

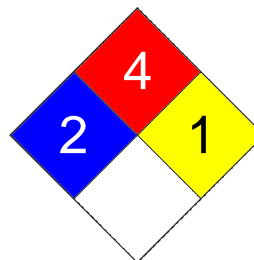
MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name Marsh Yellow Spray Stencil Ink
CAS # Mixture
Product use Spray Ink
Manufacturer MSSC, LLC
926 McDonough Lake Road, Unit E
Collinsville, IL 62234 US
Phone: (618) 343-1006
Fax: (618) 343-1016
Emergency Phone: (800) 424-9300 (USA)
Emergency Phone: (703) 527-3887 (International)

| LEGEND HMIS/NFPA | |
|---------------------|---|
| Severe | 4 |
| Serious | 3 |
| Moderate | 2 |
| Slight | 1 |
| Minimal | 0 |

| | |
|---------------------|-----|
| Health | * 2 |
| Flammability | 4 |
| Physical Hazard | 1 |
| Personal Protection | B |



2. Hazards Identification

Emergency overview DANGER
Extremely flammable. Contents under pressure. Containers may explode when heated. Eye and skin irritant. May cause chronic toxic effects. Contains material which may cause cancer.

Potential short term health effects

Routes of exposure Eye, Skin contact, Inhalation.

Eyes May cause irritation. Contact with liquid may cause frostbite.

Skin May cause irritation. Contact with liquid may cause frostbite.

Inhalation Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness).

Ingestion Not a normal route of exposure. May cause stomach distress, nausea or vomiting.

Target organs Eyes. Skin. Respiratory system.

Chronic effects Prolonged or repeated exposure can cause drying, defatting and dermatitis.

Signs and symptoms Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

3. Composition / Information on Ingredients

| Ingredient(s) | CAS # | Percent |
|---|------------|---------|
| Solvent naphtha (petroleum), light aliphatic | 64742-89-8 | 7 - 13 |
| Acetone | 67-64-1 | 30 - 60 |
| Hydrous magnesium silicate | 14807-96-6 | 3 - 7 |
| Butane | 106-97-8 | 10 - 30 |
| Propane | 74-98-6 | 10 - 30 |
| 2-Propanol, 1-methoxy-, acetate | 108-65-6 | 1 - 5 |
| Butanamide, 2,2'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl | 5468-75-7 | 1 - 5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.1 - 1 |
| Titanium oxide | 13463-67-7 | 0.1 - 1 |

4. First Aid Measures

First aid procedures

| | |
|---------------------|--|
| Eye contact | Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately. |
| Skin contact | Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists. Clothing frozen to the skin should be thawed before being removed. |
| Inhalation | If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention. If breathing has stopped, trained personnel should administer CPR immediately. |
| Ingestion | Not a normal route of exposure. Do not induce vomiting. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention. |

Notes to physician

Symptoms may be delayed.

General advice

Do not puncture or incinerate container. Keep away from sources of ignition. No smoking. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties

Flammable by WHMIS/OSHA criteria. Containers may explode when heated.

Extinguishing media

Suitable extinguishing media Carbon dioxide. Alcohol foam. Dry chemical. Foam. Water Fog.

Unsuitable extinguishing media Not available

Protection of firefighters

Specific hazards arising from the chemical Contents under pressure. Pressurized container may explode when exposed to heat or flame. Cool containers with flooding quantities of water until well after fire is out.

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

Hazardous combustion products

May include and are not limited to: Oxides of carbon.

Explosion data

Sensitivity to mechanical impact Not available

Sensitivity to static discharge Not available

6. Accidental Release Measures

Personal precautions

Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.

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. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up

Before attempting clean up, refer to hazard data given above. Remove sources of ignition. Although the chance of a significant spill or leak is unlikely in aerosol containers, in the event of such an occurrence, absorb spilled material with a non-flammable absorbent such as sand or vermiculite. Never return spills in original containers for re-use.

7. Handling and Storage

Handling

Use good industrial hygiene practices in handling this material.

Storage

Keep out of reach of children. Do not store at temperatures above 49 °C (120.2°F). Keep away from heat, open flames or other sources of ignition. Store in a tightly closed container.

8. Exposure Controls / Personal Protection

Exposure limits

| Ingredient(s) | Exposure Limits |
|---|---|
| 1,2,4-Trimethylbenzene | ACGIH-TLV TWA: 25 ppm OSHA-PEL TWA: 25 ppm |
| 2-Propanol, 1-methoxy-, acetate | ACGIH-TLV Not established OSHA-PEL Not established |
| Acetone | ACGIH-TLV TWA: 500 ppm STEL: 750 ppm OSHA-PEL TWA: 1000 ppm |
| Butanamide, 2,2'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl | ACGIH-TLV Not established OSHA-PEL Not established |
| Butane | ACGIH-TLV TWA: 1000 ppm OSHA-PEL Not established |
| Hydrous magnesium silicate | ACGIH-TLV TWA: 2 mg/m3 OSHA-PEL Not established |
| Propane | ACGIH-TLV TWA: 1000 ppm OSHA-PEL TWA: 1000 ppm |
| Solvent naptha (petroleum), light aliphatic | ACGIH-TLV Not established OSHA-PEL Not established |
| Titanium oxide | ACGIH-TLV TWA: 10 mg/m3 OSHA-PEL TWA: 15 mg/m3 |

Engineering controls

Use only under good ventilation conditions or with respiratory protection.

Personal protective equipment

Eye / face protection

Safety goggles or glasses.

Hand protection

Rubber gloves. Confirm with a reputable supplier first.

Skin and body protection

As required by employer code.

Respiratory protection

Not normally required if good ventilation is maintained and exposure guidelines are not exceeded. Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands and face before breaks and immediately after handling the product.

9. Physical and Chemical Properties

| | |
|---|-----------------|
| Appearance | Aerosol. |
| Color | Yellow |
| Form | Spray |
| Odor | Solvent. |
| Odor threshold | Not available |
| Physical state | Liquid |
| pH | Not available |
| Melting point | Not available |
| Freezing point | Not available |
| Boiling point | Not available |
| Flash point | Not available |
| Pour point | Not available |
| Evaporation rate | < 1 (Ether = 1) |
| Flammability limits in air, lower, % by volume | 1.8 |
| Flammability limits in air, upper, % by volume | 12.8 |
| Vapor pressure | Not available |
| Vapor density | Not available |
| Specific gravity | Not available |
| Octanol/water coefficient | Not available |
| Auto-ignition temperature | Not available |
| Viscosity | Not available |
| Percent volatile | Not available |

10. Stability and Reactivity

| | |
|---|--|
| Chemical stability | Stable under recommended storage conditions. |
| Conditions to avoid | Aerosol containers are unstable at temperatures above 49°C (120.2°F). Do not mix with other chemicals. |
| Incompatible materials | Strong acids, alkalis and oxidizing agents. |
| Hazardous decomposition products | May include and are not limited to: Oxides of carbon. Phosgene. |
| Possibility of hazardous reactions | Hazardous polymerization does not occur. |

11. Toxicological Information

Component analysis - LC50

| Ingredient(s) | LC50 |
|---|------------------|
| 1,2,4-Trimethylbenzene | 3661 ppm rat |
| 2-Propanol, 1-methoxy-, acetate | Not available |
| Acetone | Not available |
| Butanamide, 2,2'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl | Not available |
| Butane | Not available |
| Hydrous magnesium silicate | Not available |
| Propane | Not available |
| Solvent naphtha (petroleum), light aliphatic | 1400 mg/l/4h rat |
| Titanium oxide | Not available |

Component analysis - Oral LD50

| Ingredient(s) | LD50 |
|---|---|
| 1,2,4-Trimethylbenzene | 3280 mg/kg rat |
| 2-Propanol, 1-methoxy-, acetate | 8532 mg/kg rat |
| Acetone | 5800 mg/kg rat; 5340 mg/kg rabbit; 3000 mg/kg mouse; 2857 mg/kg human |
| Butanamide, 2,2'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl | 5000 mg/kg rat |
| Butane | Not available |
| Hydrous magnesium silicate | Not available |
| Propane | Not available |
| Solvent naphtha (petroleum), light aliphatic | 5000 mg/kg rat |
| Titanium oxide | 24000 mg/kg rat |

Effects of acute exposure

| | |
|-------------------|---|
| Eye | May cause irritation. Contact with liquid may cause frostbite. |
| Skin | May cause irritation. Contact with liquid may cause frostbite. |
| Inhalation | Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness). |
| Ingestion | Not a normal route of exposure. May cause stomach distress, nausea or vomiting. |

Sensitization

Non-hazardous by WHMIS/OSHA criteria.

Chronic effects

Fibrosis was observed in rats exposed to 6 mg/m³ of hydrous magnesium silicate (talc) for 113 or 122 weeks. Chronic respiratory disease has been observed in workers exposed to up to 3.0 mg/m³ of airborne talc ore free of asbestos and silica.

Carcinogenicity

Contains a potential carcinogen.

ACGIH - Threshold Limit Values - Carcinogens

| | | |
|----------------------------|------------|---|
| Acetone | 67-64-1 | A4 - Not Classifiable as a Human Carcinogen |
| Hydrous magnesium silicate | 14807-96-6 | A4 - Not Classifiable as a Human Carcinogen (containing no asbestos fibers) |
| Titanium oxide | 13463-67-7 | A4 - Not Classifiable as a Human Carcinogen |

IARC - Group 2A (Probably Carcinogenic to Humans)

| | | |
|--|-----------|---|
| Butanamide, 2,2'-[(3,3'-dichloro[1,1'-biphenyl]-4, | 5468-75-7 | Supplement 7, 1987; (Overall evaluation upgraded from 2B to 2A with supporting evidence from other data relevant to the evaluation of carcinogenicity and its mechanisms) |
|--|-----------|---|

IARC - Group 2B (Possibly Carcinogenic to Humans)

| | | |
|----------------|------------|--|
| Titanium oxide | 13463-67-7 | Monograph 93 [in preparation]; Monograph 47 [1989] |
|----------------|------------|--|

IARC - Group 3 (Not Classifiable)

| | | |
|----------------------------|------------|---|
| Hydrous magnesium silicate | 14807-96-6 | Monograph 93 [in preparation] (inhaled); Supplement 7 [1987]; Monograph 42 [1987] |
|----------------------------|------------|---|

NTP (National Toxicology Program) - Report on Carcinogens - Known Human Carcinogens

| | | |
|--|-----------|---|
| Butanamide, 2,2'-[(3,3'-dichloro[1,1'-biphenyl]-4, | 5468-75-7 | Known Carcinogen (metabolized to benzidine) |
|--|-----------|---|

U.S. - California - Proposition 65 - Carcinogens List

| | | |
|--|-----------|----------------------------------|
| Butanamide, 2,2'-[(3,3'-dichloro[1,1'-biphenyl]-4, | 5468-75-7 | carcinogen; initial date 10/1/92 |
|--|-----------|----------------------------------|

Mutagenicity Non-hazardous by WHMIS/OSHA criteria.

Reproductive effects Non-hazardous by WHMIS/OSHA criteria.

Teratogenicity Non-hazardous by WHMIS/OSHA criteria.

Synergistic Materials Not available

12. Ecological Information

Ecotoxicity Components of this product have been identified as having potential environmental concerns.

Ecotoxicity - Freshwater Algae Data

Solvent naphtha (petroleum), light aliphatic 64742-89-8 72 Hr EC50 Pseudokirchneriella subcapitata: 4700 mg/L

Ecotoxicity - Freshwater Fish Species Data

1,2,4-Trimethylbenzene 95-63-6 96 Hr LC50 Pimephales promelas: 7.19-8.28 mg/L [flow-through]
2-Propanol, 1-methoxy-, acetate 108-65-6 96 Hr LC50 Pimephales promelas: 161 mg/L [static]
Acetone 67-64-1 96 Hr LC50 Oncorhynchus mykiss: 4.74-6.33 ml/L; 96 Hr LC50 Pimephales promelas: 6210-8120 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 8300 mg/L
Hydrous magnesium silicate 14807-96-6 96 Hr LC50 Brachydanio rerio: >100 g/L [semi-static]

Ecotoxicity - Microtox Data

Acetone 67-64-1 15 Min EC50 Photobacterium phosphoreum: 14500 mg/L

Ecotoxicity - Water Flea Data

1,2,4-Trimethylbenzene 95-63-6 48 Hr EC50 Daphnia magna: 6.14 mg/L
2-Propanol, 1-methoxy-, acetate 108-65-6 48 Hr EC50 Daphnia magna: >500 mg/L
Acetone 67-64-1 48 Hr EC50 Daphnia magna: 10294 - 17704 mg/L [Static]; 48 Hr EC50 Daphnia magna: 12600 - 12700 mg/L

Environmental effects Not available
Aquatic toxicity Not available
Persistence / degradability Not available
Bioaccumulation / accumulation Not available
Partition coefficient Not available
Mobility in environmental media Not available
Chemical fate information Not available
Other adverse effects Not available

13. Disposal Considerations

Waste codes Not available
Disposal instructions Review federal, state/provincial, and local government requirements prior to disposal. Do not puncture or incinerate container.
Waste from residues / unused products Not available
Contaminated packaging Not available

14. Transport Information

U.S. Department of Transportation (DOT)

Basic shipping requirements:

Proper shipping name Consumer Commodity, ORM-D (Applicable to containers up to 1L)

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

Proper shipping name Limited Quantity (Applicable to containers up to 1L)

15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canada - CEPA - High Priority Chemicals as Identified by DSL Categorization

Butane 106-97-8 Batch 4, published November 17, 2007

Canada - WHMIS - Ingredient Disclosure List

| | | |
|------------------------|----------|-------|
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.1 % |
| Acetone | 67-64-1 | 1 % |
| Butane | 106-97-8 | 1 % |

US Federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Acetone 67-64-1 5000 Lb final RQ; 2270 kg final RQ

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

1,2,4-Trimethylbenzene 95-63-6 1.0 % de minimis concentration

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

CERCLA (Superfund) reportable quantity

2-Propanone: 5000.0000
Benzene, 1,3-dimethyl-: 1000.0000
Benzene, 1,2-dimethyl-: 1000.0000
Benzene, (1-methylethyl)-: 5000.0000

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 No

Section 311 hazardous chemical Yes

Clean Air Act (CAA) Not available

Clean Water Act (CWA) Not available

WHMIS status Controlled

WHMIS classification Class A - Compressed Gas, Class B - Division 5 - Flammable Aerosol, Class D - Division 2A, 2B

WHMIS labeling



U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances

| | | |
|---|-----------------------|--|
| 1,2,4-Trimethylbenzene | 95-63-6 | [present] |
| Acetone | 67-64-1 | Present |
| Butanamide, 2,2'-[(3,3'-dichloro[1,1'-biphenyl]-4, Butane | 5468-75-7 106-97-8 | [present] Present |
| Hydrous magnesium silicate | 14807-96-6 | Present (exempt except when inhalable dust is present or can be generated) |

U.S. - Connecticut - Carcinogenic Substances

| | | |
|---|-----------|---|
| Butanamide, 2,2'-[(3,3'-dichloro[1,1'-biphenyl]-4, | 5468-75-7 | Meets the definition of a carcinogen from the Secretary of Labor. |
|---|-----------|---|

U.S. - Illinois - Toxic Air Contaminants

| | | |
|------------------------|---------|---------|
| 1,2,4-Trimethylbenzene | 95-63-6 | Present |
|------------------------|---------|---------|

U.S. - Louisiana - Reportable Quantity List for Pollutants

| | | |
|---------|---------|------------------------------------|
| Acetone | 67-64-1 | 5000 Lb final RQ; 2270 kg final RQ |
|---------|---------|------------------------------------|

U.S. - Massachusetts - Right To Know List

| | | |
|----------------------------|------------|--|
| 1,2,4-Trimethylbenzene | 95-63-6 | Present |
| Acetone | 67-64-1 | Present |
| Butane | 106-97-8 | Present |
| Hydrous magnesium silicate | 14807-96-6 | Present (exempt when encapsulated or if particulates are not present and cannot be substantially generated through use of the product) |
| Propane | 74-98-6 | Present |
| Titanium oxide | 13463-67-7 | Present |

U.S. - Minnesota - Hazardous Substance List

| | | |
|---|-----------------------|---|
| 1,2,4-Trimethylbenzene | 95-63-6 | Present |
| Acetone | 67-64-1 | Present |
| Butanamide, 2,2'-[(3,3'-dichloro[1,1'-biphenyl]-4, Butane | 5468-75-7 106-97-8 | Carcinogen Present |
| Hydrous magnesium silicate | 14807-96-6 | Present (fibrous, nonasbestiform, and respirable) |
| Propane | 74-98-6 | Simple asphyxiant |
| Titanium oxide | 13463-67-7 | Present (dust) |

U.S. - New Jersey - Right to Know Hazardous Substance List

| | | |
|----------------------------|------------|---------|
| 1,2,4-Trimethylbenzene | 95-63-6 | sn 2716 |
| Acetone | 67-64-1 | sn 0006 |
| Butane | 106-97-8 | sn 0273 |
| Hydrous magnesium silicate | 14807-96-6 | sn 1773 |
| Propane | 74-98-6 | sn 1594 |
| Titanium oxide | 13463-67-7 | sn 1861 |

U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

| | | |
|---------|---------|--|
| Acetone | 67-64-1 | 5000 Lb RQ (air); 1 lb RQ (land/water) |
|---------|---------|--|

U.S. - Pennsylvania - RTK (Right to Know) List

| | | |
|----------------------------|------------|----------------------|
| 1,2,4-Trimethylbenzene | 95-63-6 | Environmental hazard |
| Acetone | 67-64-1 | Environmental hazard |
| Butane | 106-97-8 | Present |
| Hydrous magnesium silicate | 14807-96-6 | Present |
| Propane | 74-98-6 | Present |
| Titanium oxide | 13463-67-7 | Present |

U.S. - Rhode Island - Hazardous Substance List

| | | |
|----------------------------|------------|---------------------------|
| 1,2,4-Trimethylbenzene | 95-63-6 | Toxic |
| Acetone | 67-64-1 | Toxic; Flammable |
| Butane | 106-97-8 | Toxic; Flammable |
| Hydrous magnesium silicate | 14807-96-6 | Toxic (powder or fibrous) |
| Propane | 74-98-6 | Toxic; Flammable |
| Titanium oxide | 13463-67-7 | Toxic |

Inventory name

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|---|------------------------|
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

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

16. Other Information

Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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