

MATERIAL SAFETY DATA SHEET

SPOTCHECK® PENETRANT SKL-SP1

1. *Company:* MAGNAFLUX
Address: 3624 West Lake Avenue, Glenview, Illinois 60026
Telephone No.: 847-657-5300 (Off-Hour Emergency Number - CHEMTREC - 1-800-424-9300).
Product Use: Visible inspection penetrant.
Packages: 1 gallon and 5 gallon pails, 20 gallon drums, 55 gallon drums, Totes, aerosols, pens
NFPA Rating: Health 1, Flammability 1, (Aerosol Flammability 4), Reactivity 0
PIN (Canada): None
Revision date: July 14, 2008

2. HAZARDOUS INGREDIENTS

<u>Ingredient</u>	<u>Wt./Wt.%</u>	<u>CAS #</u>	<u>TLV</u>	<u>PEL</u>	<u>LD₅₀</u>	<u>LC₅₀</u>
White mineral oil (petroleum)	60-80	8042-47-5 or 64742-47-8	5 mg/m ³	5 mg/m ³	not avail.	not avail.
Phthalic Esters	5-25	71888-89-6	5mg/m ³	not avail.	not avail.	not avail.
Liquefied petroleum gasses (propellant, aerosol only)*	30	68476-86-8	not avail.	1000 ppm	not avail.	not avail.

*Aerosol Package Only

3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

Bland, oily liquid which may irritate the skin and eyes. Bulk material is difficult to ignite, but will burn vigorously if engulfed in fire. Aerosol is extremely flammable.

POTENTIAL HEALTH EFFECTS, AND SIGNS AND SYMPTOMS OF EXPOSURE:

- Skin contact:* Can irritate by removing natural skin oils on long or repeated exposures.
Eyes: May irritate.
Inhalation: Not significant at room temperatures. When heated or sprayed, vapors may cause dizziness and nausea.
Ingestion: Not significant in small (mouthful) amounts.
Medical conditions known to be aggravated by exposure to product: None

4. FIRST AID

- Skin Contact:* Wash off with soap and water. Use soothing lotion.
Eyes: Rinse carefully under upper and lower eyelids using plenty of water.
Inhalation: Remove to fresh air if dizzy or nauseated.
Ingestion: Do not induce vomiting. Accidental ingestion of a small mouthful is not expected to cause significant harm.
NOTE: In all severe cases, contact physician immediately. Local telephone operators can furnish number of regional poison control center.

5. FIRE HAZARD

- Conditions of flammability:* Aerosol: Spraying near an ignition source will ignite spray mist.
Bulk: None unless heated over 200°F (93°C) near ignition source.
Flash point (Bulk): Min. 200°F (93°C) (Pensky-Martens closed cup)
Flammable limits in air: 1% to 6%
Extinguishing media: Carbon dioxide, foam
Special fire fighting procedures: Keep containers cool with water spray. Do not spray water directly on burning SKL-SP1. It may float and spread the fire.
Hazardous combustion products: Smoke, soot, oxides of carbon and nitrogen.
Unusual fire hazards: Aerosol cans may burst at temperatures over 130°F (54°C) and spray contents into a fire.

6. ACCIDENTAL RELEASE MEASURES

Mop up or sweep up with absorbent. (For disposal, see Section 13.)

7. HANDLING AND STORAGE

Store away from heat source. Avoid eye contact. Avoid repeated or prolonged skin contact. Avoid breathing spray mist. Do not spray around arcs or flames.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Controls:* None, unless sprayed. Use where ventilation will carry spray mist away from occupied areas.
Personal protection: Wear safety glasses to protect eyes. Wear nitrile rubber gloves if hand exposure is unavoidable. Respirator with filter if sprayed in enclosed unventilated space.

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9. **PHYSICAL PROPERTIES**

Initial boiling point (bulk) Min. 455°F (230°C) (ASTM D-86)
Vapor pressure: Aerosol: 60 psi @ 75°F (24°C) Bulk: <0.10 mm @ 70°F (21°C)
Percent volatile: None (30% in aerosol) *Vapor density:* Heavier than air
Density/sp. gravity: 0.89 *Evaporation rate:* Negligible
Water solubility: 0 *Appearance:* Dark red oily liquid
pH: Neutral *Odor:* Mild oily odor

10. **STABILITY AND REACTIVITY**

Stability: Stable
Incompatibility: None
Hazardous decomposition products: Soot, oxides of carbon and nitrogen when burning
Reactivity: None

11. **TOXICOLOGICAL INFORMATION**

Carcinogenicity: Contains no known or suspected carcinogens listed with OSHA, IARC, NTP, or ACGIH.
Threshold limited value: 5 mg/m³ for oily mist.
WHMIS information (Canada): No human information is available for teratogenicity, reproductive toxicity, and mutagenicity. No reports of toxicological synerism were located. The ingredients have not been found to show skin sensitization.

12. **ECOLOGICAL INFORMATION**

No data is available on SKL-SP1. It floats on water and can be skimmed off. Its low vapor pressure may exempt it from VOC restrictions. The hydrocarbon propellant is not an ozone depleter.

13. **DISPOSAL**

As a non-hazardous oil waste, incinerate or send to waste handler who can blend it into secondary fuels. Empty aerosol cans before disposal.

14. **TRANSPORTATION**

U.S. DOT: 49 CFR 172.101 Hazardous Materials Table

	<u>1 gal, 5 gal</u>	<u>20 gal, 55 gal. & Totes</u>
<u>Aerosol</u>		
<i>Proper shipping name:</i>	None, not restricted	None, not restricted
<i>Consumer commodity</i>		
<i>Hazard class or division:</i>	None	None
ORM-D		
<i>Identification No.:</i>	None	None
None		
<i>Packing Group:</i>	None	None
None		

IATA: List of Dangerous Goods

	<u>1 gal, 5 gal</u>	<u>Bulk</u>
<u>Aerosol</u>		
<i>Proper shipping name:</i>	None, not restricted	None, not restricted
Aerosols, flammable		
<i>Hazard class or division:</i>	None	None
2.1		
<i>Identification No.:</i>	None	None
UN1950		
<i>Packing Group:</i>	None	None
-		

IMDG: General Index

	<u>1 gal, 5 gal</u>	<u>Bulk</u>
<u>Aerosol</u>		
<i>Proper shipping name:</i>	None, not restricted	None, not restricted
AEROSOLS		
<i>Hazard class or division:</i>	None	None
2.1		
<i>Identification No.:</i>	None	None
UN1950		
<i>Packing Group:</i>	None	None
-		

15. **REGULATORY INFORMATION**

TSCA: All ingredients are listed in TSCA inventory

CERCLA: Not reportable.

SARA TITLE III, Section 313: No reportable ingredients.

WHMIS Class (Canada): Bulk: D-2A Aerosol: A, B-5, D-2A

Note: This MSDS has been prepared to meet WHMIS (Canada) requirements with the exception of using 16 headings.

16. **OTHER INFORMATION**

Revision Statement: Section: 2

Supersedes: MSDS dated May 1, 2006

Prepared by: Tamie Simmons, Research Manager

MATERIAL SAFETY DATA SHEET

SPOTCHECK® SKC-S

1. IDENTIFICATION

Company: MAGNAFLUX
Address: 3624 West Lake Avenue, Glenview, Illinois 60026
Telephone No.: 847-657-5300 (Off-Hour Emergency Number - CHEMTREC - 1-800-424-9300).
Product Use: Nondestructive Testing Material
Packages: 1 gallon can, 5 gallon pail, 55 gallon drums, aerosols
NFPA Rating: Health 1, Flammability 3, Reactivity 0
PIN (Canada): Bulk: UN1268
Revision Date: June 23, 2009

2. HAZARDOUS INGREDIENTS

<i>Ingredient</i>	<i>Wt./Wt. %</i>	<i>CAS #</i>	<i>TLV</i>	<i>PEL</i>	<i>LD₅₀</i>	<i>LC₅₀</i>
		64742-89-8				
		Or	300ppm		5 g/kg	3400 ppm
Light aliphatic solvent naphtha	60-100	64742-49-0	(8 hr.TWA)	not avail.	(oral/rat)	(4hrs/rat)
Carbon dioxide propellant (Aerosol Only)	3-7	124-38-9	not avail.	5000 ppm	not avail.	not avail.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Flammable liquid and aerosol. Vapor may cause flash fire. Harmful or fatal if swallowed. Mist or vapor may irritate the respiratory tract. Liquid contact may cause eye and skin irritation. Over-exposure may cause central nervous system (CNS) depression and target organ effects. Spills may create a slipping hazard.

POTENTIAL HEALTH EFFECTS & SIGNS AND SYMPTOMS OF EXPOSURE:

Skin Contact: Irritating to skin. Repeated exposure may cause skin dryness or cracking.
Eyes: Vapors may be irritating to the eye.
Inhalation: Vapors expected to be slightly irritating. Vapors may cause drowsiness and dizziness.
Ingestion: Harmful: may cause lung damage if swallowed.
Medical conditions known to be aggravated by exposure to product: Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Eyes, Skin, and Respiratory system.

4. FIRST AID

Skin Contact: Wash off with soap and water. Do not use ointments. Seek medical attention if tissue appears damaged or if pain or irritation persists.
Eyes: Rinse carefully under upper and lower eyelids using plenty of water. Rest eyes for 30 minutes. If redness, burning, blurred vision, or swelling persists, transport to the nearest medical facility for additional treatment.
Inhalation: Remove to fresh air if dizzy or nauseated. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
Ingestion: Do not induce vomiting. Transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

NOTE: In all severe cases, contact physician immediately. Local telephone operators can furnish number of regional poison control center.

5. FIRE HAZARD

Conditions of flammability: Bulk and aerosol: Readily ignited in presence of ignition sources.
Flash point: Min. 57°F (14°C) (Pensky-Martens) closed cup.
Flammable limits in air: 1% to 6%.
Extinguishing media: Carbon dioxide, foam
Special fire fighting procedures: Keep containers cool with water spray. Do not spray water directly on burning SKC-S. It will float and spread the fire.
Hazardous combustion products: Smoke, soot, oxides of carbon.
Unusual fire hazards: Aerosol cans may burst if heated above 130°F (54°C) and spray contents into a fire.

6. ACCIDENTAL RELEASE MEASURES

Flammable Liquid! Release causes an immediate fire or explosion hazard. Do not touch or walk through spilled material. Prevent spilled material from entering waterways, sewers, basements, or confined area.
 Mop up or sweep up with absorbent. Use only non-sparking tools to collect absorbed material. Avoid contact with spilled or released material. Immediately remove all contaminated clothing. (For disposal, see Section 13.)

7. HANDLING AND STORAGE

Avoid eye contact. Avoid repeated or prolonged skin contact. Avoid breathing spray mist. Do not spray near arcs or flames. Use only in well ventilated areas. Wash thoroughly after handling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Controls: Use where ventilation will carry spray mist away from occupied areas.

Personal protection:

Wear safety glasses to protect eyes. Wear nitrile rubber gloves if hand exposure is unavoidable. Respirator with solvent vapor absorbing cartridge if used in enclosed, unventilated space.

Warning: Use of this material in spaces without adequate ventilation may result in generation of hazardous levels of flammable vapors and/or inadequate oxygen levels for breathing. Odor is an inadequate warning for hazardous conditions.

9. **PHYSICAL PROPERTIES**

<i>Initial boiling point (bulk):</i>	Min. 245°F (118°C) (ASTM D-86)	<i>Vapor pressure:</i>	12 and 16 oz. Aerosol: 105psi @ 75°F(24°C) Bulk: 1.5 – 2.0 kPa at 20°C/68.0°F
<i>VOC Content (EPA Method 24):</i>	750 g/L	<i>Vapor density:</i>	4.1
<i>Density/sp. gravity:</i>	0.76	<i>Evaporation rate:</i>	Fast
<i>Water solubility:</i>	0	<i>Appearance:</i>	Clear, colorless liquid
<i>pH:</i>	Neutral	<i>Odor:</i>	Naphtha odor

10. **STABILITY AND REACTIVITY**

<i>Stability:</i>	Stable under normal conditions of use
<i>Incompatibility:</i>	Avoid heat, sparks, open flames and other ignition sources. Avoid strong oxidizing agents.
<i>Hazardous decomposition products:</i>	A complex mixture of airborne solids, liquids, and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.
<i>Reactivity:</i>	None

11. **TOXICOLOGICAL INFORMATION**

<i>Carcinogenicity:</i>	Contains no known or suspected carcinogens listed with OSHA, IARC, NTP, or ACGIH.
<i>Threshold limit value:</i>	300 ppm
<i>WHMIS information (Canada):</i>	According to available information, the ingredients have not been found to show reproductive toxicity, teratogenicity, mutagenicity, skin sensitization, or synergistic toxic effects with other materials.

12. **ECOLOGICAL INFORMATION**

No data is available on SKC-S. It floats on water. Components will evaporate rapidly.

13. **DISPOSAL**

As hazardous waste, send to licensed waste handler who can blend it into secondary fuels.

<i>RCRA:</i>	Hazardous waste.
<i>U.S. EPA Waste Number:</i>	D001

14. **TRANSPORTATION**

U.S. DOT: 49 CFR 172.101 Hazardous Materials Table

	<u>Non-Aerosol</u>	<u>Aerosol</u>
<i>Proper shipping name:</i>	Petroleum distillates, n.o.s.	Consumer Commodity
<i>Hazard class or division:</i>	3	ORM-D
<i>Identification No.:</i>	UN1268	None
<i>Packing Group:</i>	II	None
IATA: List of Dangerous Goods	<u>Non-Aerosol</u>	<u>Aerosol</u>
<i>Proper shipping name:</i>	Petroleum distillates, n.o.s.	Aerosols, flammable
<i>Hazard class or division:</i>	3	2.1
<i>Identification No.:</i>	UN1268	UN1950
<i>Packing Group:</i>	II	-
IMDG: General Index	<u>Non-Aerosol</u>	<u>Aerosol</u>
<i>Proper shipping name:</i>	PETROLEUM DISTILLATES,N.O.S.	AEROSOLS
<i>Hazard class of division:</i>	3.2	2.1
<i>Identification No.:</i>	UN1268	UN1950
<i>Packing Group:</i>	II	-

15. **REGULATORY INFORMATION**

<i>TSCA:</i>	All ingredients are listed in TSCA inventory.
<i>Canadian DSL:</i>	All ingredients are listed in the Canadian DSL
<i>CERCLA:</i>	VM&P Naphtha (64742-89-8) Reportable Quantity 66,667 lbs.
<i>SARA TITLE III, Section 313:</i>	Xylene, Mixed Isomer (1330-20-7) <0.13%; meta-Xylene (108-38-3)< 0.05%; Ethylbenzene (100-41-4)< 0.1%; Benzene (71-43-2) <0.005%; Toluene (108-88-3) <0.1%, Naphthalene: <0.002%
<i>California Proposition 65:</i>	Warning: This material may contain trace amounts of chemicals known to the state of California to cause cancer and/or birth defects and/or reproductive harm.
<i>WHMIS Class (Canada):</i>	Non-Aerosol: B-2, D-2B; Aerosol: A, B-5, D-2B

Note: This MSDS has been prepared to meet WHMIS (Canada) requirements with the exception of using 16 headings.

16. **OTHER INFORMATION**

<i>Revision Statement:</i>	Section 1,2,4,6,12,15
<i>Supersedes:</i>	April 13, 2007
<i>Prepared by:</i>	Tamie Simmons, Research Manager

MATERIAL SAFETY DATA SHEET

SPOTCHECK® DEVELOPER SKD-S2

1. IDENTIFICATION

Company: MAGNAFLUX
Address: 3624 West Lake Avenue, Glenview, Illinois 60026
Telephone No.: 847-657-5300 (Off-Hour Emergency Number - CHEMTREC - 1-800-424-9300).
Product Use: Penetrant inspection developer
Packages: 1 gallon can, 5 gallon pail, 55 gallon drum, aerosol
NFPA Rating: Health 1, Flammability 3, (aerosol 4), Reactivity 0
PIN (Canada): UN 1993
Revision Date: September 5, 2007

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	Wt./Wt.%	CAS#	TLV	PEL	LD ₅₀	LC ₅₀
2-propanol	40 – 70	67-63-0	400 ppm	400 ppm	3.6 g/kg(oral/mouse)	Not available
2-propanone	10 – 30	67-64-1	750 ppm	750 ppm	6 g/kg (oral/rat)	Not available
Isobutane (propellant – aerosol only)	30	75-28-5	Not available	1000 ppm	Not available	Not available
Talc	1 - 3	14807-96-6	Not available	2 mg/me	Not available	Not available

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Extremely flammable white liquid and aerosol. Fast evaporating vapors can reach hazardous levels quickly in unventilated spaces.

POTENTIAL HEALTH EFFECTS & SIGNS AND SYMPTOMS OF EXPOSURE:

Skin Contact: Can irritate by removing natural skin oils on long or repeated exposures.
Eyes: Irritating, but does not damage eye tissue.
Inhalation: Causes dizziness and nausea.
Ingestion: Not significant in small (mouthful) amounts.
Medical conditions known to be aggravated by exposure to product: None

4. FIRST AID

Skin Contact: Remove contaminated clothing. Wash exposed areas with soap and water. Use soothing lotion.
Eyes: Rinse carefully under upper and lower eyelids using plenty of water.
Inhalation: Remove to fresh air if dizzy or nauseated.
Ingestion: Do not induce vomiting. Accidental ingestion of a single mouthful is not expected to cause significant harm.
NOTE: In all severe cases, contact physician immediately. Local telephone operators can furnish number of regional poison control center.

5. FIRE HAZARD

Conditions of flammability: Non-aerosol and aerosol: Ignition will occur if used near flames, arcs or other ignition sources.
Flash point: 2°F (-16°C) (Pensky-Martens closed cup).
Flammable limits in air: 2% to 15%.
Extinguishing media: Carbon dioxide, foam, water.
Special fire fighting procedures: Keep containers cool with water spray.
Hazardous combustion products: Soot, oxides of carbon.
Unusual fire hazards: Aerosol cans may burst over 130°F (54°C) and add to existing fire.

6. ACCIDENTAL RELEASE MEASURES

Turn off or remove sources of ignition. Mop up or sweep up with absorbent. (For disposal, see Section 13.)

7. HANDLING AND STORAGE

Avoid breathing vapors. Avoid eye contact. Avoid repeated or prolonged skin contact. Store away from heat source. Do not spray around arcs or flame.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Controls: Use where ventilation will carry vapors away from occupied areas.
Personal protection : Wear safety glasses to protect eyes. Wear nitrile rubber gloves if hand exposure is unavoidable. Respirator with filter if sprayed in enclosed, unventilated space.

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9. **PHYSICAL PROPERTIES**

<i>Initial boiling point (bulk):</i>	132° F (55°C) (ASTM D-86)	<i>Vapor pressure:</i>	Bulk: 150mm @ 100°F (38°C). Aerosol: 65 psi @ 75°F (24°C)
<i>Percent volatile:</i>	90%	<i>Vapor density:</i>	3
<i>Density/sp. gravity:</i>	0.87	<i>Evaporation rate:</i>	0.4 of ether
<i>Water solubility:</i>	90	<i>Appearance:</i>	White liquid
<i>pH:</i>	Neutral	<i>Odor:</i>	Alcohol odor

10. **STABILITY AND REACTIVITY**

<i>Stability:</i>	Stable
<i>Incompatibility:</i>	None
<i>Hazardous decomposition products:</i>	When burning, soot, oxides of carbon
<i>Reactivity:</i>	None

11. **TOXICOLOGICAL INFORMATION**

<i>Carcinogenicity:</i>	Contains no known or suspected carcinogens listed with OSHA, IARC, NTP, or ACGIH.
<i>Threshold limit value (Bulk):</i>	400 ppm
<i>WHMIS information (Canada):</i>	According to available information, the ingredients have not been found to show reproductive toxicity, teratogenicity, mutagenicity, skin sensitization, or synergistic toxic effects with other materials.

12. **ECOLOGICAL INFORMATION**

No data is available on SKD-S2.

13. **DISPOSAL**

Send to a licensed waste facility for proper disposal.	
<i>RCRA:</i>	Hazardous waste.
<i>U.S. EPA Waste Number:</i>	D001

14. **TRANSPORTATION (These are guidelines, in all cases refer to 49 CFR for proper classification)**

U.S. DOT: 49 CFR 172.101 Hazardous Materials Table

	<u>Non-Aerosol</u>	<u>Aerosol</u>
<i>Proper shipping name:</i>	Flammable Liquid, n.o.s. (Isopropanol, acetone)	Consumer commodity
<i>Hazard class or division:</i>	3	ORM-D
<i>Identification No.:</i>	UN1993	None
<i>Packing Group:</i>	II	None

IATA: List of Dangerous Goods

	<u>Non-aerosol</u>	<u>Aerosol</u>
<i>Proper shipping name:</i>	Flammable liquid, n.o.s. (Isopropanol, Acetone)	Aerosols, flammable
<i>Hazard class or division:</i>	3	2.1
<i>Identification No.:</i>	UN1993	UN1950
<i>Packing Group:</i>	II	-

IMDG: General Index

	<u>Non-aerosol</u>	<u>Aerosol</u>
<i>Proper shipping name:</i>	FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL, ACETONE)	AEROSOLS
<i>Hazard class or division:</i>	3.2	2.1
<i>Identification No.:</i>	UN1993	UN1950
<i>Packing Group:</i>	II	-

15. **REGULATORY INFORMATION**

<i>TSCA:</i>	All ingredients are listed in TSCA inventory.
<i>CERCLA:</i>	Reportable quantity (RQ) for Acetone = 5000 lbs.
<i>SARA TITLE III, Section 313:</i>	Acetone.
<i>California Proposition 65:</i>	This product contains trace amount of chemicals known to the State of California to cause cancer and to cause birth defects or other reproductive harm.
<i>WHMIS Class (Canada):</i>	Non-Aerosol: B-2, D-2B - Aerosol: A, B-5, D-2B
Note:	This MSDS has been prepared to meet WHMIS (Canada) requirements with the exception of using 16 headings.

16. **OTHER INFORMATION**

<i>Revision Statement:</i>	Review
<i>Supersedes:</i>	October 26, 2004
<i>Prepared by:</i>	Tamie Simmons, R&D Manager