

# Material Safety Data Sheet



PA401D PA-401D  
Revised 19-NOV-2008 Printed 19-NOV-2008

## CHEMICAL PRODUCT/COMPANY IDENTIFICATION

### Tradenames and Synonyms

Developer

### Company Identification

#### MANUFACTURER/DISTRIBUTOR

HD Microsystems  
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	%
Cyclopentanone	120-92-3	>60

## HAZARDS IDENTIFICATION

### Potential Health Effects

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

#### >>>Cyclopentanone

\*\*\*\*Additional animal tests have shown: No data available to define carcinogenic, mutagenic or reproductive toxicity; No animal data available to define developmental toxicity.  
\*\*\*\*Human health effects of overexposure may include: BY SKIN CONTACT: Burns; Skin permeation can occur in amounts capable of producing effects of systemic toxicity; Severe irritation; BY EYE CONTACT: Burns; Tearing; Severe irritation; Itching; Redness; BY INHALATION: Unconsciousness; Headache; Nausea; Irritation of the respiratory tract; Difficulty in breathing;

## Material Safety Data Sheet

## (HAZARDS IDENTIFICATION - Continued)

Narcotic effects; Coughing; Faintness; Wheezing; Vomiting; Irritation of the nose and throat; Intoxication; BY INGESTION: Burns; Nausea; Diarrhea; Gastrointestinal irritation; Vomiting; Intoxication; BY CONTACT, INHALATION, OR INGESTION: Harmful. \*\*\*\*Human effects of higher level acute, repeated or chronic overexposure may include: High blood pressure; Central nervous system depression; BY INHALATION: Dizziness; Lightheadedness.

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

Central nervous system.

## 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.

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FIRST AID MEASURES  
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## 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.

## INGESTION

If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

## Material Safety Data Sheet

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FIRE FIGHTING MEASURES  
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## Flammable Properties

Flash Point : 94 F (34 C)  
Method : Closed Cup.

Method: Calculated.

## FIRE &amp; EXPLOSION HAZARDS:

KEEP AWAY FROM SPARKS AND OPEN FLAMES. Do not smoke in area with open product;

The solvent vapors are heavier than air and may travel along the floor to a source of ignition and flashback; Use the product in areas and equipment with appropriate National Electric Code (NEC) classification. Consider the need for spark proof tools.

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.).

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ACCIDENTAL RELEASE MEASURES  
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## 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.).

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HANDLING AND STORAGE  
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## Handling (Personnel)

Do not breathe vapor or mist. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling.

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

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EXPOSURE CONTROLS/PERSONAL PROTECTION  
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## 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;

Gloves:

Gloves should be used when the possibility of skin contact

## Material Safety Data Sheet

## (EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

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);

## Exposure Guidelines

## Applicable Exposure Limits

## Cyclopentanone

PEL (OSHA)	: None Established
TLV (ACGIH)	: None Established
AEL * (DuPont)	: 25 ppm, 8 & 12 Hr. TWA STEL 50 ppm, 15 minute 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.

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PHYSICAL AND CHEMICAL PROPERTIES  
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## Physical Data

Form	: Liquid.
Color	: Colorless, Yellowish.
Solubility in Water	: Slightly soluble
Odor	: Mint-like.

## Material Safety Data Sheet

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STABILITY AND REACTIVITY  
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## Chemical Stability

Stable at normal temperatures and recommended storage conditions.

## Conditions to Avoid

Reducing agents; Oxidizing agents; Bases; Acids; Strong Acids; Strong Oxidizers; Inert gases; Direct Sunlight.

## Incompatibility with Other Materials

Reducing agents; Oxidizing agents; Bases; Acids; Strong Acids; Strong Oxidizers; Inert gases; Direct Sunlight.

## Decomposition

Carbon monoxide (CO); Nitrogen oxides; Carbon dioxide; water; Various hydrocarbons

## Polymerization

Polymerization will not occur.

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TOXICOLOGICAL INFORMATION  
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## Animal Data

>>>Cyclopentanone  
Skin LD50 [Rabbit]: 5,000 mg/kg  
Oral LD50 [Rat]: 1,180 mg/kg.

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ECOLOGICAL INFORMATION  
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## # Ecotoxicological Information

No information is available.

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DISPOSAL CONSIDERATIONS  
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## Waste Disposal

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

## Material Safety Data Sheet

(DISPOSAL CONSIDERATIONS - Continued)

## Container Disposal

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

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TRANSPORTATION INFORMATION  
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## # Shipping Information

ICAO  
UN No. : UN 2245  
Proper Shipping Name : Cyclopentanone  
Hazard Class : 3  
Packing Group : III

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REGULATORY INFORMATION  
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## U.S. Federal Regulations

All Ingredients in This Product Are TSCA Listed/Reported.

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 = .9509 g/mL

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OTHER INFORMATION  
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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 Road  
Parlin, New Jersey 08859  
Telephone : 800-346-5656

# Indicates updated section.

End of MSDS