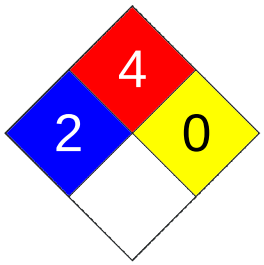
MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name	**Marsh Blue 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
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
Carbonic acid calcium salt (1:1)	471-34-1	1 - 5
Titanium oxide	13463-67-7	0.5 - 1.5
1,2,4-Trimethylbenzene	95-63-6	0.1 - 1

4. First Aid Measures

First aid procedures	
Eye contact	Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.
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 120°F (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
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
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	Blue.
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
Viscosity	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 (120°F).
Incompatible materials	Strong acids, alkalies 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	> 16000 mg/m3 rat
Butane	Not available
Carbonic acid calcium salt (1:1)	Not available
Hydrous magnesium silicate	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
Acetone	5800 mg/kg rat
Butane	Not available
Carbonic acid calcium salt (1:1)	6450 mg/kg rat
Hydrous magnesium silicate	Not available
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 a potential carcinogen.

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 2B (Possibly Carcinogenic to Humans)		
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]

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)

IATA Shipping Name: Aerosols, flammable, Class2.1, UN1950

IMDG Shipping Name: Aerosols, Class2, UN1950, EMS no. F-D, S-U

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

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, ethyl-: 1000.0000
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
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]
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. - 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
Butane	106-97-8	Present
Hydrous magnesium silicate	14807-96-6	Present (fibrous, nonasbestiform, and respirable)
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
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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