

PA 400 R

Version 2.2

Revision Date 02/21/2013

Ref. 130000024716

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 400 R
MSDS Number : 130000024716

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

1-Methoxy-2-propyl acetate : Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering.

Eyes

1-Methoxy-2-propyl acetate : May cause eye irritation. tearing, Discomfort, Blurred vision.

Inhalation

1-Methoxy-2-propyl acetate : Respiratory irritation Cough, Discomfort.

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.

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
1-Methoxy-2-propyl acetate	108-65-6	>99%

SECTION 4. FIRST AID MEASURES

- Skin contact : Wash off with soap and water. Get medical attention if irritation develops and persists. Wash contaminated clothing before re-use.
- Eye contact : Immediately flush eyes for at least 15 minutes. Get medical attention.
- Inhalation : If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
- Ingestion : If swallowed Rinse mouth with water. Call a physician or poison control centre immediately. DO NOT induce vomiting unless directed to do so by a physician or poison control center.

SECTION 5. FIREFIGHTING MEASURES

- Flammable Properties
- Flash point : 43 °C (109 °F) closed cup
- Ignition temperature : 354 °C (669 °F)
- Lower explosion limit/ lower flammability limit : 1.3 vol%
- Upper explosion limit/ upper flammability limit : 10.8 vol%

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- Fire and Explosion Hazard** : Hazardous decomposition products formed under fire conditions. (see also section 10) Avoid breathing decomposition products.
- Suitable extinguishing media** : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray, Carbon dioxide (CO₂), Dry chemical, Foam
- Firefighting Instructions** : Wear self-contained breathing apparatus and protective suit. Evacuate personnel to safe areas. Stop spill/release if it can be done with minimal risk. Do not allow run-off from fire fighting to enter drains or water courses.

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)** : Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Wear suitable protective equipment.
- Spill Cleanup** : Dike spill. Neutralize with: lime soda ash Collect and contain contaminated absorbent and dike material for disposal. Keep in suitable, closed containers for disposal. Ventilate the area. Clean contaminated surface thoroughly.
- Accidental Release Measures** : Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Clean contaminated floors and objects thoroughly while observing environmental regulations. Dispose of in accordance with local regulations.

SECTION 7. HANDLING AND STORAGE

- Handling (Personnel)** : Avoid inhalation, ingestion and contact with skin and eyes. Do not use in areas without adequate ventilation. Keep container closed when not in use. Take care to avoid waste and spillage when weighing, loading and mixing the product.
Handle in accordance with good industrial hygiene and safety practice. Avoid

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contact with skin, eyes and clothing. Contaminated work clothing should not be allowed out of the workplace. Remove contaminated clothing and protective equipment before entering eating areas. Remove and wash contaminated clothing before re-use.

- Handling (Physical Aspects) : Avoid formation of dust and aerosols. Keep away from heat and sources of ignition.
- Storage : Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from sources of ignition - No smoking. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material. Keep container closed when not in use. Do not reuse empty container.
Keep away from: Strong oxidizing agents
- Storage temperature : 20 - 30 °C (68 - 86 °F)

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering controls : Local exhaust or a laboratory hood should be used when handling the materials. Maintain air concentrations below occupational exposure standards.
- Personal protective equipment
Respiratory protection : Provide adequate ventilation. No personal respiratory protective equipment normally required. Where there is potential for airborne exposures in excess of applicable limits, wear approved respiratory protection with dust/mist cartridge. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.
- Hand protection : Material: Impervious gloves
Additional protection: Gloves must be inspected prior to use., Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough., The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other., The exact break through time can be obtained from the protective glove producer and this has to be observed., Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the

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specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

- Eye protection : Wear safety glasses with side shields.
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Lightweight protective clothing
Safety shoes
- Protective measures : All chemical protective clothing should be visually inspected prior to use. Clothing and gloves should be replaced in case of chemical or physical damage or if contaminated.

Exposure Guidelines
Exposure Limit Values

1-Methoxy-2-propyl acetate
AEL * (DUPONT) 30 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form : liquid
 Color : colourless
 Odor : solvent-like
 pH : no data available
 Freezing point : < -10 °C (< 14 °F)
 : 145 - 146 °C (293 - 295 °F)
 Vapour Pressure : 4.93 hPa at 20 °C (68 °F)
 Specific gravity : 0.968
 Water solubility : > 100 g/l
 Partition coefficient: n-octanol/water : POW: 0.36 at 25 °C (77 °F)

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SECTION 10. STABILITY AND REACTIVITY

Stability	: Stable at normal temperatures and storage conditions.
Conditions to avoid	: Heat, flames and sparks. Take measures to prevent the build up of electrostatic charge.
Incompatibility	: Strong acids and strong bases Strong oxidizing agents
Hazardous decomposition products	: Hazardous decomposition products: Carbon dioxide (CO ₂), Carbon monoxide
Hazardous reactions	: With exposure to air, product may slowly degrade, forming peroxides which can be unstable. Hazardous polymerisation does not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

PA 400 R	
Further information	: Solvents may degrease the skin.High concentration of vapours may cause irritation to eyes and respiratory system and produce narcotic effects.No data is available on the product itself.
1-Methoxy-2-propyl acetate	
Dermal LD50	: > 5,000 mg/kg , rabbit
Oral LD50	: 8,532 mg/kg , rat
Skin irritation	: No skin irritation, rabbit
Eye irritation	: Mild eye irritation, rabbit
Skin sensitization	: Did not cause sensitisation on laboratory animals., guinea pig
Repeated dose toxicity	: Inhalation multiple species Respiratory irritation
Mutagenicity	: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

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Reproductive toxicity : Animal testing showed no reproductive toxicity.
Teratogenicity : Animal testing showed no developmental toxicity.

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity

1-Methoxy-2-propyl acetate

96 h LC50 : Oryzias latipes (medaka) > 100 mg/l
96 h LC50 : Oncorhynchus mykiss (rainbow trout) 134 mg/l
96 h LC50 : Pimephales promelas (fathead minnow) 161 mg/l
72 h EC50 : Scenedesmus capricornutum (fresh water algae) > 1,000 mg/l
48 h EC50 : Daphnia magna (Water flea) 380 mg/l

Environmental Fate

1-Methoxy-2-propyl acetate

Biodegradability : Readily biodegradable.

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

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal : If recycling is not practicable, dispose of in compliance with local regulations. Never place unused product down any indoor or out door drain.

Container Disposal : Do not reuse empty container.
Contaminated/not cleaned containers should be treated/handled like product waste.
Dispose of container properly.
Refer to applicable Local, State/Provincial, and Federal Regulations, as well as industry Standards.

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SECTION 14. TRANSPORT INFORMATION

DOT	UN number	: 3272
	Proper shipping name	: Esters, n.o.s. (1-Methoxy-2-propyl acetate)
	Class	: 3
	Packing group	: III
	Labelling No.	: 3
IATA_C	UN number	: 3272
	Proper shipping name	: Esters, n.o.s. (1-Methoxy-2-propyl acetate)
	Class	: 3
	Packing group	: III
	Labelling No.	: 3
IMDG	UN number	: 3272
	Proper shipping name	: Esters, n.o.s. (1-Methoxy-2-propyl acetate)
	Class	: 3
	Packing group	: III
	Labelling No.	: 3

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

SECTION 16. OTHER INFORMATION

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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.