressive strength.

PACKAGING

AP-SILANE 32T is available in 4 oz. samples and 441-lb. drums.

You may also be interested in . . .

- AP-SILANE 20
- AP-SILANE 21

Advanced Polymer, Inc.
400 Paterson Plank Road
Carlstadt, NJ 07072
Tel: (201) 933-0600
Fax: (201) 933-8442
www.advpolymer.com

The information set forth herein is furnished free of charge and based on technical data that Advanced Polymer, Inc. believes to be reliable. It is intended for use by persons having technical skill at their own risk. Because conditions
AP-SILANE 32T

Section I Product Identity

Product Name: AP-SILANE 32T  
Chemical Name/Family: N-β(aminoethyl)-γ-aminopropyl-trimethoxy silane  
CAS Registry #: 1760-24-3  
24 Hour Emergency Number: 800-424-9300  
24 Hour Chemtrec Number: 800-424-9300

All ingredients are listed in EPA's TSCA list of chemical substances

Section II Hazardous Components/Composition Information

<table>
<thead>
<tr>
<th>CHEMICAL:</th>
<th>CAS #:</th>
<th>USOS:</th>
<th>TWA:</th>
<th>STEL:</th>
<th>PERCENT:</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-β(aminoethyl)-γ-aminopropyl-trimethoxy silane</td>
<td>1760-24-3</td>
<td>&gt;98</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section III Physical and Chemical Properties

- Boiling Point: 498°F
- Specific Gravity (H₂O=1): 0.99
- Vapor Pressure: <0.1
- Vapor Density (Air=1): 7.7
- Percent Volatile By Weight: 100%
- Evaporation Rate (BuAc=1): <1
- Solubility in Water: Soluble
- Appearance and Odor: Light straw, transparent liquid with slight amine odor.

Section IV Fire and Explosion Hazard Data

- Flash Point (Method Used): 202°F (Closed Cup)
- Flammable Limits in Air (% By Volume): ND
- Extinguishing Media: Foam, dry chemical CO₂
- Special Fire Fighting Procedures: Evacuate personnel to a safe area. Wear self-contained breathing apparatus. Wear full protective equipment
- Unusual Fire and Explosion Hazard: Combustion can produce nitrogen oxides, toxic and corrosive gasses.

Section V Reactivity Data

- Stability: Stable
- Conditions to Avoid: Store in a well-ventilated place at temperatures below 120°F. Keep container tightly closed. Keep from freezing.
- Incompatibilities: Will hydrolyze with water, but no hazard. Avoid contact with strong oxidizing agents and acid.
- Hazardous Decomposition or By Products: Combustion may produce CO₂, CO and ethanol (flammable liquid)
- Hazardous Polymerization: May Not Occur
Section VI Health hazard Data

<table>
<thead>
<tr>
<th>Primary Routes of Entry</th>
<th>Inhalation: NO</th>
<th>Dermal: YES</th>
<th>Ingestion: YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health hazard</td>
<td>LD50 (oral/rat) 2.02—2.43 ml/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NTP: No</td>
<td>IARC Monograph: NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSHA Regulated: NO</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signs and Symptoms of Exposure:

| Skin Contact | Contact with skin may cause severe irritation. |
| Eye Contact  | May cause irreversible damage and burns to the eyes |
| Ingestion    | Although ingestion is unlikely, liquid may irritate upper digestive tract if swallowed. May cause severe irritation. |
| Inhalation   | May cause severe irritation. |

Medical Condition Generally Aggravated by Exposure

None known

Emergency First Aid Procedures

| Eyes          | Immediately flush eyes with plenty of water. Seek medical attention. |
| Skin         | Immediately wash skin with soap and water. Wash contaminated clothing before reuse. |
| Ingestion    | Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician. |
| Inhalation   | Immediately remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Please note: Symptoms may be delayed; prompt medical attention may be required. Call a physician. |

Section VII Precautions for Safe Handling and Use

Steps to be Taken in Case the Material is Released or Spilled:

- Turn off ignition sources. Soak up with sand, oil dry or other absorbent material.

Waste Disposal Method:

- Dispose of according to State, Local and EPA regulations.

Section VIII Special Precautions

Precautions to be Taken in Handling and Storage:

- Store in a well-ventilated place at temperatures below 120°F. Keep container tightly closed. Keep from freezing *** Agitate contents of container before using ***
Section IX Control Measures

Respiratory Protection

<table>
<thead>
<tr>
<th>Ventilation</th>
<th>Local exhaust</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical</td>
<td></td>
<td>Adequate ventilation system</td>
</tr>
<tr>
<td>Special</td>
<td></td>
<td>None required</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>None</td>
</tr>
</tbody>
</table>

Eye Protection        
Protective Gloves     
Protective Clothing   
Other Protective Equipment 
Other Precautions

Safety glasses should be worn
Rubber or plastic gloves should be worn
Rubber apron
Eye wash equipment and safety shower should be available. NIOSH approved respirator as needed
Wash hands after use.

Section X SARA Title III

SECTION 313 SUPPLIER NOTIFICATION

This product contains the following toxic chemicals subject to the reporting requirements of SECTION 331 of the EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 and of 40 CFR 371

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Chemical Name</th>
<th>Percent by Weight</th>
</tr>
</thead>
</table>

This information must be included in all MSDS's that are copied and distributed for this material.

Section XI Transportation Information

SHIPPING INFORMATION

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>AP-SILANE 32T</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT PROPER SHIPPING NAME</td>
<td>Non-Regulated for DOT</td>
</tr>
<tr>
<td>HAZARD CLASS</td>
<td>None</td>
</tr>
<tr>
<td>UN NUMBER</td>
<td>None</td>
</tr>
<tr>
<td>PACKING GROUP</td>
<td>None</td>
</tr>
<tr>
<td>LABEL REQUIREMENTS</td>
<td>None</td>
</tr>
</tbody>
</table>

Hazard Ratings

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

Date Prepared ................. February 12, 2009
Prepared By ..................... API
Date Revised ................... July 12, 2010
Revised By ..................... API

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