

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name Marsh Tan 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: Infotrac: USA 1 800 535 5053
Emergency Phone: International 352-323-3500 Call Collect

2. Hazards Identification

Emergency overview DANGER
Extremely Flammable Aerosol.
Contents under pressure. Containers may explode when heated.
CAUSES EYE IRRITATION. MAY CAUSE SKIN IRRITATION.
May cause chronic toxic effects.

Potential short term health effects

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

Eyes Causes irritation.

Skin May cause irritation. This product may be harmful if it is absorbed through the skin.

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 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.

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
Butane	106-97-8	7 - 13
Hydrous magnesium silicate	14807-96-6	3 - 7
Acetone	67-64-1	20 - 30
Propane	74-98-6	20 - 30
2-Methylpentane	107-83-5	1 - 5
2-Propanol, 1-methoxy-, acetate	108-65-6	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

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	Immediately flush with water. Wash with soap and water. Obtain medical attention if irritation persists.
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. Foam. Dry chemical. 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. Vapors are heavier than air and may travel along the ground to some distant source of ignition and flash back.
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Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
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Hazardous combustion products

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

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

Do not discharge into lakes, streams, ponds or public waters.

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.

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.
Avoid contact with skin and clothing.
Use only with adequate ventilation.
Avoid breathing vapors or mists of this product.
"Empty" containers retain product residue (liquid or vapor) and can be dangerous.
Wash thoroughly after handling.

Storage

Keep out of reach of children.
Keep away from heat, open flames or other sources of ignition.
Protect from sunlight.
Do not store at temperatures above 49 °C (120.2°F).

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
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. Wear safety glasses with side shields.
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	Tan
Form	Liquid
Odor	Acetone
Odor threshold	Not available
Physical state	Liquid
pH	Not available
Melting point	Not available
Freezing point	Not available
Boiling point	-44 - 302 °F (-42.22 - 150.00 °C)
Pour point	Not available
Evaporation rate	> 1 (BuAc=1)
Flash point	-156 °F (-104.44 °C) Pensky-Martens Closed Cup
Auto-ignition temperature	Not available
Flammability limits in air, lower, % by volume	1
Flammability limits in air, upper, % by volume	12.8
Vapor pressure	Not available
Vapor density	Heavier than air
Specific gravity	0.7649
Octanol/water coefficient	Not available
Solubility (H2O)	Partial
Viscosity	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	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 sulfur.

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	658 mg/l/4h rat
Hydrous magnesium silicate	Not available
Limestone	Not available
N-Hexane	38500 mg/l/4h rat
Pentane, 3-methyl-	Not available
Propane	658 mg/l/4h rat
Titanium oxide	Not available

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
Titanium oxide	24000 mg/kg rat

Effects of acute exposure

Eye Causes irritation.
Skin May cause irritation. This product may be harmful if it is absorbed through the skin.

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 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 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]

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

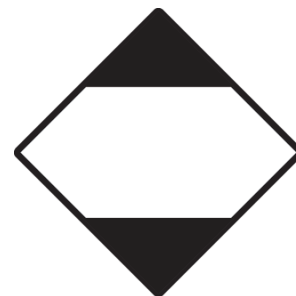
Ecotoxicity	Components of this product have been identified as having potential environmental concerns.	
Ecotoxicity - Freshwater Fish - Acute Toxicity Data		
2-Propanol, 1-methoxy-, acetate	108-65-6	96 Hr LC50 Pimephales promelas: 161 mg/L [static]
Acetone	67-64-1	96 Hr LC50 Oncorhynchus mykiss: 4.74 - 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]
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	Not available	
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

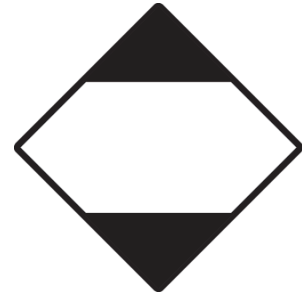
U.S. Department of Transportation (DOT)	
Basic shipping requirements:	
Proper shipping name	Aerosols
Hazard class	Limited Quantity
UN number	UN1950
Additional information:	
Special provisions	N82
ERG number	115



Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

Proper shipping name AEROSOLS, flammable
Hazard class Limited Quantity
UN number UN1950



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 %

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 Yes
chemical

US Federal regulations

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

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

N-Hexane	110-54-3	Present
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U.S. - CAA (Clean Air Act) - Accidental Release Prevention - Flammable Substances

Butane	106-97-8	10000 lb threshold quantity
Propane	74-98-6	10000 lb threshold quantity

U.S. - CAA (Clean Air Act) - HON Rule - Organic HAPs

N-Hexane	110-54-3	Present
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U.S. - CAA (Clean Air Act) - HON Rule - SOCM Chemicals

Acetone	67-64-1	Group I
N-Hexane	110-54-3	Group V

U.S. - CAA (Clean Air Act) - Reactivity Factors for VOCs in Aerosol Coatings

2-Methylpentane	107-83-5	1.80 G Ozone/g VOC Reactivity Factor
2-Propanol, 1-methoxy-, acetate	108-65-6	1.71 G Ozone/g VOC Reactivity Factor
Acetone	67-64-1	0.43 G Ozone/g VOC Reactivity Factor
Butane	106-97-8	1.33 G Ozone/g VOC Reactivity Factor
N-Hexane	110-54-3	1.45 G Ozone/g VOC Reactivity Factor
Propane	74-98-6	0.56 G Ozone/g VOC Reactivity Factor

U.S. - CAA (Clean Air Act) - SNAP Program Listing of Substitutes for ODSs

Acetone	67-64-1	Acceptable substitute for: 2
Butane	106-97-8	Acceptable substitute for: 6
Propane	74-98-6	Acceptable substitute for: 6, 7

U.S. - CAA (Clean Air Act) - VOCs with Negligible Photochemical Reactivity

Acetone	67-64-1	Present
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U.S. - CAA (Clean Air Act) - Volatile Organic Compounds (VOCs) in SOCM

Acetone	67-64-1	Present
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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
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CERCLA (Superfund) reportable quantity

Acetone: 5000.0000
 Hexane: 5000.0000
 Cyclohexane: 1000.0000
 Toluene: 1000.0000
 1-Propanol, 2-methyl-: 5000.0000
 Ammonia: 100.0000
 Benzene, 1,3-dimethyl-: 1000.0000
 Benzene, ethyl-: 1000.0000
 Benzene, 1,4-dimethyl-: 100.0000
 Benzene, 1,2-dimethyl-: 1000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No
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Section 302 extremely hazardous substance	No
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Section 311 hazardous chemical	Yes
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Clean Water Act (CWA)	Hazardous substance Priority pollutant Toxic pollutant
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State regulations

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

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)

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

Titanium oxide	13463-67-7	carcinogen, initial date 9/2/11 (airborne, unbound particles of respirable size)
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U.S. - Illinois - Toxic Air Contaminant Carcinogens

Titanium oxide	13463-67-7	IARC 2B Carcinogen
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U.S. - Illinois - Toxic Air Contaminants

N-Hexane	110-54-3	Present
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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

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)

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

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)
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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

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

Inventory name**Country(s) or region**

Canada

Canada

United States & Puerto Rico

Inventory name

Domestic Substances List (DSL)

Non-Domestic Substances List (NDSL)

Toxic Substances Control Act (TSCA) Inventory

On inventory (yes/no)*

Yes

No

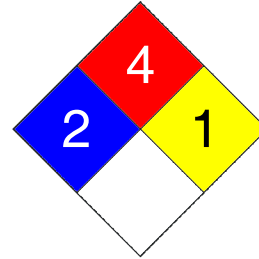
Yes

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

Health	* 2
Flammability	4
Physical Hazard	1
Personal Protection	X

**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.

Issue date

25-Feb-2013

Effective date

15-Feb-2013

Expiry date

15-Feb-2016

Prepared by

Dell Tech Laboratories Ltd. (519) 858-5021

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.