



Woo-Bin Song

12/6/2002

Adv: talghader

## MATERIAL SAFETY DATA SHEET

### \*\*\*\*\* IDENTIFICATION \*\*\*\*\*

NAME: VM651  
CHEM. FAMILY: Mixture.

SYNONYMS: SEMICONDUCTOR MATERIAL.  
FORMULA: Proprietary.

MANUFACTURER:  
HD Microsystems™  
Cheesequake Road  
Parlin, NJ 08859

INFORMATION & EMERGENCY TELEPHONE NOS:  
INFORMATION: Product: (800) 441-7515  
EMERGENCIES: Medical: (800) 441-3637  
Transport (CHEMTREC): (800) 424-9300

All Ingredients in This Product Are TSCA Listed/Reported.

### \*\*\*\*\* PHYSICAL DATA \*\*\*\*\*

FORM: Liquid.

ODOR: Amine.

APPEARANCE: Colorless to Amber. SOLUBILITY IN WATER: High to Miscible.

### \*\*\*\*\* COMPONENTS \*\*\*\*\*

Material(s):	CAS#	V.P. mm Hg @ 20C	Weight %
Proprietary Ingredient(s).			> 60%

### \*\*\*\*\* HAZARDOUS REACTIVITY \*\*\*\*\*

INSTABILITY:  
The product is normally stable.

VM651/AH1  
05/29/98

INCOMPATIBILITY:

Reaction with water is rapid and exothermic. Reaction with water (2-15%) can generate sufficient heat to exceed the flash point; Water.

DECOMPOSITION:

Decomposition products:

Carbon monoxide, carbon dioxide, water; Nitrogen oxides; Silicon oxides.

POLYMERIZATION:

The product does not normally polymerize significantly.

\*\*\*\*\* FIRE & EXPLOSION DATA \*\*\*\*\*

FLASHPOINT: >200F Calculated

FIRE & EXPLOSION HAZARDS:

The product is not an unusual fire or explosion hazard.

EXTINGUISHING MEDIA:

Sand, dry chemical, or carbon dioxide.

SPECIAL FIREFIGHTING INFORMATION:

Toxic decomposition products may form under fire conditions. (See Decomposition Section.);

Wear full protective clothing and a full facepiece, positive pressure, self-contained breathing apparatus (SCBA);

Decontaminate contaminated clothing and equipment with soap and water. Dispose of residues per federal, state, and local regulation. (See Waste Disposal Section.).

\*\*\*\*\* HEALTH HAZARD INFORMATION \*\*\*\*\*

PRINCIPAL HEALTH EFFECTS:

>>>Proprietary Ingredient(s)

\*\*\*\*Toxic effects described in animals include: BY SKIN OR EYE CONTACT: Corrosive to the skin; Corrosive to the eye.

\*\*\*\*Human health effects of overexposure may include: BY SKIN OR EYE CONTACT: Skin irritation with discomfort or rash; May cause eye corrosion with corneal or conjunctival ulceration.

\*\*\*\*Human effects of higher level acute, repeated or chronic



overexposure may include: BY SKIN OR EYE CONTACT: Skin burns or ulceration; BY INHALATION: Temporary central nervous system depression with anaesthetic effects: dizziness, headache, confusion, incoordination, and loss of consciousness. \*\*\*In addition: Skin permeation can occur in amounts capable of producing effects of systemic toxicity.

Individuals may have increased susceptibility to the hazards of overexposure to ingredient(s) of this product if they have pre-existing diseases of the:

Skin.

#### ANIMAL DATA:

>>>Proprietary Ingredient(s)

Skin absorption LD50: ~ 4,700 mg/kg in rabbits

Oral LD50: ~1,680 mg/kg in rats.

#### CARCINOGENICITY LISTING:

No ingredients of this product are designated by IARC, NTP, OSHA, ACGIH or Dupont as potential carcinogens.

#### EXPOSURE LIMITS:

Workplace exposures should be kept below the following limits:

None Established.

#### NOTES ON EXPOSURE LIMITS:

PELs - OSHA Permissible Exposure Limits - 29 CFR 1910.1000, Subpart Z, or specific substance standards;

TLVs - ACGIH Threshold Limit Values - published by American Conference of Governmental Industrial Hygienists, 6500 Glenway Avenue, Cincinnati, OH 45211;

WEELs- AIHA Workplace Environmental Exposure Limits - published by the American Industrial Hygiene Association, 2700 Prosperity Avenue, Suite 250, Fairfax, VA 22031;

AELs - Dupont Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits are lower than AEL in effect, government limits shall take precedence;

(C) = "ceiling", limit not to be exceeded for any time period;

(S) = "skin" , skin absorption may contribute significantly to the ingredient's internal toxicity.

\*\*\*\*\* FIRST AID INSTRUCTIONS \*\*\*\*\*

- Skin Contact: For skin contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash contaminated clothing before reuse.
- Eye Contact: For eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.
- Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
- Ingestion: If swallowed, do not induce vomiting. Immediately give two glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

NOTES TO PHYSICIAN: Activated charcoal slurry may be administered. To prepare activated charcoal slurry, suspend 50 grams activated charcoal in 400ml water and mix thoroughly. Administer 5ml/kg, or 350ml for an average adult.

\*\*\*\*\* PROTECTION INFORMATION \*\*\*\*\*

Respiratory Protection:

A NIOSH/MSHA approved full-face mask equipped with chemical cartridges approved for methylamine may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, when exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection; For most conditions, no respiratory protection should be needed; however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator. In dusty atmospheres, use an approved dust respirator;

Selection of a suitable respirator will depend on the properties of the contaminant(s) and their actual or expected air concentration(s) versus applicable limits. Consult ANSI Standard Z88.2 for decision logic to select appropriate NIOSH/MSHA approved respirators;

A NIOSH/MSHA/OSHA approved air purifying respiratory with a dust/mist cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed limits. Protection provided by air purifying respirators is limited. Use a positive pressure



air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known or any other circumstances where air purifying respirators may not provide adequate protection;

Use a positive pressure air-supplied respirator if concentrations may exceed exposure limits. Air-purifying respirators are inadequate for this material;

If respirators are needed to meet applicable limits, a respiratory protection program up to the level of OSHA Standard 29 CFR 1910.134 is mandatory. This includes air monitoring, selection, medical approval, training, fit testing, inspection, maintenance, cleaning, storage, etc; An OSHA/NIOSH respirator for protection against Nuisance Dust is recommended.

**Gloves:**

Gloves should be used when the possibility of skin contact exists;

The suitability of a particular glove and glove material should be determined as part of an overall glove program. Considerations may include chemical breakthrough time; permeation rate; abrasion, cut and puncture resistance; flexibility; duration of contact; etc.

**Recommended glove materials:**

Polyvinyl chloride.

**Other Protection Practices:**

Appropriate eye protection such as chemical splash goggles should be used if the possibility of eye contact exists;

Protective outer clothing should be used where the possibility of body contact exists. Contaminated work clothing should not be allowed out of the workplace;

Do not smoke, consume or store food or drinks in areas where the product is handled or stored. After handling the product, wash hands thoroughly before leaving the work area;

Additional engineering controls, work practices and training may be required depending on exposure levels. These are discussed in the OSHA Respiratory Protection Standard (29 CFR 1910.134) and OSHA Hazard Communication Standard (29 CFR 1910.1200);

Do not breath dust. Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling.

\*\*\*\*\* DISPOSAL INFORMATION \*\*\*\*\*

Spill, Leak or Release:

FOR SMALL SPILLS, absorb on rags, sand or other absorbent material;

FOR LARGE SPILLS, get workers out of affected area. If flammable liquids or vapors may be present, turn off electrical devices or other sources of sparks or flames. WEAR PROTECTIVE EQUIPMENT. Use supplied-air respiratory protection if vapor concentrations are not known;

Contain spill at source by diking or absorbing with sand. Do not allow spill to spread to or intentionally flush to sewer or ground. Wash area thoroughly. Adequately ventilate area; Spill residue, cleaning rags and absorbent may be considered hazardous. (See Waste Disposal Section.).

Waste Disposal:

Components of this product may be considered hazardous; Consult applicable Federal, State, and local regulations for allowable disposal methods.

\*\*\*\*\* PRODUCT INFORMATION \*\*\*\*\*

Contaminated Items:

Empty product containers, contaminated clothing and cleaning materials, etc. should be considered hazardous until decontaminated or properly disposed of. (See Waste Disposal Section.).

Storage:

Store product below 90F to ensure product viscosity stability.

\*\*\*\*\* ADDITIONAL INFORMATION \*\*\*\*\*

No ingredients of this product are subject to the reporting requirements of section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372.

DENSITY =            g/L            VOC =            g/L            wt %

CALIFORNIA PROPOSITION 65: WARNING: This product does not contain chemical known to the state of California to cause cancer, birth defects, or other reproductive harm.



This product is a physical mixture. The health effects information about this product is based on the individual ingredients; The data in this Material Safety Data Sheet relates only to the specific product designated herein and does not relate to its use in combination with any other material or in any process.

Date of latest MSDS revision: 05/29/98

Person Responsible for MSDS:

Safety Coordinator - MSDS  
DuPont P&EM / MCM  
14 Alexander Drive  
Research Triangle Park, NC 27709-4425  
Telephone: (800) 284-3382  
Outside U.S.: (919) 248-5775