

**VM 651**

Version 2.0

Revision Date 03/28/2011

Ref. 130000024743

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : VM 651  
 MSDS Number : 130000024743

Product Use : Solvent, Electrical/electronic industries

Manufacturer : HD MicroSystems™  
 250 Cheesequake Road  
 Parlin, New Jersey 08859

Product Information : 800-346-5656  
 Transport Emergency : CHEMTREC: 1-800-424-9300 (outside the U.S. 1-703-527-3887)

**SECTION 2. HAZARDS IDENTIFICATION**

## Potential Health Effects

## Skin

3-Aminopropyltriethoxysilane : Corrosion with pain, ulceration or blisters, cracking or peeling of skin. May cause skin sensitization reactions in certain individuals.

## Eyes

3-Aminopropyltriethoxysilane : Corrosive, may cause permanent eye injury if not promptly treated.

## Carcinogenicity

Material	IARC	NTP	OSHA
Ethanol	1		

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

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Component	CAS-No.	Concentration
3-Aminopropyltriethoxysilane	919-30-2	>95%

**SECTION 4. FIRST AID MEASURES**

- Skin contact : Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
- Eye contact : Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
- Inhalation : Move to fresh air.
- Ingestion : Immediately give plenty of water (if possible charcoal slurry). Do NOT induce vomiting. Call a physician immediately.
- General advice : Never give anything by mouth to an unconscious person.

**SECTION 5. FIRE-FIGHTING MEASURES**

- Flammable Properties
- Flash point : 93 °C (199 °F)
- Ignition temperature : 300 °C (572 °F)
- Lower explosion limit : 0.8 vol%
- Upper explosion limit : 4.5 vol%
- Fire and Explosion Hazard : Fire or intense heat may cause violent rupture of packages.
- Suitable extinguishing media : Dry sand, Dry chemical, Carbon dioxide (CO<sub>2</sub>)
- Unsuitable extinguishing media : Water

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Firefighting Instructions : In the event of fire, wear self-contained breathing apparatus.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Safeguards (Personnel) : Wear personal protective equipment. Avoid contact with skin, eyes and clothing.

Spill Cleanup : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Accidental Release Measures : Should not be released into the environment.

**SECTION 7. HANDLING AND STORAGE**Handling (Personnel) : Use only in well-ventilated areas.  
Keep away from food, drink and animal feedingstuffs. Avoid contact with the skin and the eyes. When using do not eat, drink or smoke.

Handling (Physical Aspects) : When using do not smoke. Use only in area provided with appropriate exhaust ventilation.

Storage : Keep container tightly closed in a dry and well-ventilated place. Store in original container.  
Never allow product to get in contact with water during storage.**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Engineering controls : Ensure adequate ventilation.

Personal protective equipment  
Respiratory protection : Breathing apparatus needed only when aerosol or mist is formed. respirator with A2B2-P3 filter

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Hand protection : Material: butyl-rubber  
 Glove thickness: 0.5 mm  
 Wearing time: 480 min  
 Additional protection: Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Eye protection : Safety glasses with side-shields

Skin and body protection : Long sleeved clothing

## Exposure Guidelines

## Exposure Limit Values

Ethanol

PEL: (OSHA) 1,000 ppm 1,900 mg/m<sup>3</sup> 8 hr. TWA

TLV (ACGIH) 1,000 ppm 8 hr. TWA

TLV (ACGIH) 1,000 ppm STEL

AEL \* (DUPONT) 1,000 ppm 8 & 12 hr. TWA

\* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Form : liquid  
 Color : none  
 Odor : amine-like  
 Water solubility : Decomposes in contact with water.

**SECTION 10. STABILITY AND REACTIVITY**

Stability : Stable at room temperature when stabilized with 2-ethylhexyl dihydrogen

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phosphate.

- Conditions to avoid : Exposure to water vapour.
- Incompatibility : Incompatible with acids.
- Hazardous reactions : Hazardous polymerisation does not occur.

**SECTION 11. TOXICOLOGICAL INFORMATION**

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- Further information : No data is available on the product itself.
- 3-Aminopropyltriethoxysilane
- Derma1 LD50 : 4,290 mg/kg , rabbit
- Derma1 : rabbit  
Kidney effects
- Oral LD50 : 1,680 mg/kg , rat  
no data available
- Oral : rat  
Kidney effects
- Inhalation 4 h LC50 : > 7.35 mg/l , rat
- Skin irritation : rabbit  
Corrosive
- Eye irritation : rabbit  
Corrosive
- Skin sensitization : Causes sensitization., guinea pig
- Repeated dose toxicity : Inhalation  
rat  
Respiratory irritation
- Derma1  
rabbit  
No adverse effects expected.

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Oral  
rat  
No toxicologically significant effects were found.

Mutagenicity : Animal testing did not show any mutagenic effects.  
Did not cause genetic damage in cultured bacterial cells.

Reproductive toxicity : Animal testing showed no reproductive toxicity.

Teratogenicity : Animal testing showed no developmental toxicity.

**SECTION 12. ECOLOGICAL INFORMATION**

## Aquatic Toxicity

3-Aminopropyltriethoxysilane

96 h LC50 : Danio rerio (zebra fish) > 934 mg/l

72 h EbC50 : Algae 603 mg/l

48 h EC50 : Daphnia magna (Water flea) 331 mg/l

Additional ecological information : No data is available on the product itself.

**SECTION 13. DISPOSAL CONSIDERATIONS**

Waste Disposal : In accordance with local and national regulations. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.

Environmental Hazards : Dispose of as unused product.

**SECTION 14. TRANSPORT INFORMATION**

DOT UN number : 1760

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Proper shipping name : Corrosive liquids, n.o.s. (3-(Triethoxysilyl)propylamine)  
 Class : 8  
 Packing group : II  
 Labelling No. : 8  
 Reportable Quantity : 100 lbs Ethanol

IATA\_C UN number : 1760

Proper shipping name : Corrosive liquid, n.o.s. (3-(Triethoxysilyl)propylamine)

Class : 8

Packing group : II

Labelling No. : 8

IMDG UN number : 1760

Proper shipping name : Corrosive liquid, n.o.s. (3-(Triethoxysilyl)propylamine)

Class : 8

Packing group : II

Labelling No. : 8

**SECTION 15. REGULATORY INFORMATION**

TSCA Status : On the inventory, or in compliance with the inventory

SARA 313 Regulated Chemical(s) : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

CERCLA Reportable Quantity : 10,000 lbs  
Based on the percentage composition of this chemical in the product.: Ethanol

California Prop. 65 : WARNING! This product contains a chemical known to the State of California to cause cancer.Ethanol  
WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.Ethanol

PA Right to Know Regulated Chemical(s) : Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances): Ethanol

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NJ Right to Know Regulated Chemical(s) : Substances on the New Jersey Workplace Hazardous Substance List present at a concentration of 1% or more (0.1% for substances identified as carcinogens, mutagens or teratogens): Ethanol

**SECTION 16. OTHER INFORMATION**

Contact person : HD Microsystems™, Customer Service, 800-346-5656

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Significant change from previous version is denoted with a double bar.