

## BBC Biochemical

## MATERIAL SAFETY DATA SHEET

**Section 1. Chemical Product and Company Information**

|                |                                                                                                |                                                                                                         |                      |
|----------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|----------------------|
| Common Name:   | Path-Mark™ Margin Ink Yellow                                                                   | Code:                                                                                                   | MA0116016, MA0116001 |
| Supplier:      | BBC Biochemical                                                                                | MSDS#:                                                                                                  | MA0116001            |
| Synonym:       | None.                                                                                          | Validation Date:                                                                                        | 2-25-09              |
| Trade Name:    | None.                                                                                          | Print Date:                                                                                             | 2-25-09              |
| Material Uses: | Not Available                                                                                  | Responsible Name:                                                                                       | Dr. B                |
| Manufacturer:  | BBC Biochemical<br>PO Box 1320<br>409 Eleanor Lane<br>Mount Vernon, WA 98273<br>1-800-635-4477 | In Case of Emergency: 1-800-424-9300 Chemtrec<br>USA<br>1-202-483-7616 Chemtrec Intrl<br>1-800-635-4477 |                      |

**Section 2. Composition and Information on Ingredients**

| Name                      | CAS#        | OSHA PEL/TWA | Exposure Limits |
|---------------------------|-------------|--------------|-----------------|
| 1) Hansa Yellow Pigment   | 6358-31-2   | Not listed   |                 |
| 2) Surfactants NV         | Proprietary |              |                 |
| 3) Propylene Glycol       | 57-55-6     |              |                 |
| 4) Water                  | 7732-18-5   |              |                 |
| 5) Ammonium Hydroxide 28% | 1336-21-6   |              |                 |
| 6) Preservatives          |             |              |                 |

**Section 3. Hazards Identification**

|                                                                           |                                                                                                           |
|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Physical State and Appearance                                             | Liquid/paste; yellow. Mild ammoniacal odor.                                                               |
| Emergency Overview                                                        | Not available.                                                                                            |
| Routes of Entry                                                           | Inhalation, ingestion, and skin absorption.                                                               |
| Potential Acute Health Effects                                            |                                                                                                           |
| Eyes                                                                      | May cause irritation (redness, tearing, burning) if vapors present in excessive amount.                   |
| Skin                                                                      | Some irritation; overexposure can cause defatting, dermatitis.                                            |
| Inhalation                                                                | May cause dizziness, headache, nausea, and narcosis; can aggravate asthma-like conditions.                |
| Ingestion                                                                 | May cause blindness, nausea, damage to gastrointestinal tract, liver, kidneys, and cardiovascular system. |
| Potential Chronic Health Effects                                          | Components not listed (IARC, NTP, OSHA) as cancer causing agents.                                         |
| Medical Conditions Aggravated by Overexposure/Overexposure/Signs/Symptoms | Kidney, liver, heart, and GI conditions.                                                                  |

**Section 4. First Aid Measures**

|                    |                                                                                                                  |
|--------------------|------------------------------------------------------------------------------------------------------------------|
| Eye Contact        | Immediately flush thoroughly with water for at least 15 minutes.                                                 |
| Skin Contact       | Wash area thoroughly with copious amounts of water. Remove contaminated clothing and clean before wearing again. |
| Inhalation         | Remove to fresh air; give artificial respiration if breathing has stopped.                                       |
| Ingestion          | If conscious, drink water. Seek medical attention. Do not induce vomiting.                                       |
| Notes to Physician | Not available.                                                                                                   |

**Section 5. Fire Fighting Measures**

|                             |                   |
|-----------------------------|-------------------|
| Flammability of the Product | Flammable Liquid. |
| Auto-ignition Temperature   | Not available.    |

|                                                            |                                                                                      |
|------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <b>Flash Points</b>                                        | 211 F (99C)                                                                          |
| <b>Flammable Limits</b>                                    | 2.6/12.5 % by volume (lower/upper)                                                   |
| <b>Products of Combustion</b>                              | Carbon dioxide and possible carbon monoxide.                                         |
| <b>Fire Hazards in Presence Of Various Substances</b>      | Keep away from excessive heat or open flame.                                         |
| <b>Explosion Hazards in Presence of Various Substances</b> | Keep away from excessive heat or open flame.                                         |
| <b>Fire Fighting Media and Instructions</b>                | DO NOT use water, except as FOAM.                                                    |
| <b>Protective Clothing (Fire)</b>                          | Fire fighters should use self-contained breathing apparatus and protective clothing. |
| <b>Special Remarks on Fire Hazards</b>                     | Vapor can travel distances to ignition source and flash back.                        |
| <b>Special Remarks on Explosion Hazards</b>                |                                                                                      |

### Section 6. Accidental Release Measures

|                             |                                                                                                                                                |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Small Spill and Leak</b> | Evacuate the area of all unnecessary personnel. Wear suitable protective equipment. Eliminate all sources of ignition and provide ventilation. |
| <b>Large Spill and Leak</b> | Same as above.                                                                                                                                 |

### Section 7, Handling and Storage

|                 |                                                                                                                                                                                           |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling</b> | Use adequate ventilation. Avoid repeated or prolonged skin contact or breathing of vapors. Do not breathe vapors. Do not get in eyes.                                                     |
| <b>Storage</b>  | Store and use in areas away from heat, sparks, and open flame. Store in tightly closed containers in a cool, dry, well-ventilated, fire-resistant area. Store away from oxidizing agents. |

### Section 8. Exposure Controls / Personal Protection

|                                                              |                                                                                    |
|--------------------------------------------------------------|------------------------------------------------------------------------------------|
| <b>Engineering Controls</b>                                  |                                                                                    |
| <b>Personal Protection</b>                                   |                                                                                    |
| <b>Eyes</b>                                                  | Safety glasses with approved side shields should be worn at all times.             |
| <b>Body</b>                                                  | Protective clothing, such as a lab coat, to minimize skin contact.                 |
| <b>Respiratory</b>                                           | Use NIOSH or MSHA approved respirators in absence of proper environmental control. |
| <b>Hands</b>                                                 | Neoprene, Nitrile or equivalent protective gloves.                                 |
| <b>Feet</b>                                                  | Impervious footwear should be worn to prevent skin contact.                        |
| <b>Personal Protection in Case of a Large Spill</b>          | See above.                                                                         |
| <b>Product Name</b>                                          | <b>Exposure Limits</b>                                                             |
| 1)                                                           |                                                                                    |
| 2)                                                           |                                                                                    |
| 3)                                                           |                                                                                    |
| Consult Local authorities before acceptable exposure limits. |                                                                                    |

### Section 9. Physical and Chemical Properties

|                                      |                         |               |                  |
|--------------------------------------|-------------------------|---------------|------------------|
| <b>Physical State and Appearance</b> | Liquid/paste; yellow.   | <b>Odor:</b>  | Ammoniacal odor. |
| <b>Molecular Weight</b>              | Not applicable.         | <b>Taste:</b> | Vinous.          |
| <b>Molecular Formula</b>             | Not applicable.         | <b>Color:</b> | Yellow.          |
| <b>pH (1%/Water)</b>                 | Not applicable.         |               |                  |
| <b>Boiling/Condensation Point</b>    | 365-374 F               |               |                  |
| <b>Melting/Freezing Point</b>        | Not applicable.         |               |                  |
| <b>Critical Temperature</b>          | Not applicable.         |               |                  |
| <b>Specific Gravity</b>              | 1.13                    |               |                  |
| <b>Vapor Pressure</b>                | <1.0 mm Hg 25C          |               |                  |
| <b>Vapor Density</b>                 | 2.62 Air =1             |               |                  |
| <b>Volatility</b>                    | Not applicable.         |               |                  |
| <b>Odor Threshold</b>                | Not applicable.         |               |                  |
| <b>Evaporation Rate</b>              | <1.0 (BuAct=1)          |               |                  |
| <b>VOC</b>                           | 209 (lbs/gal); 250 gr/L |               |                  |
| <b>Viscosity</b>                     | Not available.          |               |                  |
| <b>Ionicity (in water)</b>           | Not available.          |               |                  |
| <b>Dispersion Properties</b>         | Not available.          |               |                  |
| <b>Solubility</b>                    | Miscible                |               |                  |
| <b>Physical Chemical</b>             | Not available.          |               |                  |

## Comments

**Section 10. Stability and Reactivity**

|                                         |                                                                                                                                      |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Stability and Reactivity                | Stable.                                                                                                                              |
| Conditions of Instability               | Heat.                                                                                                                                |
| Incompatibility with Various Substances | Oxidizers.                                                                                                                           |
| Hazardous Decomposition Products        | Thermal-oxidative degradation can produce oxides of carbon. Toxic gases and vapors (i.e. carbon monoxide) may be released in a fire. |
| Hazardous Polymerization                | Does not occur.                                                                                                                      |

**Section 11. Toxicological Information**

|                                                  |                                                                                                                                                                                                                             |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Toxicity to Animals                              | LD50: Not available.<br>LC50: Not available.                                                                                                                                                                                |
| Chronic Effects on Humans                        | Not Available.                                                                                                                                                                                                              |
| Other Toxic Effects on Humans                    | Not Available.                                                                                                                                                                                                              |
| Special Remarks on Toxicity to Animals           | Not available.                                                                                                                                                                                                              |
| Special Remarks on Chronic Effects on Humans     | Not available.                                                                                                                                                                                                              |
| Special Remarks on Other Toxic Effects on Humans | Heavy Metal Content (in PPM unless otherwise noted)<br>Antimony: <10.0      Cadmium: 5.0      Selenium: <10.0<br>Barium: <300.0      Chromium: None      Arsenic: <10.0<br>Copper: Unknown      Zinc None      Lead: <100.0 |

**Section 12. Ecological Information**

|                                                   |                |
|---------------------------------------------------|----------------|
| Ecotoxicity                                       | Not available. |
| BODS and COD                                      | Not available. |
| Biodegradable/OEDC                                | Not available. |
| Mobility                                          | Not available. |
| Toxicity of the Products of Biodegradation        | Not available. |
| Special Remarks on The Products of Biodegradation | Not available. |

**Section 13. Disposal Considerations**

|                                             |                |
|---------------------------------------------|----------------|
| Waste Information                           | Not available. |
| Waste Stream                                | Not available. |
| Consult your local or regional authorities. |                |

**Section 14. Transport Information**

|                                          |                                    |
|------------------------------------------|------------------------------------|
| DOT Classification                       | Non Hazardous.                     |
| Marine Pollutant                         | Not available.                     |
| Hazardous Substances Reportable Quantity | Not available.                     |
| Special Provisions for Transport         | Not applicable.                    |
| TDG Classification                       | Not controlled under TDG (Canada). |
| ADR/RID Classification                   | Not controlled under ADR (Europe). |
| IMO/IMDG Classification                  | Not controlled under IMDG.         |
| ICAO/IATA Classification                 | Not controlled under IATA.         |

**Section 15. Other Information**

| Label requirements                             |             |   |                                               |                                                                                                                           |
|------------------------------------------------|-------------|---|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Hazardous Material Information System (U.S.A.) | Health      | 1 | National Fire Protection Association (U.S.A.) | <div><div>Health</div><div>1</div><div>0</div><div>Reactivity</div><div>Specific Hazard</div><div>Fire Hazard</div></div> |
|                                                | Fire Hazard | 1 |                                               |                                                                                                                           |
|                                                | Reactivity  | 0 |                                               |                                                                                                                           |

|                     |   |
|---------------------|---|
| Personal Protection | H |
|---------------------|---|

**References****Other Special  
Considerations****Notice to Reader**

*To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.*