FOR ANY EMERGENCY, CALL A LOCAL - NATIONAL POISON CONTROL UNIT OR THE ARCH CHEMICALS PARIS TELEPHONE (33-1) 5330-6300

IN THE USA CALL: ARCH CHEMICALS EMERGENCY PHONE (24HOURS): (423)-336-4970
FOR ALL USA MSDS QUESTIONS & REQUESTS CALL MSDS CONTROL: (203)-229-3449

PRODUCT NAME: ARCH® 8250-10

I. PRODUCT AND COMPANY IDENTIFICATION

REVISION DATE: 01-13-2000 SUPERCEDES: 12-03-1999
MSDS NO: 02066-0001 - 842608

MANUFACTURER: **Arch Chemicals, Inc. 501 Merritt 7 PO Box 5204 Norwalk, CT 06856-5204**

SYNONYMS: None
CHEMICAL FAMILY: Organic Mixture
FORMULA: Not Applicable/Mixture
USE DESCRIPTION: Positive Photoresist

SECTION 2 COMPOSITION

CAS or CHEMICAL NAME: 1-Methoxy-2-propanol acetate
CAS NUMBER: 108-65-6 PERCENTAGE RANGE: 75-85%
EXPOSURE STANDARDS: 100 ppm (8 hr. - TWA); 150 ppm (15 min. - STEL) - AIHA WEEL Guideline
This component may contain 2-methoxy-1-propanol acetate (CAS Number 70657-70-4) present as an impurity, at a concentration of 0.5% maximum

CAS or CHEMICAL NAME: Derivatized polystyrene resin
CAS NUMBER: Not Assigned (LVE # L-99-23) PERCENTAGE RANGE: 15-25%

SECTION 3 HAZARD IDENTIFICATION

R AND S PHRASES AND SYMBOLS:
R PHRASES: R10-36 - Flammable; Irritating to eyes
S PHRASES: S25 - Avoid contact with eyes
SYMBOLS: Xi (Irritant)

OTHER: May be a mild skin and respiratory irritant; central nervous system depressant

SECTION 4 FIRST AID MEASURES

EYES:
Immediately flush with large amounts of water for at least 15

minutes, occasionally lifting the upper and lower eyelids. Call a physician at once.

SKIN:

Immediately flush with water for 15 minutes. Wash the contaminated skin with soap and water. If irritation develops, call a physician. If clothing comes in contact with the product, the clothing should be laundered before re-use.

INGESTION:

Immediately drink water to dilute. Consult a physician if symptoms develop.

INHALATION:

If person experiences nausea, headache or dizziness, person should stop work immediately and move to fresh air until these symptoms disappear. If breathing is difficult, administer oxygen, keep the person warm and at rest. Call a physician. In the event that an individual inhales enough product to lose consciousness, person should be moved to fresh air at once and a physician should be called immediately. If breathing has stopped, artificial respiration should be given immediately. In all cases, ensure adequate ventilation and provide respiratory protection before the person returns to work.

SECTION 5 FIRE-FIGHTING MEASURES

FLAMMABILITY DATA

FLASH POINT: 46 Deg.C (115 Deg.F) (data for pure solvent only)

AUTOIGNITION TEMPERATURE: No Data

FLAMMABLE LIMITS AT NORMAL ATMOSPHERIC TEMPERATURE AND PRESSURE (PERCENT VOLUME IN AIR): LEL - 1.5% UEL - 7.0%
(data for pure solvent only)

EXTINGUISHING MEDIA:

Alcohol foam, Carbon dioxide, Dry chemical, Water spray

FIRE FIGHTING TECHNIQUES AND COMMENTS:

Use water to cool containers exposed to fire.

See Section 6 for protective equipment for fire fighting.

SECTION 6 ACCIDENTAL RELEASE MEASURES

SPILL MITIGATION PROCEDURES:

Evacuate all non-essential personnel. Hazardous concentrations in air may be found in local spill area and immediately downwind. Remove all sources of ignition. Stop source of spill as soon as possible and notify appropriate personnel.

AIR RELEASE: Vapors may be suppressed by the use of water spray. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste.

WATER RELEASE: This material has a density similar to water and is slightly soluble. Notify all downstream users of possible contamination. Divert water flow around spill if possible and safe to do so.

LAND SPILL: Create a dike or trench to contain materials. Spill materials may be absorbed using non-flammable absorbants.

Do not place spill materials back in their original containers. Containerize and label all spill materials properly. Decontaminate all clothing and the spill area using detergent and flush with large amounts of water.

PERSONAL PROTECTION FOR EMERGENCY SPILL AND FIRE-FIGHTING SITUATIONS:
In case of fire, use normal fire fighting equipment, including a approved self-contained breathing apparatus (SCBA).

Additional protective clothing must be worn to prevent personal contact with this material. Those items include but are not limited to: boots, gloves, splash-proof goggles and impervious clothing, i.e., chemically impermeable suit.

A hazardous physical characteristic of this product is: Combustible

SECTION 7 HANDLING AND STORAGE

DO NOT TAKE INTERNALLY. AVOID CONTACT WITH SKIN, EYES AND CLOTHING. UPON CONTACT WITH SKIN OR EYES, WASH OFF WITH WATER. AVOID BREATHING MIST OR VAPOR.
STORAGE CONDITIONS:
STORE AT TEMPERATURES BETWEEN 4 DEG.C AND 10 DEG.C AND AWAY FROM ALL SOURCES OF IGNITION.
OTHER: Material is light sensitive; do not expose to direct sunlight.
PRODUCT STABILITY AND COMPATIBILITY
SHELF LIFE LIMITATIONS: 6 months
INCOMPATIBLE MATERIALS FOR STORAGE OR TRANSPORT: Strong oxidizers

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

PERSONAL PROTECTION FOR ROUTINE USE OF PRODUCT:
RESPIRATORY PROTECTION:
Wear an approved air purifying respirator with organic vapor cartridges if any exposure exceeds the recommended exposure limits. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres.
VENTILATION:
Use local exhaust ventilation to maintain levels to below the recommended exposure limits.
SKIN AND EYE PROTECTIVE EQUIPMENT:
Use chemical goggles and impermeable gloves.

EQUIPMENT SPECIFICATIONS (WHEN APPLICABLE):
RESPIRATOR TYPE: Approved air-purifying respirator with organic vapor cartridges
PROTECTIVE CLOTHING TYPE (This includes: gloves, boots, apron, protective suit): Impervious

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Pale yellow liquid
FREEZING POINT: No Data
BOILING POINT: 146 Deg.C (294.8 Deg.F) (data for pure solvent only)
DECOMPOSITION TEMPERATURE: No Data
SPECIFIC GRAVITY: Approximately 1
BULK DENSITY: Approximately 1 (g/cc)

pH @ 25 DEG.C: Not Applicable
VAPOR PRESSURE @ 25 DEG.C: 3.8 mm Hg
SOLUBILITY IN WATER: Slight
VOLATILES, PERCENT BY VOLUME: 75-85%
EVAPORATION RATE: 0.34 (Butyl acetate=1)
VAPOR DENSITY: Heavier than air
MOLECULAR WEIGHT: Not Applicable/Mixture
ODOR: Ester odor
COEFFICIENT OF OIL/WATER DISTRIBUTION: No Data

SECTION 10 STABILITY AND REACTIVITY

CONDITIONS UNDER WHICH THIS PRODUCT MAY BE UNSTABLE:
  TEMPERATURES ABOVE: Stable at normal room temperatures.
  MECHANICAL SHOCK OR IMPACT: No
  ELECTRICAL (STATIC) DISCHARGE: May cause ignition at temperatures at or above the flash point
  HAZARDOUS POLYMERIZATION: Will not occur
INCOMPATIBLE MATERIALS: Acids, oxidizing agents
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, oxides of sulfur, oxides of nitrogen
OTHER CONDITIONS TO AVOID: Exposure to sunlight

SECTION 11 TOXICOLOGY INFORMATION

ROUTES OF ABSORPTION
  Inhalation, ingestion, skin and eye contact

WARNING STATEMENTS AND WARNING PROPERTIES
  MAY CAUSE SKIN, EYE AND RESPIRATORY TRACT IRRITATION. INHALATION OF HIGH VAPOR CONCENTRATIONS MAY CAUSE DIZZINESS AND DROWSINESS. DO NOT TAKE INTERNALLY.

HUMAN THRESHOLD RESPONSE DATA
  ODOR THRESHOLD: No Data for product. 1-Methoxy-propyl acetate has an odor detection threshold of 0.07 ppm and a recognition threshold of 0.12 ppm.
  IRRITATION THRESHOLD: No Data
  IMMEDIATELY DANGEROUS TO LIFE OR HEALTH: The IDLH concentration has not been established for this product.

SIGNS, SYMPTOMS, AND EFFECTS OF EXPOSURE
INHALATION
  ACUTE:
    If inhaled, irritation may result to the nose, throat, mucous membranes and lungs. Any irritation would be transient with no permanent damage expected. Inhalation of high concentrations may cause CNS depression with symptoms including headache, breathing difficulty, dizziness, drowsiness, loss of coordination, weakness, nausea, and vomiting.
  CHRONIC:
    Repeated exposure would cause similar effects to those observed from acute exposure.
SKIN
  ACUTE:
    Skin contact may cause irritation consisting of transient redness. This irritant effect would not result in permanent damage.
  CHRONIC:

Prolonged or repeated overexposure may cause defatting of the skin leading to dermatitis.

EYE

Contact with the eyes would be expected to cause irritation consisting of reversible redness, swelling, and mucous discharge to the conjunctiva. Prolonged contact with the eyes may cause reversible corneal opacity to occur, with no visual impairment expected.

INGESTION

ACUTE:

No data is available on the effects of acute ingestion of this product. However, ingestion may cause gastrointestinal irritation and discomfort with any or all of the following symptoms: nausea, vomiting, lethargy, or diarrhea. Additional symptoms may include CNS depression.

CHRONIC:

There are no known or reported effects from chronic exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Respiratory illness and skin disorders may be aggravated by exposure to this product.

INTERACTIONS WITH OTHER CHEMICALS WHICH ENHANCE TOXICITY

None known or reported

ANIMAL TOXICOLOGY

ACUTE TOXICITY:

Inhalation LC 50: No Data
Dermal LD 50: Believed to be > 2 g/kg. (rabbit), based on constituents
Oral LD 50: Believed to be > 5 g/kg. (rat), based on constituents
Irritation: Irritant to skin, eyes and upper respiratory tract

ACUTE TARGET ORGAN TOXICITY:

Irritation to skin, respiratory tract and eyes. May cause CNS depression.

CHRONIC TARGET ORGAN TOXICITY:

- Prolonged or repeated skin contact may cause dermatitis.
- Intense exposure to 1-Methoxy-2-Propyl acetate via ingestion has been shown to cause kidney and liver damage in laboratory animals. Chronic overexposure to high concentrations of 1-Methoxy-2-Propyl acetate from inhalation has been found to cause lung, kidney and liver damage in laboratory animals. It is judged that these effects will not occur from industrial use of this product due to the sufficiently large quantities required to bring about these effects from the oral and inhalation routes of exposure.

REPRODUCTIVE AND DEVELOPMENTAL TOXICITY:

- This product is not known or reported to cause effects on reproductive function or fetal development.
- This product contains 75-85% 1-Methoxy-2-Propyl acetate (containing 0.5% maximum of 2-Methoxy-1-Propyl acetate as a contaminant) which has been tested in pregnant rats by the inhalation route of exposure. No developmental effects were seen in fetuses at air concentrations as high as 4,000 ppm, in spite of maternal toxicity being seen at lower concentrations. The 2-Methoxy-1-propyl acetate contaminant was tested by itself in pregnant rats and rabbits. Developmental toxicity occurred in both species from the inhalation route of exposure. In rabbits, this occurred in the highest dose group in the absence of significant maternal toxicity. In rats, this also occurred in the highest dose group, but in the presence of maternal toxicity. When tested from the

dermal route of exposure, 2-Methoxy-1-propyl acetate did not cause developmental toxicity in either species. Based upon the low percentage of 2-Methoxy-1-propyl acetate found in this product, it is judged that exposure to this product will not pose a reproductive toxicity hazard.

CARCINOGENICITY:
This product is not known or reported to be carcinogenic.

MUTAGENICITY:
- This product is not known or reported to be mutagenic.
- 1-Methoxy-2-propyl acetate was determined to be non-mutagenic in the Salmonella/microsome mutagenesis assay (Ames assay), and did not produce any evidence of genotoxicity in a rat hepatocyte unscheduled DNA synthesis assay.

SECTION 12 ECOLOGY INFORMATION

AQUATIC TOXICITY
There is no available data for this product. Individual constituents are as follows:
1-Methoxy-2-propyl acetate (Propylene glycol monomethyl ether acetate):
Fathead minnow, 96-hr. LC 50: 161 mg/L
Daphnid, 48-hr. LC 50: 408 mg/L

SECTION 13 DISPOSAL CONSIDERATIONS

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THIS MATERIAL. THE USER OF THIS MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.

SECTION 14 TRANSPORT INFORMATION

U.S. DOT: COMBUSTIBLE LIQUID, N.O.S., (1-METHOXY-2-PROPANOL ACETATE), 3, NA 1993, PG III
IMDG: FLAMMABLE LIQUID, N.O.S., (1-METHOXY-2-PROPANOL ACETATE), 3.3, UN 1993, PG III
IATA/ICAO: FLAMMABLE LIQUID, N.O.S., (1-METHOXY-2-PROPANOL ACETATE), 3, UN 1993, PG III
RID/ADR: UN1993, FLAMMABLE LIQUID, N.O.S., (1-METHOXY-2-PROPANOL ACETATE), 3, 31 MARGINAL (c), ADR

SECTION 15 REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (USA):
The components of this product are in compliance with the reporting requirements of the Toxic Substance Control Act.

R AND S PHRASES AND SYMBOLS:
R PHRASES: R10-36 S PHRASES: S25
SYMBOLS: Xi (Irritant)

SECTION 16 OTHER INFORMATION

MSDS REVISION STATUS: Revision to Sections 2, 7 and 11

MAJOR REFERENCES: Available upon request

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION INTHIS MSDS SHOULD BE PROVIDEDTO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ARCH CHEMICALS BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION BUT, MAKES NO WARRANTY THAT IT IS. ADDITIONALLY, IF THIS MSDS IS MORE THAN THREE YEARS OLD, YOU SHOULD CONTACT ARCH CHEMICALS MSDS CONTROL AT THE PHONE NUMBER ON THE FRONT PAGE TO MAKE CERTAIN THAT THIS DOCUMENT IS CURRENT.

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