MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name **Marsh White 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)

2. Hazards Identification

Emergency overview

DANGER
EXTREMELY FLAMMABLE.
Contents under pressure. Containers may explode when heated.
Eye and skin irritant.

Potential short term health effects

Routes of exposure Eye, Skin contact, Skin absorption, Inhalation, Ingestion.

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

Skin May cause irritation. May be absorbed through the skin. Contact with liquid may cause frostbite.

ACGIH - Threshold Limit Values - Skin Notations

N-Hexane	110-54-3	Skin - potential significant contribution to overall exposure by the cutaneous route

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. Respiratory system. Skin.

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.

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.

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

Potential environmental effects See section 12.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Vinyltoluene	25013-15-4	3 - 7
Acetone	67-64-1	15 - 40
Butane	106-97-8	10 - 30
Propane	74-98-6	10 - 30
2-Methylpentane	107-83-5	1 - 5
2-Propanol, 1-methoxy-, acetate	108-65-6	1 - 5
Hydrous magnesium silicate	14807-96-6	1 - 5
Limestone	1317-65-3	1 - 5
N-Hexane	110-54-3	1 - 5
Pentane, 3-methyl-	96-14-0	1 - 5
Titanium oxide	13463-67-7	1 - 5
Quaternary ammonium compounds, bis(hydrogenated tallow alkyl) dimethyl, salts with bentonite	68953-58-2	0.5 - 1.5

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 if irritation develops or 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. 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 aerosol by flame projection test. Containers may explode when heated.
Extinguishing media	
Suitable extinguishing media	Dry chemical. Carbon dioxide. Foam.
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. Oxides of nitrogen.
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.
Environmental precautions	Prevent entry into waterways, sewers, basements or confined areas.
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	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.

7. Handling and Storage

Handling	Use good industrial hygiene practices in handling this material. Pressurized container: Do not pierce or burn, even after use. Avoid contact with eyes and skin. Avoid breathing vapors or mists of this product. Wash thoroughly after handling.
Storage	Keep out of reach of children. Keep away from heat, open flames or other sources of ignition. Do not store at temperatures above 49 °C (120.2°F). Protect from sunlight.

8. Exposure Controls / Personal Protection

Exposure limits

Ingredient(s)	Exposure Limits
2-Methylpentane	**ACGIH-TLV** TWA: 500 ppm STEL: 1000 ppm **OSHA-PEL** Not established
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
Hydrous magnesium silicate	**ACGIH-TLV** TWA: 2 mg/m3 **OSHA-PEL** Not established
Limestone	**ACGIH-TLV** TWA: 5 mg/m3 **OSHA-PEL** TWA: 15 mg/m3
N-Hexane	**ACGIH-TLV** TWA: 50 ppm STEL: 1000 ppm **OSHA-PEL** TWA: 500 ppm
Pentane, 3-methyl-	**ACGIH-TLV** TWA: 500 ppm **OSHA-PEL** Not established
Propane	**ACGIH-TLV** TWA: 1000 ppm **OSHA-PEL** TWA: 1000 ppm
Quaternary ammonium compounds, bis(hydrogenated tallow alkyl) dimethyl, salts with bentonite	**ACGIH-TLV** Not established **OSHA-PEL** Not established

Titanium oxide	**ACGIH-TLV** TWA: 10 mg/m3 **OSHA-PEL** TWA: 15 mg/m3
Vinyltoluene	**ACGIH-TLV** TWA: 50 ppm STEL: 100 ppm **OSHA-PEL** TWA: 100 ppm

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 before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance	Aerosol.
Color	White
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
Pour point	Not available
Evaporation rate	< 1 (Ether = 1)
Flash point	Not determined
Auto-ignition temperature	Not available
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
Percent volatile	Not available

10. Stability and Reactivity

Reactivity Aerosol containers are unstable at temperatures above 49°C (120.2°F).

Possibility of hazardous reactions Hazardous polymerization does not occur.

Chemical stability Stable under recommended storage conditions.

Conditions to avoid Heat, open flames, static discharge, sparks and other ignition sources. Do not mix with other chemicals.

Incompatible materials Strong acids, alkalies and oxidizing agents.

Hazardous decomposition products May include and are not limited to: Oxides of carbon. Oxides of nitrogen.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
2-Methylpentane	Not available
2-Propanol, 1-methoxy-, acetate	Not available
Acetone	44000 Mg/m3/4H mouse
Butane	Not available
Hydrous magnesium silicate	Not available
Limestone	Not available
N-Hexane	38500 mg/l/4h rat
Pentane, 3-methyl-	Not available
Propane	Not available
Quaternary ammonium compounds, bis(hydrogenated tallow alkyl) dimethyl, salts with bentonite	12.6 mg/l/4h rat
Titanium oxide	Not available
Vinyltoluene	> 3535 ppm rat; 3020 Mg/m3/4H mouse

Component analysis - Oral LD50

Ingredient(s)	LD50
2-Methylpentane	Not available
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
Butane	Not available
Hydrous magnesium silicate	Not available
Limestone	6450 mg/kg rat
N-Hexane	28710 mg/kg rat
Pentane, 3-methyl-	Not available
Propane	Not available
Quaternary ammonium compounds, bis(hydrogenated tallow alkyl) dimethyl, salts with bentonite	5000 mg/kg rat
Titanium oxide	24000 mg/kg rat
Vinyltoluene	3160 mg/kg mouse; 2255 mg/kg rat

Effects of acute exposure

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

Skin May cause irritation. May be absorbed through the skin. Contact with liquid may cause frostbite.

ACGIH - Threshold Limit Values - Skin Notations

N-Hexane	110-54-3	Skin - potential significant contribution to overall exposure by the cutaneous route

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. Peripheral nerve damage has been observed following occupational exposure to hexane.

Carcinogenicity High concentrations of pigment-grade (powdered) and ultrafine titanium dioxide (titanium oxide) dust have caused respiratory tract cancer in rats exposed by inhalation and intratracheal instillation.

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
Vinyltoluene	25013-15-4	A4 - Not Classifiable as a Human Carcinogen

IARC - Group 2B (Possibly Carcinogenic to Humans)

Titanium oxide	13463-67-7	Monograph 93 [2010]; Monograph 47 [1989]

IARC - Group 3 (Not Classifiable)

Hydrous magnesium silicate	14807-96-6	Monograph 93 [2010] (inhaled); Supplement 7 [1987]; Monograph 42 [1987]
Vinyltoluene	25013-15-4	Monograph 60 [1994]

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

Titanium oxide	13463-67-7	carcinogen, initial date 9/2/11 (airborne, unbound particles of respirable size)

Mutagenicity Non-hazardous by WHMIS/OSHA criteria.

Reproductive effects Non-hazardous by WHMIS/OSHA criteria.

Teratogenicity Non-hazardous by WHMIS/OSHA criteria.

Name of Toxicologically Synergistic Products Not available

12. Ecological Information

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

Ecotoxicity - Freshwater Fish - Acute Toxicity Data

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]
N-Hexane	110-54-3	96 Hr LC50 Pimephales promelas: 2.1-2.98 mg/L [flow-through]
Vinyltoluene	25013-15-4	96 Hr LC50 Pimephales rafinesque: 23.4 mg/L

Ecotoxicity - Water Flea - Acute Toxicity Data

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
N-Hexane	110-54-3	24 Hr EC50 Daphnia magna: >1000 mg/L

Persistence / degradability Not available

Bioaccumulation / accumulation Not available

Mobility in environmental media Not available

Environmental effects Harmful to aquatic life.

Aquatic toxicity Not available

Partition coefficient Not available

Chemical fate information Not available

Other adverse effects Not available

13. Disposal Considerations

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 (applicable to containers up to 1L)
Hazard class	ORM-D
Additional information:	
Packaging exceptions	156, 306

Transportation of Dangerous Goods (TDG - Canada)

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 - CEPA - High Priority Chemicals as Identified by DSL Categorization

Butane	106-97-8	Batch 4, published November 17, 2007
N-Hexane	110-54-3	Batch 4, published November 17, 2007

Canada - WHMIS - Ingredient Disclosure List

2-Methylpentane	107-83-5	1 %
Acetone	67-64-1	1 %
Butane	106-97-8	1 %
N-Hexane	110-54-3	1 %
Vinyltoluene	25013-15-4	1 %

WHMIS status Controlled

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

WHMIS labeling

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical	Yes

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
N-Hexane	110-54-3	5000 Lb final RQ; 2270 kg final RQ

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

N-Hexane	110-54-3	1.0 % de minimis concentration

CERCLA (Superfund) reportable quantity

Acetone: 5000.0000
Acetic acid, butyl ester: 5000.0000
Hexane: 5000.0000
Cyclohexane: 1000.0000

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) Hazardous substance

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

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 by use)
Vinyltoluene	25013-15-4	Present

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

Titanium oxide	13463-67-7	carcinogen, initial date 9/2/11 (airborne, unbound particles of respirable size)

U.S. - Illinois - Toxic Air Contaminants

N-Hexane	110-54-3	Present

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

Acetone	67-64-1	5000 Lb final RQ; 2270 kg final RQ
N-Hexane	110-54-3	5000 Lb final RQ; 2270 kg final RQ

U.S. - Massachusetts - Right To Know List

2-Methylpentane	107-83-5	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)
Limestone	1317-65-3	Present
N-Hexane	110-54-3	Present
Pentane, 3-methyl-	96-14-0	Present
Propane	74-98-6	Present
Titanium oxide	13463-67-7	Present
Vinyltoluene	25013-15-4	Present

U.S. - Minnesota - Hazardous Substance List

2-Methylpentane	107-83-5	Present (Hexane isomer)
Acetone	67-64-1	Present
Butane	106-97-8	Present
Hydrous magnesium silicate	14807-96-6	Present (fibrous, nonasbestiform, dust and fume)
Limestone	1317-65-3	Present (dust)
N-Hexane	110-54-3	Present
Propane	74-98-6	Simple asphyxiant
Titanium oxide	13463-67-7	Present (dust)
Vinyltoluene	25013-15-4	Present

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

2-Methylpentane	107-83-5	sn 1285
Acetone	67-64-1	sn 0006
Butane	106-97-8	sn 0273
Hydrous magnesium silicate	14807-96-6	sn 1773
Limestone	1317-65-3	sn 4001
N-Hexane	110-54-3	sn 1340
Propane	74-98-6	sn 1594
Titanium oxide	13463-67-7	sn 1861
Vinyltoluene	25013-15-4	sn 2010

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)
N-Hexane	110-54-3	1 Lb RQ (air); 1 lb RQ (land/water)

U.S. - North Carolina - Control of Toxic Air Pollutants

N-Hexane	110-54-3	1.1 mg/m3 (chronic toxicants)

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

2-Methylpentane	107-83-5	Present
Acetone	67-64-1	Environmental hazard
Butane	106-97-8	Present
Hydrous magnesium silicate	14807-96-6	Present
Limestone	1317-65-3	Present
N-Hexane	110-54-3	Present
Pentane, 3-methyl-	96-14-0	Present
Propane	74-98-6	Present
Titanium oxide	13463-67-7	Present
Vinyltoluene	25013-15-4	Present

U.S. - Rhode Island - Hazardous Substance List

Acetone	67-64-1	Toxic; Flammable
Butane	106-97-8	Toxic; Flammable
Hydrous magnesium silicate	14807-96-6	Toxic (powder or fibrous)
Limestone	1317-65-3	Toxic
N-Hexane	110-54-3	Toxic; Flammable
Propane	74-98-6	Toxic; Flammable
Titanium oxide	13463-67-7	Toxic
Vinyltoluene	25013-15-4	Toxic; Flammable

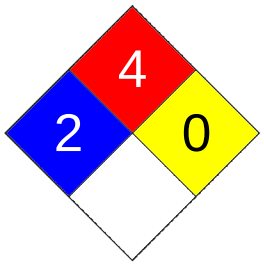
Inventory name

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

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



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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Other information For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.