MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name: All-Skin Marker Ink - Blue
Revision date: 12-19-2011
Version #: 01
CAS #: Mixture
Product use: Used for surgical marking on intact skin
Manufacturer/Supplier: Aspen Surgical Products, Inc
6945 Southbelt Dr. SE
Caledonia, MI 49316

Telephone number: 616-698-7100
Emergency: 3E Hotline
24-Hour Emergency 1-855-350-3591

2. Hazards Identification

Physical state: Liquid.
Appearance: Marker containing liquid ink
Emergency overview: WARNING
HIGHLY FLAMMABLE LIQUID AND VAPOR.
Causes severe eye irritation. Vapors may cause drowsiness and dizziness.

OSHA regulatory status: This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects:

Routes of exposure: Skin contact. Eye contact. Inhalation.

Eyes: Health injuries are not known or expected under normal use. However: Contact causes severe eye irritation.

Skin: May cause skin irritation.

Inhalation: Due to the physical form of the product, the ingredients are not expected to present a hazard by inhalation. However: Breathing of high concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness.

Ingestion: Not likely, due to the form of the product. May cause throat irritation, nausea, vomiting, and central nervous system effects as noted under INHALATION.

Target organs: Skin. Eyes. Central nervous system.

Chronic effects: Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Prolonged exposure may cause chronic effects.

Signs and symptoms: Contact may cause irritation with redness, tearing and pain.

Potential environmental effects: The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

3. Composition / Information on Ingredients

Components | CAS # | Percent
--- | --- | ---
TRADE SECRET SOLVENT | Proprietary | Proprietary

Composition comments: All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First Aid Measures

First aid procedures:

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops or persists.

Skin contact: Wash off immediately with plenty of water. Get medical attention if irritation develops or persists.

Inhalation: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention, if needed.
Ingestion
Rinse mouth thoroughly with water. Do not induce vomiting without advice from poison control center. Immediately call a poison control center or doctor for treatment advice.

Notes to physician
Treat symptomatically. Symptoms may be delayed.

General advice
If you feel unwell, seek medical advice (show the label where possible). Show this safety data sheet to the doctor in attendance.

5. Firefighting Measures

Flammable properties
Contents of marker are highly flammable. Solvent vapors may form explosive mixtures with air.

Extinguishing media
Suitable extinguishing media

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Protection of firefighters
Specific hazards arising from the chemical
Fire may produce irritating, corrosive and/or toxic gases.

Protective equipment and precautions for firefighters
Firefighters should wear full protective clothing including self contained breathing apparatus.

Firefighting equipment/instructions
Move containers from fire area if you can do so without risk.

Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental Release Measures

Personal precautions
Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental precautions
Avoid discharge into drains, water courses or onto the ground.

Methods for containment
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk.

Methods for cleaning up
Wipe up spilled material and place in a suitable container for disposal. Clean surface thoroughly to remove residual contamination. For waste disposal, see Section 13 of the MSDS.

7. Handling and Storage

Handling
The product is highly flammable, and explosive vapor/air mixtures may be formed even at normal room temperatures. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not smoke. Avoid contact with skin and eyes. Wear personal protective equipment. Do not empty into drains.

Storage
Keep tightly closed. Store in a cool, dry, well-ventilated place. Keep away from heat, sparks and open flame. Use care in handling/storage. Store in accordance with local/regional/national/international regulation.

8. Exposure Controls / Personal Protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>US. ACGIH Threshold Limit Values</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRADE SECRET SOLVENT (Proprietary)</td>
<td>STEL</td>
<td>400 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>200 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRADE SECRET SOLVENT (Proprietary)</td>
<td>PEL</td>
<td>980 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Canada. Alberta OELs (Occupational Health &amp; Safety Code, Schedule 1, Table 2)</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRADE SECRET SOLVENT (Proprietary)</td>
<td>STEL</td>
<td>984 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>492 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>200 ppm</td>
</tr>
</tbody>
</table>
Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td>TRADE SECRET SOLVENT (Proprietary)</td>
<td>STEL</td>
<td>400 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>200 ppm</td>
</tr>
</tbody>
</table>

Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents)

<table>
<thead>
<tr>
<th>Components</th>
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<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRADE SECRET SOLVENT (Proprietary)</td>
<td>STEL</td>
<td>400 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>200 ppm</td>
</tr>
</tbody>
</table>

Canada. Quebec OELS. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRADE SECRET SOLVENT (Proprietary)</td>
<td>STEL</td>
<td>1230 mg/m3</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>983 mg/m3</td>
</tr>
</tbody>
</table>

Mexico. Occupational Exposure Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRADE SECRET SOLVENT (Proprietary)</td>
<td>STEL</td>
<td>1225 mg/m3</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>980 mg/m3</td>
</tr>
</tbody>
</table>

Exposure guidelines
Use personal protective equipment as required. Keep working clothes separately.

Engineering controls
Ensure adequate ventilation, especially in confined areas. Provide easy access to water supply and eye wash facilities.

Personal protective equipment

Eye / face protection
Avoid contact with eyes. Chemical goggles are recommended.

Skin protection
Chemical resistant gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

Respiratory protection
No specific recommendations due to the small quantities handled. Respiratory protection must be used if air contamination exceeds acceptable level.

General hygiene considerations
When using do not smoke. Avoid contact with eyes. Avoid contact with skin. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned.

9. Physical & Chemical Properties

Appearance
Marker containing liquid ink

Color
Blue.

Odor
Slight characteristic odor. Isopropanol

Odor threshold
Not available.

Physical state
Liquid.

Form
Liquid.

pH
Not available.

Melting point
Not available.

Freezing point
Not available.

Boiling point
Not available.

Flash point
54 °F (12.2 °C) Closed Cup

Evaporation rate
Not available.

Flammability limits in air, upper, % by volume
Not available.

Flammability limits in air, lower, % by volume
Not available.

Vapor pressure
Not available.
Vapor density: Not available.
Specific gravity: 0.922
Solubility (water): Completely Soluble.
Partition coefficient (n-octanol/water): Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.

10. Chemical Stability & Reactivity Information

Chemical stability: Stable under normal temperature conditions and recommended use.
Conditions to avoid: Heat, flames and sparks. Avoid temperatures exceeding the flash point.
Hazardous decomposition products: Irritating and/or toxic fumes and gases may be emitted upon the products decomposition.
Possibility of hazardous reactions: Hazardous polymerization does not occur.

11. Toxicological Information

<table>
<thead>
<tr>
<th>Toxicological data Components</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRADE SECRET SOLVENT (Proprietary)</td>
<td>Acute Dermal LD50 Rabbit: 12800 mg/kg</td>
</tr>
<tr>
<td>Acute Oral LD50 Rat: 4.7 g/kg</td>
<td></td>
</tr>
</tbody>
</table>

Acute effects: Swallowing may cause gastrointestinal irritation.
Local effects: Severe eye irritation. High concentration of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects.
Chronic effects: Prolonged exposure may cause chronic effects.
Carcinogenicity: Not classified.

ACGIH Carcinogens: TRADE SECRET SOLVENT (CAS Proprietary) A4 Not classifiable as a human carcinogen.

Mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Reproductive effects: Not classified.
Teratogenicity: Not classified.
Symptoms and target organs: Symptoms include itching, burning, redness, and tearing of eyes.

12. Ecological Information

<table>
<thead>
<tr>
<th>Ecotoxicological data Components</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRADE SECRET SOLVENT (Proprietary)</td>
<td>LC50 Bluegill (Lepomis macrochirus): &gt; 1400 mg/l 96 hours</td>
</tr>
</tbody>
</table>

Ecotoxicity: The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Environmental effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Persistence and degradability: No data is available on the degradability of this product.
Bioaccumulation / Accumulation: No data available.
Partition coefficient (n-octanol/water): Not available.
Mobility in environmental media: No data available.
13. Disposal Considerations

Disposal instructions
Do not discharge into drains, water courses or onto the ground. Dispose of contents/container in accordance with local/regional/national/international regulations.

Waste from residues / unused products
Dispose in accordance with all applicable regulations.

Contaminated packaging
Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

Product Specific Note:
Not relevant, due to the form of the product. Otherwise, the following descriptions apply:

DOT
Basic shipping requirements:
- UN number: UN1210
- Proper shipping name: Printing ink, flammable or Printing ink related material
- Hazard class: 3
- Packing group: II
- Labels required: 3

Additional information:
- Special provisions: 149, IB2, T4, TP1, TP8
- Packaging exceptions: 150
- Packaging non bulk: 173
- Packaging bulk: 242

IATA
Basic shipping requirements:
- UN number: UN1210
- Proper shipping name: Printing ink, flammable or Printing ink related material
- Hazard class: 3
- Packing group: II
- Labels required: 3

Additional information:
- Packaging exceptions: 150
- Packaging non bulk: 173
- Packaging bulk: 242

IMDG
Basic shipping requirements:
- UN number: UN1210
- Proper shipping name: Printing ink, flammable or Printing ink related material
- Hazard class: 3
- Packing group: II
- Labels required: 3

Additional information:
- Packaging exceptions: 150

TDG
Basic shipping requirements:
- Proper shipping name: Printing ink, flammable or Printing ink related material
- Hazard class: 3
- UN number: UN1210
- Packing group: II

Additional information:
- Special provisions: 149, IB2, T4, TP1, TP8
- Labels required: 3

Additional information:
- Packaging exceptions: 150
- Packaging non bulk: 173
- Packaging bulk: 242
15. Regulatory Information

**US federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration**

TRADE SECRET SOLVENT (CAS Proprietary) 1.0 %

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance**

TRADE SECRET SOLVENT (CAS Proprietary) Listed.

CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)

TRADE SECRET SOLVENT: 100

Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories**

Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

**Section 302 extremely hazardous substance (40 CRF 355, Appendix A)**

No

**Section 311/312 (40 CFR 370)**

No

Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)

Not controlled

**Canadian regulations**

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**WHMIS status**

Controlled

**WHMIS classification**

B2 - Flammable/Combustible
D2B - Other Toxic Effects-TOXIC

**WHMIS labeling**

**Inventory status**

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.
US - California Hazardous Substances (Director's): Listed substance
TRADE SECRET SOLVENT (CAS Proprietary)  Listed.

US - Massachusetts RTK - Substance: Listed substance
TRADE SECRET SOLVENT (CAS Proprietary)  Listed.

US - New Jersey Community RTK (EHS Survey): Reportable threshold
TRADE SECRET SOLVENT (CAS Proprietary)  500 LBS

US - New Jersey RTK - Substances: Listed substance
TRADE SECRET SOLVENT (CAS Proprietary)  Listed.

US - Pennsylvania RTK - Hazardous Substances: Listed substance
TRADE SECRET SOLVENT (CAS Proprietary)  Listed.

Mexico regulations
This safety data sheet was prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2000).

16. Other Information
Further information
HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings
Health: 2*
Flammability: 3
Physical hazard: 0

NFPA ratings
Health: 2
Flammability: 3
Instability: 0

Disclaimer
The information in the sheet was written based on the best knowledge and experience currently available.

Issue date
12-19-2011