

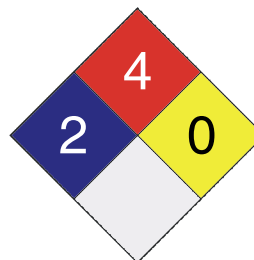
MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name Marsh Orange Spray Stencil Ink
CAS # Mixture
Product use Spray Ink
Manufacturer Marsh Shipping Supply Company, 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 | 0 |
| 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, Skin absorption, 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 naptha (petroleum), light aliphatic | 64742-89-8 | 7 - 13 |
| Acetone | 67-64-1 | 30 - 60 |
| Butane | 106-97-8 | 10 - 30 |
| Propane | 74-98-6 | 10 - 30 |
| 2-Propanol, 1-methoxy-, acetate | 108-65-6 | 1 - 5 |
| Carbonic acid calcium salt (1:1) | 471-34-1 | 1 - 5 |
| Hydrous magnesium silicate | 14807-96-6 | 1 - 5 |
| Neodecanoic acid, cobalt salt | 27253-31-2 | 1 - 5 |
| Titanium oxide | 13463-67-7 | 0.5 - 1.5 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.1 - 1 |
| 3H-Pyrazol-3-one, 4,4'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis (azo)]bis[2,4-dihydro-5-methyl-2-phenyl- | 3520-72-7 | 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. Rinse mouth with water, then drink one or two glasses of water. Obtain medical attention. Never give anything by mouth if victim is unconscious, or is convulsing. |

Notes to physician

Symptoms may be delayed.

General advice

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.

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. Phosgene.

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. 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 |
| 3H-Pyrazol-3-one, 4,4'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis (azo)]bis[2,4-dihydro-5-methyl-2-phenyl- | ACGIH-TLV Not established OSHA-PEL Not established |
| Acetone | ACGIH-TLV TWA: 500 ppm STEL: 750 ppm OSHA-PEL TWA: 1000 ppm |
| Butane | ACGIH-TLV TWA: 1000 ppm OSHA-PEL Not established |
| Carbonic acid calcium salt (1:1) | ACGIH-TLV TWA: 10 mg/m3 OSHA-PEL Not established |
| Hydrous magnesium silicate | ACGIH-TLV TWA: 2 mg/m3 OSHA-PEL Not established |
| Neodecanoic acid, cobalt salt | ACGIH-TLV TWA: 0.02 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 & Chemical Properties

| | |
|---|-----------------|
| Appearance | Aerosol. |
| Color | Orange |
| 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 determined |
| 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 |
| Percent volatile | Not available |

10. Chemical Stability & Reactivity Information

| | |
|---|---|
| Chemical stability | Stable under recommended storage conditions. |
| Conditions to avoid | Aerosol containers are unstable at temperatures above 49°C. |
| 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 |
| 3H-Pyrazol-3-one, 4,4'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis (azo)]bis[2,4-dihydro-5-methyl-2-phenyl- | Not available |
| Acetone | > 16000 mg/m3 rat |
| Butane | 658 mg/m3 rat |
| Carbonic acid calcium salt (1:1) | Not available |
| Hydrous magnesium silicate | Not available |
| Neodecanoic acid, cobalt salt | Not available |
| Propane | Not available |
| Solvent naptha (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 |
| 3H-Pyrazol-3-one, 4,4'-[(3,3'-dichloro[1,1'-biphenyl]-4,4'-diyl)bis (azo)]bis[2,4-dihydro-5-methyl-2-phenyl- | 5000 mg/kg rat |
| Acetone | 5800 mg/kg rat |
| Butane | Not available |
| Carbonic acid calcium salt (1:1) | 6450 mg/kg rat |
| Hydrous magnesium silicate | Not available |
| Neodecanoic acid, cobalt salt | 3900 mg/kg rat |
| Propane | Not available |
| Solvent naptha (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

Repeated or prolonged exposure to Hydrous magnesium silicate (Talc) may cause scarring of the lungs with shortness of breath, chronic cough, and heart failure.

| | | |
|--|---------------------------------------|---|
| Carcinogenicity | Contains potential carcinogens. | |
| ACGIH - Threshold Limits 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); A1 - Confirmed Human Carcinogen (containing asbestos fibers) |
| Titanium oxide | 13463-67-7 | A4 - Not Classifiable as a Human Carcinogen |
| IARC - Group 2A (Probably Carcinogenic to Humans) | | |
| 3H-Pyrazol-3-one, 4,4'-[(3,3'-dichloro[1,1'-biphenyl]-4, (azo))bis[2,4-dihydro-5-methyl-2-pl | 3520-72-7 | 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) | | |
| Neodecanoic acid, cobalt salt | 27253-31-2 | Monograph 52, 1991; (Evaluated as a group) |
| Titanium oxide | 13463-67-7 | Monograph 93 posted, Monograph 47 [1989] |
| IARC - Group 3 (Not Classifiable) | | |
| Hydrous magnesium silicate | 14807-96-6 | Monograph 93 posted (inhaled), Supplement 7 [1987], Monograph 42 [1987] |
| NTP (National Toxicology Program) - Report on Carcinogens - Known Carcinogens | | |
| 3H-Pyrazol-3-one, 4,4'-[(3,3'-dichloro[1,1'-biphenyl]-4, (azo))bis[2,4-dihydro-5-methyl-2-pl | 3520-72-7 | Known Carcinogen (metabolized to benzidine) |
| Mutagenicity | Non-hazardous by WHMIS/OSHA criteria. | |
| Reproductive effects | Non-hazardous by WHMIS/OSHA criteria. | |
| Teratogenicity | Non-hazardous by WHMIS/OSHA criteria. | |

12. Ecological Information

| | | |
|---|---|--|
| Ecotoxicity | Components of this product have been identified as having potential environmental concerns. | |
| Ecotoxicity - Freshwater Algae Data | | |
| Solvent naptha (petroleum), light aliphatic | 64742-89-8 | 72 Hr EC50 Selenastrum capricornutum: 4700 mg/L |
| Ecotoxicity - Freshwater Fish Species Data | | |
| 1,2,4-Trimethylbenzene | 95-63-6 | 96 Hr LC50 Pimephales promelas: 7.72 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: 5540 mg/L [static]; 96 Hr LC50 Pimephales promelas: 6210 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 8300 mg/L [static] |
| 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 water flea: 0.0039 mg/L; 48 Hr EC50 water flea: 12700 mg/L [Static]; 48 Hr EC50 Daphnia magna: 12600 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 | |

13. Disposal Considerations

| | |
|--|---|
| Waste codes | Not available |
| Disposal instructions | Review federal, 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

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)

Basic shipping requirements:

Proper shipping name Consumer Commodity (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 - 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 |
| Neodecanoic acid, cobalt salt | 27253-31-2 | 1 Lb statutory RQ (no final RQ is being assigned to the generic or broad class); 0.454 kg statutory RQ (no final RQ is being assigned to the generic or broad class) |

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

| | | |
|-------------------------------|------------|---|
| 1,2,4-Trimethylbenzene | 95-63-6 | 1.0 % de minimis concentration |
| Neodecanoic acid, cobalt salt | 27253-31-2 | 0.1 Percent de minimis concentration (Chemical Category N096) |

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

CERCLA (Superfund) reportable quantity

2-Propanone: 5000.0000
Benzene, ethyl-: 1000.0000
Benzene, 1,3-dimethyl-: 1000.0000
Benzene, 1,4-dimethyl-: 100.0000
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

Safe Drinking Water Act (SDWA)

Not available

Drug Enforcement Agency (DEA)

Not available

Food and Drug Administration (FDA)

Not available

WHMIS status

Controlled

WHMIS classification

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

WHMIS labeling



State regulations

WARNING: This product contains a chemical known to the State of California to cause cancer.

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

| | | |
|---|------------|--|
| 1,2,4-Trimethylbenzene | 95-63-6 | [present] |
| 3H-Pyrazol-3-one, | 3520-72-7 | [present] |
| 4,4'-[(3,3'-dichloro[1,1'-biphenyl]-4, (azo))bis[2,4-dihydro-5-methyl-2-pl | | |
| Acetone | 67-64-1 | Present |
| Butane | 106-97-8 | Present |
| Hydrous magnesium silicate | 14807-96-6 | Present (exempt except when inhalable dust is present or can be generated) |

U.S. - Connecticut - Carcinogenic Substances

| | | |
|---|-----------|---|
| 3H-Pyrazol-3-one, | 3520-72-7 | Meets the definition of a carcinogen from the Secretary of Labor. |
| 4,4'-[(3,3'-dichloro[1,1'-biphenyl]-4, (azo))bis[2,4-dihydro-5-methyl-2-pl | | |

U.S. - Illinois - Toxic Air Contaminant Carcinogens

| | | |
|-------------------------------|------------|--------------------------|
| Neodecanoic acid, cobalt salt | 27253-31-2 | IARC Group 2B Carcinogen |
|-------------------------------|------------|--------------------------|

U.S. - Illinois - Toxic Air Contaminants

| | | |
|-------------------------------|------------|---------|
| 1,2,4-Trimethylbenzene | 95-63-6 | Present |
| Neodecanoic acid, cobalt salt | 27253-31-2 | 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 |
| 3H-Pyrazol-3-one, | 3520-72-7 | Carcinogen |
| 4,4'-[(3,3'-dichloro[1,1'-biphenyl]-4, (azo))bis[2,4-dihydro-5-methyl-2-pl | | |
| Acetone | 67-64-1 | Present |
| Butane | 106-97-8 | Present |
| Hydrous magnesium silicate | 14807-96-6 | Present (nonasbestiform, respirable, and fibrous) |
| Propane | 74-98-6 | Simple asphyxiant |
| Titanium oxide | 13463-67-7 | Present |

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 |
| Neodecanoic acid, cobalt salt | 27253-31-2 | Environmental hazard |
| 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 |
| 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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