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**: PA 401 D
- **MSDS Number**: 130000024724
- **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**: Cyclopentanone - May cause skin irritation. Redness, Discomfort.
  - **Eyes**: Cyclopentanone - May cause eye irritation. tearing, Discomfort, Blurred vision.
  - **Inhalation**: Cyclopentanone - Respiratory irritation
  - **Ingestion**: Cyclopentanone - Gastrointestinal disturbance

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

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**
SECTION 4. FIRST AID MEASURES

Skin contact : Wash off immediately with plenty of water.

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 : Clean mouth with water and drink afterwards plenty of water. Induce vomiting, but only if victim is fully conscious. Consult a physician.

General advice : Never give anything by mouth to an unconscious person.

SECTION 5. FIRE-FIGHTING MEASURES

Flammable Properties

Flash point : ca. 26 °C (79 °F)

Lower explosion limit : 1.3 vol%

Upper explosion limit : 10.8 vol%

Fire and Explosion Hazard : Vapours may form explosive mixtures with air. Burning produces irritant fumes.

Suitable extinguishing media : Water spray, Dry powder, Carbon dioxide (CO2), Alcohol-resistant foam

Unsuitable extinguishing media : High volume water jet, (contamination risk)

Firefighting Instructions : In the event of fire, wear self-contained breathing apparatus. Keep containers and surroundings cool with water spray.
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.

Spill Cleanup : Suitable material for picking up Kieselguhr Universal binder Unsuitable material for picking up: Chemical binders containing acids. Sweep up or vacuum up spillage and collect in suitable container for disposal. Use approved industrial vacuum cleaner for removal.

SECTION 7. HANDLING AND STORAGE

Handling (Personnel) : Provide adequate ventilation. Take precautionary measures against static discharges.
Avoid contact with the skin and the eyes. Keep away from food, drink and animal feedingstuffs. When using do not eat, drink or smoke.

Handling (Physical Aspects) : Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

Storage : Keep containers tightly closed in a cool, well-ventilated place. Keep away from sources of ignition - No smoking.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls : Ensure adequate ventilation.

Personal protective equipment : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Mask with gas filter, type A (EN 141)

Respiratory protection : Material: butyl-rubber
Glove thickness: 0.5 mm
Wearing time: < 240 min
Additional protection: Avoid natural rubber gloves., Unsuitable material,
Material Safety Data Sheet

PA 401 D

Version 2.0

Revision Date 03/28/2011

Ref. 130000024724

Polymers:
Polyvinyl chloride - PVC, Nitrile rubber / nitrile latex - NBR (0.35mm),
Polychloroprene - CR (0.5mm), Fluoro rubber - FKM (0.4 mm)

Eye protection  :  Safety glasses with side-shields
Skin and body protection  :  Solvent-resistant apron

Exposure Guidelines

Exposure Limit Values

Cyclopentanone

AEL *  (DUPONT)  25 ppm  8 & 12 hr. TWA
AEL *  (DUPONT)  50 ppm  STEL, 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form  :  liquid
Color  :  colourless, to, light yellow
Odor  :  mint-like
pH  :  no data available
Melting point  :  -51 °C (-60 °F)
Boiling point/boiling range  :  130.5 °C (266.9 °F)
Specific Gravity  :  0.9509
Water solubility  :  slightly soluble

SECTION 10. STABILITY AND REACTIVITY

Stability  :  Stable at normal temperatures and storage conditions.
Conditions to avoid  :  Exposure to sunlight.
Incompatibility  :  Incompatible with strong acids and oxidizing agents.
Hazardous decomposition  :  Hazardous decomposition products: Carbon dioxide (CO2), Carbon
SECTION 11. TOXICOLOGICAL INFORMATION

PA 401 D

Skin irritation : Moderate skin irritation
Eye irritation : Moderate eye irritation

Cyclopentanone
Dermal LD50 : > 2,000 mg/kg, rabbit
Oral LD50 : > 2,000 mg/kg, rat
Inhalation 4 h LC50 : > 19.5 mg/l, rat

SECTION 12. ECOLOGICAL INFORMATION

Environmental Fate

Cyclopentanone
Biodegradability : Expected to be biodegradable

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. The product should not be allowed to enter drains, water courses or the soil.

Environmental Hazards : Do not re-use empty containers.
SECTION 14. TRANSPORT INFORMATION

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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 : 100 lbs
Based on the percentage composition of this chemical in the product.: Cyclopentanone

California Prop. 65 : Chemicals known to the State of California to cause cancer, birth defects or any other harm: none known

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): Cyclopentanone
SECTION 16. OTHER INFORMATION


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.