

SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1. Identification

Product name : MFA-16 Magnetic Crack Detection Spray
Product code : CIRCLESAFE® 800A

1.2. Recommended Use of The Chemical and Restrictions on Use

Recommended Use : Non-destruction testing
Recommended Restrictions : None known.

1.3. Details of the supplier of the safety data sheet

Distributor : Goodson Manufacturing Company
156 Galewski Drive
Winona, MN 55987-0847 - USA
T 507-452-1830

1.4. Emergency telephone number

Emergency number : 800-924-6804 (24 hours)

SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

Flammable Aerosols : Category 1
Gases Under Pressure : Compressed Gas
STOT-Single Exposure : Category 3 Narcotic Effects
Aspiration Hazard : Category 1
Hazardous To Aquatic Environment : Category 2 Acute Hazard
OSHA Defined Hazards : Not Classified

2.2. Label elements

GHS-US labeling
Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : Extremely flammable aerosol. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. May cause drowsiness or dizziness. Toxic to aquatic life.

Precautionary statements (GHS-US) : Keep away from heat/sparks/open flames/hot surfaces. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing mist or vapor. Use only outdoors or in a well-ventilated area. Avoid release to the environment.

Response : If swallowed: Immediately call a poison center/doctor. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. Do NOT induce vomiting.

Storage : Store in a well-ventilated place. Keep containers tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal : Dispose of contents/containers in accordance with local/regional/national/international regulations.

2.3. Hazards Not Otherwise Classified

None known

SECTION 3: Composition/information on ingredients

Chemical Name	CAS Number	Wt. %
Distillates (Petroleum) Hydrotreated Light	0064742-47-8	> 95%
Carbon Dioxide	0000124-38-9	< 5%

SECTION 4: First Aid Measures

4.1. Description of Necessary First Aid Measures

- Inhalation : If symptoms develop move victim to fresh air. Call a POISON CONTROL CENTER or doctor/physician if you feel unwell.
- Skin Contact : Wash off with soap and water. Get medical attention if irritation develops and persists.
- Eye Contact : Rinse with water. Get medical attention if irritation develops and persists.
- Ingestion : Call a physician or poison control center immediately. Rinse mouth. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach contents does not get into lungs.

4.2. Most Important Symptoms/Effects, Acute and Delayed

- Symptoms : Diarrhea. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of eyes and mucous membranes. Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Skin irritation. High concentrations: Inhalation of propellant may cause respiratory irritation, dizziness, nausea or drowsiness.

4.3. Indication of Need for Immediate Medical Attention/Special Treatment

- Indications : Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

4.4. General Information

- General : Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Fire-Fighting Measures

- Suitable Extinguishing Media : Alcohol resistant foam. Water fog. Dry chemical powder. Dry chemicals. Carbon dioxide (CO₂).
- Unsuitable Extinguishing Media : Do not use water jet as an extinguisher as this will spread the fire.
- Specific Hazards Arise from Chemical : Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.
- Protective Equipment & Precautions For Fire-fighter : Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
- Fire-fighting Equipment/Instructions : Cool containers exposed to heat with water spray and remove container from fire area, if no risk is involved. Containers should be cooled with water to prevent vapor pressure build-up.
- Specific Methods : Move containers from fire area if you can do so without risk.
- General Fire Hazards : Extremely flammable aerosol.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

- Precautions : Keep unnecessary personnel away. Keep up-wind. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Local authorities should be advised if significant spillages cannot be contained.

6.2. Methods and Materials for Containment and Cleaning up

- Methods for cleaning up : Refer to Safety Data Sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. The product is immiscible with water and will spread on the water surface. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Use water spray to reduce vapors or divert vapor cloud drift. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place in containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.
- Small Spills : Wipe up with absorbent materials (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see Section 13.

6.3. Environmental Precautions

- Precautions : Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Inform appropriate managerial or supervisory personnel of all environmental releases.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling

- Precautions for Safe Handling : Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind or expose containers to heat, flame, sparks or other sources of ignition. Ground and bond containers when transferring material. Avoid inhalation of aerosols. Use only in well-ventilated areas. Do not reuse empty containers. Avoid breathing mist or vapor. Avoid prolonged or repeated contact with skin.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

- Cautions : Level 1 Aerosol
- Storage conditions : Do not handle or store near an open flame, heat or other sources of ignition. Protect from direct sunlight. Do not puncture, incinerate or crush. Store away from incompatible materials (see Section 10). Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122°F.

SECTION 8: Exposure Controls/Personal Protection

8.1. Occupational Exposure Limits

Component	CAS Number	OSHA*		ACGIH**		NIOSH***	
		PEL	STEL	TWA	STEL	TWA	
Carbon Dioxide	0000124-38-9	5000 ppm	30000 ppm	5000 ppm	54000 mg/m ³	30000 ppm 9000 mg/m ³ 5000 ppm	
Distillates (Petroleum) Hydrotreated Light	0064742-47-8					100mg/m ³	

* OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), **ACGIH Threshold Limit Values
 ***NIOSH Pocket Guide to Chemical Hazards

- Biological Limit Values : No biological exposure limits noted for the ingredient(s).

8.2. Appropriate Engineering Controls

- Engineering Controls : Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

8.3. Individual Protection Measures, Such as Personal Protective Equipment (PPE)

Eye/Face Protection	: Chemical respirator with organic vapor cartridge and full face piece.
Skin Protection	: Hand Protection: Wear appropriate chemical resistant gloves. Other: Wear suitable protective clothing.
Respiratory Protection	: Chemical respirator with organic vapor cartridge and full face piece.
Thermal Hazards	: Wear appropriate thermal protective clothing when necessary.
General Hygiene Considerations	: Do NOT smoke when using. Always observe good personal hygiene measures such as washing after handling the material and before eating, drinking or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

SECTION 9: Physical and Chemical Properties

9.1. Information on Basic Physical and Chemical Properties

Physical state	: Liquid
Form	: Aerosol can
Color	: Dark green
Odor	: Slight petroleum odor
Odor threshold	: Not available
pH	: Not available
Melting point / Freezing Point	: < -68°C 90.4°F) ASTM D-2386
Initial Boiling point / Boiling Range	: 239 to 276°C (464 to 528°F), ASTM D-86
Flash point	: 109°C (229°F), ASTM D 93
Evaporation rate	: Not available
Flammability (solid, gas)	: Not available
Lower Flammability Limit (%)	: 1.2%
Upper Flammability Limit (%)	: 6%
Lower Explosive Limit (%)	: Not available
Upper Explosive Limit (%)	: Not available
Vapor Pressure	: 0.02 mm Hg @ 20°C (68°F)
Vapor Density	: 6.7
Relative Density	: 0.821 at 15.5°C (60°F), ASTM D-4052
Solubility (water)	: Insoluble
Partition Coefficient; n-octanol/water	: Not available
Auto-ignition temperature	: 216°C (421°F), ASTM E 659
Decomposition temperature	: Not available
Viscosity	: Not available
VOC (Weight %)	: 815 to 821 g/l EPA Method 24

SECTION 10: Stability and reactivity

Reactivity	: Product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical Stability	: Material is stable under normal conditions.
Possibility of Hazardous Reactions	: No dangerous reactions known under conditions of normal use.
Conditions to Avoid	: Avoid temperatures exceeding the flash point. Avoid contact with incompatible materials. Avoid temperatures above 50°C (122°F).
Incompatible Materials	: Strong Oxidizing agents.
Hazardous decomposition products	: No hazardous decomposition products are known.

SECTION 11: Toxicological Information

11.1. Information on Likely Routes of Exposure

- Ingestion : Droplets of the product aspirated into the lungs through ingestions or vomiting may cause a serious chemical pneumonia. Expected to be a low ingestion hazard.
- Inhalation : May cause drowsiness and dizziness. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
- Skin Contact : May cause skin irritation.
- Eye Contact : May cause eye irritation.

11.2. Symptoms Related to the Physical, Chemical & Toxicological Characteristics

- Symptoms : Diarrhea. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Irritation of eyes and mucous membranes. Skin irritation. High concentrations: Inhalation of propellant may cause respiratory irritation, dizziness, nausea or drowsiness.

11.3. Information on Toxicological Effects

- Acute Toxicity : May be fatal if swallowed and enters airways. Narcotic effects.

Components	CAS Number	Dermal LD ₅₀	Inhalation LC ₅₀	Oral LD ₅₀
Distillates (Petroleum), Hydrotreated Light Test Results	0064742-47-8	Species: Rabbit > 2000 mg/kg bw	Species: Rat > 5.28 mg/l, 4 h	Species: Rat > 5000 mg/kg, bw

- Skin Corrosion/Irritation : Prolonged skin contact may cause temporary irritation.
- Serious Eye Damage/Irritation : Direct eye contact may cause temporary irritation.
- Respiratory Sensitization : Not a respiratory sensitizer.
- Skin Sensitization : This product is not expected to cause skin sensitization.
- Germ Cell Mutagenicity : No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
- Carcinogenicity : This product is not considered to be a carcinogen by IARC, ACGIH, NTP or OSHA.
- OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) : Not listed.
- Reproductive Toxicity : Not expected to be a reproductive hazard.
- STOT-Single Exposure : May cause drowsiness and dizziness.
- STOT-Repeated Exposure : Not classified.
- Aspiration Hazard : May be fatal if swallowed and enters airways.
- Chronic Effects : Prolonged inhalation may be harmful.

SECTION 12: Ecological Information

- Ecotoxicity : Toxic to aquatic life

Components	CAS Number	Test Result
Distillates (Petroleum), Hydrotreated Light	0064742-47-8	Fish: LL ₅₀ : Oncorhynchus mykiss 2-5 mg/l, 96 hours NOEC : Oncorhynchus mykiss 2 mg/l, 96 hours

- Persistence and Degradability : No data is available on the degradability of this product.
- Bioaccumulative Potential : No data available.
- Mobility in Soil : No data available.
- Other Adverse Effects : No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal Considerations

- Disposal Instructions : Contents under pressure. Do not puncture, incinerate or crush. Dispose of in accordance with all applicable regulations.
- Local Disposal Regulations : Dispose of in accordance with all applicable regulations.
- Hazardous Waste Code : The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
- Waste From Residues/Unused Product : Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see Disposal Instructions).
- Contaminated Package : Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14: Transport Information

	DOT	IATA	IMDG
UN Number	UN1950	UN1950	UN1950
UN Proper Shipping Name	Aerosols, Flammable, Limited Quantity	Aerosols, Flammable, Limited Quantity	Aerosols, Flammable, Limited Quantity
Transport Hazard Class(es)	2.1	2.1	2.1
Subsidiary Risk	—	—	—
Label(s)	2.1, Limited Quantity	2.1, Limited Quantity	2.1, Limited Quantity
Packaging Group	Y203	Y203	Not applicable
Environmental Hazards	—	No	—
Marine Pollutant	—	—	No
EmS	—	—	Not available
ERG Code	—	10L	—
Special Precautions for User	Read safety instructions, SDS and emergency procedures before handling.		
Packaging Exceptions	306	—	—
Packaging Non Bulk	None	—	—
Packaging Bulk	None	—	—
Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code	—	—	Not established

SECTION 15: Regulatory Information

15.1. US Federal Regulations

- Regulations : All components are on the U.S. EPA TSCA Inventory List. This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
- TSCA Section 12(b) Export Notification (40 CFR 707, Subpt D) : Not Regulated.
- OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) : Not listed.
- CERCLA Hazardous Substances List (40 CFR 302.4) : Not listed.

15.2. Superfund Amendments and Reauthorization Act of 1986 (SARA)

- Hazard Categories : Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

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SARA 302 Extremely Hazardous Substance : Not listed.
SARA 311/312 Hazardous Chemical : Yes.
SARA 313 (TRI Reporting) : Not regulated.

15.3. Other Federal Regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List : Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) : Not regulated.
Safe Drinking Water Act (SDWA) : Not regulated.

15.4. US State Regulations

Massachusetts RTK Substance List : Carbon Dioxide, CAS Number 0000124-38-9
Distillates (Petroleum), Hydrotreated Light, CAS Number 0064762-47-8
New Jersey Worker & Community Right-to-Know Act : Carbon Dioxide, CAS Number 0000124-38-9
Distillates (Petroleum), Hydrotreated Light, CAS Number 0064762-47-8
Pennsylvania RTK Hazardous Substances : Carbon Dioxide, CAS Number 0000124-38-9
Distillates (Petroleum), Hydrotreated Light, CAS Number 0064762-47-8
Rhode Island RTK : Not regulated
California Proposition 65 : WARNING: This product contains a chemical known to the State of California to cause cancer.
California Proposition 65 - Carcinogens and Reproductive Toxicity (CRT) - Listed Substance : Formaldehyde, CAS Number 0000050-00-0

15.5 International Inventories

Country or Region	Inventory Name	On Inventory (Yes/No)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemical List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
US & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirement administered by the governing country(s).

A "No" indicates that one or more components of this product are not listed or exempt from listing on the inventory administered by the governing country(s).

SECTION 16: Other Information

Issue Date : November 13, 2014
Revision Date : —
Further Information : NFPA Hazard Scale: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe
HMIS Hazard Scale: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe
*=Chronic
HMIS Rating : Health=2, Flammability=2, Physical Hazard=0

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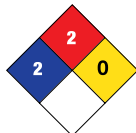
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NFPA Rating

:



List of Abbreviations

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LC₅₀: Lethal Concentration, 50%

LD₅₀: Lethal Dose, 50%

NOEC: No Observed Effect Concentration

STOT: Single Target Organ Toxicity

TWA: Time Weighted Average

References

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HSDB® - Hazardous Substances Data Bank

Disclaimer

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End of Safety Data Sheet