SECTION 1 - CHEMICAL PRODUCT and COMPANY IDENTIFICATION

Catalog Number: M-CLP13X5
Description: Base/Neutrals Calibration Mixture in Methylene Chloride
Product is: Mixture

Supplied by CHEM SERVICE, Inc. PO BOX 599, WEST CHESTER, PA 19381 (610)-692-3026
EMERGENCY PHONE: 1-610-692-3026

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

The following compounds are contained in this mixture at the stated concentrations:

<table>
<thead>
<tr>
<th>CONC</th>
<th>ANALYTE</th>
<th>CAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000ug/ml</td>
<td>Acenaphthene</td>
<td>83-32-9</td>
</tr>
<tr>
<td>2000ug/ml</td>
<td>Benzo(a)pyrene</td>
<td>50-32-8</td>
</tr>
<tr>
<td>2000ug/ml</td>
<td>1,4-Dichlorobenzene</td>
<td>106-46-7</td>
</tr>
<tr>
<td>2000ug/ml</td>
<td>Di-n-octyl phthalate</td>
<td>117-84-0</td>
</tr>
<tr>
<td>2000ug/ml</td>
<td>Fluoranthene</td>
<td>206-44-0</td>
</tr>
<tr>
<td>2000ug/ml</td>
<td>Hexachloro-1,3-butadiene</td>
<td>87-68-3</td>
</tr>
<tr>
<td>2000ug/ml</td>
<td>N-Nitrosodiphenylamine</td>
<td>86-30-6</td>
</tr>
</tbody>
</table>

SECTION 3 - HAZARDS IDENTIFICATION

Contact lenses should not be worn in the laboratory. All chemicals should be considered hazardous - Avoid direct physical contact!

For the solvent: Methylene chloride

Health Risks: Suspected Carcinogen-may produce cancer. May be harmful by inhalation, ingestion, or skin absorption. Can cause eye irritation. Can cause skin irritation. Dust and/or vapors can cause irritation to respiratory tract. Can be irritating to mucous membranes. Exposure can cause liver damage.

This chemical is considered to be a carcinogen by the state of California.

SECTION 4 - FIRST AID MEASURES

An antidote is a substance intended to counteract the effect of a poison. It should be administered only by a physician or trained emergency personnel. Medical advice can be obtained from a POISON CONTROL CENTER.

For the solvent: Methylene chloride

First Aid: In case of contact: Flush eyes continuously with water for 15-20 minutes. Flush skin with water for 15-20 minutes. If patient has stopped breathing administer artificial respiration. If patient is in cardiac arrest administer CPR. Continue life supporting measures until medical assistance has arrived. Remove and wash contaminated clothing. Do not administer liquids or induce vomiting to an unconscious or convulsing person. Get medical attention if necessary. Contact Poison Control Center immediately if necessary. If patient is exhibiting signs of shock - Keep warm and quiet. If patient is vomiting-watch closely to make sure airway does not become obstructed by vomit. If no burns have occurred-use soap and water to cleanse skin. If inhaled remove patient to fresh air. Administer oxygen if patient is having difficulty breathing.
SECTION 5 - FIRE AND EXPLOSION DATA

For the solvent: Methylene chloride

Flash Point: Non-flammable
Extinguishing Media: Carbon dioxide, dry chemical powder or spray.
Lower Explosion Limit: 12.0%
Upper Explosion Limit: 19.0%
Autoignition Temperature: 556°C
NFPA Scale: 0 - Least, 1 - Slight, 2 - Moderate, 3 - High, 4 - Severe
NFPA Hazard Rating: Health: 2, Reactivity: 0, Flammability: 0

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spills or Leaks: Evacuate area. Wear appropriate OSHA regulated equipment. Ventilate area. Absorb on vermiculite or similar material. Sweep up and place in an appropriate container. Hold for disposal. Wash contaminated surfaces to remove any residue. Remove contaminated clothing and wash before reuse.

SECTION 7 - HANDLING AND STORAGE

Handling:
This chemical should be handled only in a hood. Eye shields should be worn. Use appropriate OSHA/MSHA approved safety equipment. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. Wash thoroughly after handling.

Storage:
Store in a cool dry place. Store only with compatible chemicals. Keep tightly closed.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

For the solvent: Methylene chloride

OSHA PEL (TWA): 500 ppm
ACGIH TLV (TWA): 50 ppm (174mg/m3)
ACGIH TLV (STEL): Data Not Available

Personal Protective Equipment
Eyes: Wear Safety Glasses.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to minimize contact with skin.
Respirators: A respiratory protection program that meets OSHA’s 29 CFR 1910.134 requirements must be followed whenever workplace conditions warrant the use of a respirator.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

For the solvent: Methylene chloride

Color: Colorless
Phase: Liquid
Melting Point: -95°C
Boiling Point: 40°C
Specific Gravity: 1.325g/mL @ 25°C
Vapor Density: 2.9
Vapor Pressure: 470.8hPa @ 20°C
Solubility in Water: Slightly soluble
Odor: Ether like
Evaporation Rate (Butyl acetate=1): 27.5
Molecular Weight: 84.93
Molecular Formula: CH2C12

SECTION 10 - STABILITY AND REACTIVITY

For the solvent: Methylene chloride
Volatile. Sensitive to heat. Incompatible with strong bases. Incompatible with strong oxidizing agents. Do not use Magnesium/Aluminum or their alloys as containers. Decomposition liberates toxic fumes. Decomposition products are corrosive.

SECTION 11 - TOXICOLOGY INFORMATION

Since this mixture contains a very low concentration of active components, the primary hazard is from the solvent.

For the solvent: Methylene chloride
RTECS: PA8050000
Oral Rat or Mouse LD50: 1600 mg/kg
Dermal Rat or Mouse LD50: N/A
Rat or Mouse LC50: 14400 ppm/7H

Carcinogenicity
OSHA: No  NTP: Yes - S  IARC: Yes - 2b  NIOSH: Yes  ACGIH: Yes - A3  Other: No

This chemical is considered to be a CARCINOGEN by the state of California.

For the minor components:
The LD50 for the individual components are:

<table>
<thead>
<tr>
<th>ANALYTE</th>
<th>CAS</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acenaphthene</td>
<td>83-32-9</td>
<td>0 mg/kg</td>
</tr>
<tr>
<td>Benzo(a)pyrene</td>
<td>50-32-8</td>
<td>4,095 mg/kg</td>
</tr>
<tr>
<td>1,4-Dichlorobenzene</td>
<td>106-46-7</td>
<td>500 mg/kg</td>
</tr>
<tr>
<td>Di-n-octyl phthalate</td>
<td>117-84-0</td>
<td>6,513 mg/kg</td>
</tr>
<tr>
<td>Fluoranthene</td>
<td>206-44-0</td>
<td>2,000 mg/kg</td>
</tr>
<tr>
<td>Hexachloro-1,3-butadiene</td>
<td>87-68-3</td>
<td>82 mg/kg</td>
</tr>
<tr>
<td>N-Nitrosodiphenylamine</td>
<td>86-30-6</td>
<td>1,650 mg/kg</td>
</tr>
</tbody>
</table>

Carcinogenicity
Acenaphthene OSHA No NTP No IARC No NIOSH No ACGIH No
Benzo(a)pyrene OSHA No NTP Yes IARC Yes NIOSH No ACGIH Yes
1,4-Dichlorobenzene OSHA No NTP Yes IARC No NIOSH Yes ACGIH Yes
Di-n-octyl phthalate OSHA No NTP No IARC No NIOSH No ACGIH No
Fluoranthene OSHA No NTP No IARC Yes NIOSH No ACGIH No
Hexachloro-1,3-butadiene OSHA No NTP No IARC No NIOSH Yes ACGIH Yes
N-Nitrosodiphenylamine OSHA No NTP No IARC No NIOSH No ACGIH No
SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: Not Available
Environmental Fate: Not Available

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal: Dispose in accordance with Federal, State and Local regulations.

SECTION 14 - TRANSPORTATION INFORMATION

For the solvent: Methylene chloride

UN Number: UN1593
Class: 6.1
Packing Group: III
Proper Shipping Name: Dichloromethane

SECTION 15 - REGULATORY INFORMATION

For the solvent: Methylene chloride

European Labeling in Accordance with EC Directives

Hazard Symbols: Xn
Risk Phrases: R40: Possible risk of irreversible effects.
S24/25: Avoid contact with skin and eyes.
S36/37: Wear suitable protective clothing and gloves.

SECTION 16 - OTHER INFORMATION

The above information is believed to be correct on the date it was last revised and must not be considered all inclusive. The information has been obtained only by a search of available literature and is only a guide for handling the chemicals. OSHA regulations require that if other hazards become evident, an upgraded MSDS must be made available to the employee within three months. RESPONSIBILITY for updates lies with the employer and not with CHEM SERVICE, Inc.

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