Identification of the substances/mixture and of the company/undertaking

1.1 Product Identifiers

Product Number       S047
Product Name          M’Fadyean Stain (Polychrome Methylene Blue)
REACH Registration Number This product is a mixture. Reach registration number is not available for this mixture.

1.2 Relevant identified uses of the substance or mixture and uses advised against

1.2.1 Relevant identified uses
Laboratory Chemicals, Analytical Purpose, Biochemical Analysis
For InVitro Diagnostic Use

1.3 Details of the supplier of the safety data sheet

Produced by HiMedia Laboratories Private Limited
Address 23, Vadhani Industrial Estate, LBS Marg, Ghatkopar (W), Mumbai - 400 086 India
Tel. No. +91-22-2500 0970, +91-22-2500 1607 Fax No. +91-22-2500 2468
Mail Id info@himedialabs.com Website: www.himedialabs.com

1.4 Emergency Tel. No.
Emergency Tel. No. Please contact the regional HiMedia representation in your country

Hazards Identification

2.1 Classification of the substance or mixture

CLP Classification-Regulation (EC) No. 1272/2008 [EU-GHS/CLP]
Flammable liquids, (Category 2), H225
Serious eye damage or eye irritation, (Category 2A), H319

2.2 Label elements

Labeling according to Regulation (EC) No. 1272/2008

Pictogram Signal word Danger

Hazard Statement(s)

H225 Highly flammable liquid and vapour
H319 Causes serious eye irritation

Precautionary Statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313  IF eye irritation persists: Get medical advice/attention.
P403 + P235  Store in a well-ventilated place. Keep cool.

2.3 Other Hazards
None

3 Composition/Information On Ingredients
3.2 Mixture

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene blue</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=0.1 - &lt;=1.00%</td>
</tr>
<tr>
<td>CAS No.: 7220-79-3</td>
<td>Acute Tox.oral 4; Skin Irrit. 2; Eye Irrit. 2A; STOT SE 3 H302; H315; H319; H335</td>
<td></td>
</tr>
<tr>
<td>EC No.: 200-515-2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl alcohol</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=20.00 - &lt;=40.00%</td>
</tr>
<tr>
<td>CAS No.: 64-17-5</td>
<td>Flam. Liq. 2; Eye Irrit. 2A H225; H319</td>
<td></td>
</tr>
<tr>
<td>EC No.: 200-578-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index-No : 603-002-00-5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium hydroxide</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=0.01 - &lt;=0.1%</td>
</tr>
<tr>
<td>CAS No.: 1310-58-3</td>
<td>Met. Corr. 1; Acute Tox.oral 4; Skin Corr. 1A H290; H302; H314</td>
<td></td>
</tr>
<tr>
<td>EC No.: 215-181-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index-No : 019-002-00-8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Refer Section 16 for complete statement of H codes & classification.

4 First Aid Measures
4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash with plenty of soap and water. Consult a physician.

In case of eye contact
Rinse immediately with plenty of water for at least 15 minutes. Consult a physician.

If swallowed

Page 2 of 10
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
No data available.

4.3 Indication of immediate medical attention and special treatment needed
No data available

5 Fire Fighting Measures
5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media
No data available.

5.2 Special hazards arising from the substance or mixture
Nature of decomposition products unknown

5.3 Precautions for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary

5.4 Further information
No data available

6 Accidental Release Measures
6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see Section 13.

7 Handling and Storage
7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended Storage Temperature: On receipt store between 10-30°C

7.3 Specific end uses
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8 Exposure Controls/Personal Protection
8.1 Control parameters
Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the products.

Personal protective equipment

Hygiene measure
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with the product.

Eye/face protection
Tightly fitting safety goggles; Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environment exposure controls
Do not empty into drains.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Deep violet coloured clear solution</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (Solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Vapour density
Thermal decomposition

9.2 Other safety information
No data available

10 Stability and Reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
No data available

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
No data available

10.5 Incompatible materials
No data available

10.6 Hazardous decomposition products
Refer Section 5.2

11 Toxicological Information

11.1 Information on toxicological effects

Acute toxicity
No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
No data available

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

11.2 Components
Methylene blue

Acute oral toxicity
Rat LD50 : 1,180mg/kg
Acute inhalation toxicity
No data available.

Acute dermal toxicity
No data available.

Skin irritation
No data available.

Eye irritation
No data available.

Sensitisation
No data available.

Germ cell mutagenicity
No data available.

Carcinogenicity
No data available.

Reproductive toxicity
No data available.

Teratogenicity
No data available.

Additional information:
RTECS: SP5740000

Ethanol (Ethyl alcohol)

Acute oral toxicity
Rat LD50: 10,470 mg/kg
(As Per OECD Test Guideline 401)

Acute inhalation toxicity
Rat LC50: 124.7 mg/l; 4 h; Vapour
(As Per OECD Test Guideline 403)

Acute dermal toxicity
No data available

Skin irritation
Rabbit Result: Non Irritant
(As Per OECD Test Guideline 404)

Eye irritation
Rabbit Result: Eye irritation
(As Per OECD Test Guideline 405)

Sensitisation
Result: Negative
(As Per IUCLID)

Ames test
Salmonella Typhimurium
Result: Negative
(As Per OECD Test Guideline 471)
Additional information:
RTECS: KQ6300000

Potassium hydroxide
Acute oral toxicity
Rat LD50: 333 mg/kg (As per OECD Guideline 425)
Acute inhalation toxicity
No data available
Acute dermal toxicity
No data available
Skin irritation
Reconstituted human epidermis Result: Irritant
Eye irritation
Rabbit Result: Corrosive
Sensitisation
Not sensitising
Genetic toxicity (in-vitro)
No data available
Genetic toxicity (in-vivo)
No data available
Carcinogenicity
No data available
Toxicity to Reproduction
No data available
Teratogenicity
No data available

Additional information:
RTECS: TT2100000

---

12 Ecological Information
12.1 Toxicity
No data available
Components:
Methylene blue
Toxicity to fish
Pimephales promelas (fathead minnow) LC50: 45 mg/l; 96 h
Toxicity to daphnia and other aquatic invertebrates
Daphnia magna (Water flea) EC50: 2,260 mg/l; 48 h
Component:
Ethanol (Ethyl alcohol)
Toxicity to fish
Leuciscus idus (Golden orfe) LC50: 8,140 mg/l; 48 h
(As Per IUCLID)
Pimephales promelas (fathead minnow) LC50: 14,200 mg/l; 96h
Toxicity to daphnia and other aquatic invertebrates
Daphnia magna (Water flea) EC50: 9,268-14,221 mg/l; 48h
(As Per IUCLID)
Daphnia magna (Water flea) NOEC: 9.6 mg/l; 9d
Toxicity to algae
Scenedesmus quadricauda (Green algae) IC50: 5,000 mg/l; 7d
Chlorella vulgaris (Fresh water algae) EC50: 275 mg/l; 72h
(As Per OECD Test Guideline 201)
Toxicity to bacteria
Pseudomonas putida EC50: 6,500 mg/l; 16 h
(As Per IUCLID)
Components:
Potassium hydroxide
Toxicity to aquatic invertebrates
Dreissena polymorpha EC100: >10 mg/L; 2d

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 PBT and vPvB assessment
This preparation contains no substance considered to be persistent, bioaccumulating or toxic (PBT) or a very persistent and very bioaccumulative (vPvB) at levels less than 0.1%.

12.6 Other adverse effects
No data available

13 Disposal Considerations
13.1 Waste treatments methods
Product
Offer surplus and non-recyclable solutions to a licenced disposal company. Contact a licenced professional waste disposal service to dispose off this material.

13.2 Contaminated packaging
Dispose of as unused product.

14 Transport Information
14.1 UN-No
ADNR : ADR : IATA_C : IATA_P : IMDG : RID :

14.2 UN proper shipping name
ADNR : Not dangerous goods
ADR : Not dangerous goods
IATA_C : Not dangerous goods
IATA_P : Not dangerous goods
IMDG : Not dangerous goods
RID : Not dangerous goods

14.3 Transport hazard class(es)
ADNR : - ADR : - IATA_C : - IATA_P : - IMDG : - RID : -

14.4 Packaging group
ADNR : ADR : IATA_C : IATA_P : IMDG : RID :

14.5 Environmental hazards
ADNR : NO ADR : NO IMDG : Marine pollutant: NO IATA_C : NO IATA_P : NO RID : NO

14.6 Special precautions for use
No data available

15 Regulatory Information
This safety data sheet complies with the requirements of Regulation(EC) No. 1907/2006.

15.1 Safety health and environment regulations/legislation specific for the substance or mixture
No data available

15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out.

16 Other information
Text of H codes and classification mentioned in section 3
H225 Highly flammable liquid and vapour
H290 May be corrosive to metals
H302 Harmful if swallowed
H314 Causes severe skin burns and eye damage
H315 Causes skin irritation
H319 Causes serious eye irritation
H335 May cause respiratory irritation
Acute Tox. oral 4 Acute toxicity, oral, Category 4
Eye Irrit. 2A Serious eye damage or eye irritation, Category 2A
Flam. Liq. 2 Flammable liquids, Category 2
Met. Corr. 1 Corrosive to metals, Category 1
Skin Corr. 1A Skin corrosion or irritation, Category 1A
Skin Irrit. 2 Skin corrosion or irritation, Category 2
STOT SE 3 Specific target organ toxicity, single exposure, Respiratory tract irritation, Category 3

Further Information

Copyright 2016 HiMedia Laboratories Pvt. Ltd.
The information given in this safety data sheet is believed to be correct yet does not claim to be all inclusive. This document is intended only as a guide for appropriate precautionary handling of the material by properly trained individuals, information here being commensurate with the present state of our knowledge regarding the manner and conditions of use, handling, storage or disposal.
The information provided herein shall not be considered as guarantee of the properties of the product. HiMedia Laboratories, shall not be held liable for any damage resulting from improper handling or contact with the above product. Unless explicitly stated on the product or in any of the documentation accompanying the product, it is intended for research or testing purpose only and is not to be used for any other purpose.