

# Material Safety Data Sheet



HD-3007

HD3007

Revised 27-MAY-2008

Printed 27-MAY-2008

## CHEMICAL PRODUCT/COMPANY IDENTIFICATION

### Company Identification

#### MANUFACTURER/DISTRIBUTOR

HD Microsystems(TM)  
Cheesequake Road  
Parlin  
New Jersey  
USA  
08859

#### PHONE NUMBERS

Product Information : (800) 346-5656  
Transport Emergency : (800) 424-9300 (Outside the US (703)  
527-3887)  
Medical Emergency : (800) 441-7515 (Outside the US (302)  
774-1000)

## COMPOSITION/INFORMATION ON INGREDIENTS

### Components

Material	CAS Number	%
Proprietary Polymer		10-30
PGMEA	108-65-6	<10
4-Butyrolactone	96-48-0	>60

### Components (Remarks)

The specific chemical identity of the Proprietary Polymer is withheld as a trade secret.

## HAZARDS IDENTIFICATION

### Potential Health Effects

This product is a physical mixture. The health effects information about this product is based on the individual ingredients:

>>>Proprietary Polymer  
Human health effects of overexposure may include irritation of lungs.

>>>PGMEA  
Skin contact may initially include: skin irritation with discomfort or rash.

## Material Safety Data Sheet

## (HAZARDS IDENTIFICATION - Continued)

Eye contact may initially include: eye irritation with discomfort, tearing, or blurring of vision.

Inhalation may initially include: nonspecific discomfort, such as nausea, headache, or weakness. Prolonged excessive inhalation exposures may cause irritation of the upper respiratory passages, with coughing and discomfort. Data to evaluate the skin permeation hazard of this compound are insufficient. There are no reports of human sensitization.

>>>Butyrolactone

Skin contact may initially include: skin irritation with discomfort or rash. There are reports in the literature that, after excessive contact, this compound may be absorbed through the skin, producing the effects of systemic toxicity.

Eye contact may initially include: severe eye irritation with discomfort, tearing, or blurring of vision.

Higher exposures may lead to these effects: irritation of the upper respiratory passages, with coughing and discomfort upon inhalation; or temporary nervous system depression with anaesthetic effects such as dizziness, headache, confusion, incoordination, and loss of consciousness upon inhalation or ingestion.

## Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

-----  
FIRST AID MEASURES  
-----

## First Aid

## INHALATION

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

## SKIN CONTACT

In case of 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

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

## Material Safety Data Sheet

(FIRST AID MEASURES - Continued)

## INGESTION

If swallowed, immediately give 2 glasses of water and induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.

-----  
FIRE FIGHTING MEASURES  
-----

## Flammable Properties

Flash Point : 165 F (74 C) Calculated

## Fire and Explosion Hazards:

KEEP AWAY FROM SPARKS AND OPEN FLAMES. Do not smoke in area with open product; If the product may be heated above its flashpoint during processing, remove sources of ignition such as open sparks, flames or static discharge to prevent vapor ignition.

## Extinguishing Media

Water Spray, Dry Chemical, Carbon Dioxide.

## Fire Fighting Instructions

Wear full protective equipment. Thoroughly decontaminate all equipment used in firefighting efforts before returning to service.

Toxic decomposition products may form under fire conditions. (See Decomposition Section.); Wear a full facepiece, positive pressure, self-contained breathing apparatus (SCBA); Dispose of residues per federal, state, and local regulation. (See Waste Disposal Section.).

-----  
ACCIDENTAL RELEASE MEASURES  
-----

## Safeguards (Personnel)

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

Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus.

## Material Safety Data Sheet

(ACCIDENTAL RELEASE MEASURES - Continued)

## Spill Clean Up

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.).

-----  
HANDLING AND STORAGE  
-----

## Handling (Personnel)

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

## Storage

Store product in a cool location away from sunlight or ultraviolet light to ensure product viscosity stability.

-----  
EXPOSURE CONTROLS/PERSONAL PROTECTION  
-----

## Engineering Controls

Use only with adequate ventilation.

## Personal Protective Equipment

Respiratory Protection:

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.. 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/MESA approved respirators;

Material Safety Data Sheet

(EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

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.

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.

Exposure Guidelines

Applicable Exposure Limits

PGMEA

PEL (OSHA)	: None Established
TLV (ACGIH)	: None Established
AEL * (DuPont)	: 100 ppm, 15 minute TWA
WEEL (AIHA)	: 50 ppm, 8 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.

-----  
 PHYSICAL AND CHEMICAL PROPERTIES  
 -----

Physical Data

Form	: Liquid.
Color	: Amber.
Solubility in Water	: Insoluble
Odor	: Hydrocarbon.

## Material Safety Data Sheet

-----  
STABILITY AND REACTIVITY  
-----

## Chemical Stability

Stable at normal temperatures and recommended storage conditions.

## Incompatibility with Other Materials

Avoid contact with:  
Reducing agents; Oxidizing agents; Bases; Acids; Strong Acids; Strong Oxidizers.

## Decomposition

Decomposition products at high temperature:  
Carbon monoxide (CO); Nitrogen oxides; Carbon dioxide; water; Various hydrocarbons

## Polymerization

Polymerization will not occur.

-----  
TOXICOLOGICAL INFORMATION  
-----

## Animal Data

>>>Proprietary Polymer  
No information found.

>>>PGMEA  
Inhalation LC50: no information found  
Skin absorption LD50: 5000 mg/kg in rabbits  
Oral LD50: 8532 mg/kg in female rats

>>>Butyrolactone  
Inhalation 4 hour LC50: > 5.1 mg/L in rats  
Skin absorption LD50: > 10 mL/kg in guinea pigs  
Oral LD50: 800 - 1600 mg/kg in rats

-----  
ECOLOGICAL INFORMATION  
-----

## Ecotoxicological Information

>>>Proprietary Polymer  
No information found.

>>>PGMEA  
No information found

>>>Butyrolactone  
LC50- fish (various species) : 300 ppm.

## Material Safety Data Sheet

-----  
DISPOSAL CONSIDERATIONS  
-----

## Waste Disposal

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

## Container Disposal

Empty product containers should be considered hazardous  
until decontaminated or properly disposed of. (See Waste  
Disposal Section.).

-----  
REGULATORY INFORMATION  
-----

## U.S. Federal Regulations

TSCA Inventory Status : In compliance with TSCA Inventory  
requirements for commercial purposes.

-----  
OTHER INFORMATION  
-----

The data in this Material Safety Data Sheet relates only to the  
specific material designated herein and does not relate to use in  
combination with any other material or in any process.

Responsibility for MSDS : HD MicroSystems (TM)  
Address : Cheesequake Rd  
Parlin, NJ 08859  
Telephone : 800-346-5656

End of MSDS

→