SAFETY DATA SHEET

1. Identification

<table>
<thead>
<tr>
<th>Product identifier</th>
<th>CIRCLESOL M™</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other means of identification</td>
<td>Not available.</td>
</tr>
<tr>
<td>Recommended use</td>
<td>Non-destructive testing.</td>
</tr>
<tr>
<td>Recommended restrictions</td>
<td>None known.</td>
</tr>
</tbody>
</table>

Manufacturer / Importer / Supplier / Distributor information

- **Company name**: Circle Systems, Inc.
- **Address**: 479 West Lincoln Ave.
P.O Box 1228
Hinckley, IL 60520
- **Telephone**: 815-286-3271
- **E-mail**: customerservice@circlesafe.com
- **Emergency phone number**: Chem-tel 800-255-3924 (US & Canada); +1-813-248-0585 (International)

2. Hazard(s) identification

Health hazards
Aspiration hazard
Category 1

Environmental hazards
Not classified.

OSHA defined hazards

Label elements

**Signal word**: Danger
**Hazard statement**: May be fatal if swallowed and enters airways.
**Precautionary statement**

**Prevention**: Keep away from heat/sparks/open flames/hot surfaces. - No smoking. 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 locked up.

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

Hazard(s) not otherwise classified (HNOC)
Not classified.

3. Composition/information on ingredients

**Mixtures**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum),</td>
<td>64742-47-8</td>
<td>100</td>
</tr>
<tr>
<td>Hydrotreated Light</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. First-aid measures

**Inhalation**: If symptoms develop move victim to fresh air. Call a POISON 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 content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed

Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

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

5. Fire-fighting measures

| Suitable extinguishing media | 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 arising from the chemical | During fire, gases hazardous to health may be formed. |
| Special protective equipment and precautions for firefighters | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| Fire-fighting equipment/instructions | Not applicable. |
| Specific methods | Not applicable. |
| General fire hazards | NFPA Class III B combustible liquid. |

6. Accidental release measures

| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. Keep upwind. 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. |
| Methods and materials for containment and cleaning up | Refer to attached 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 container 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 into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS. |
| Environmental 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. |

7. Handling and storage

| Precautions for safe handling | Do not smoke while using. 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. Use only in well-ventilated areas. Do not re-use empty containers. Avoid breathing mist or vapor. Avoid prolonged or repeated contact with skin. |
| Conditions for safe storage, including any incompatibilities | Ambient temperature and pressure. Do not handle or store near an open flame, heat or other sources of ignition. Store away from incompatible materials (see Section 10 of the SDS). |
8. Exposure controls/personal protection

Occupational exposure limits

US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), Hydrotreated Light (CAS 64742-47-8)</td>
<td>TWA</td>
<td>100 mg/m³</td>
</tr>
</tbody>
</table>

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate 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.

Individual protection measures, such as personal protective equipment

Eye/face protection

Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection

Hand protection: Wear appropriate chemical resistant gloves.
Other: Wear suitable protective clothing.

Respiratory protection

Respiratory protection is not normally required except in emergencies or when conditions cause excessive airborne levels of mist or vapors – then use a chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using, do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state: Liquid.
Form: Liquid.
Color: Water white.
Odor: Slight petroleum odor.
Odor threshold: Not available.
pH: Not available.
Melting point/freezing point: < -68°C, < -90°F
Initial boiling point and boiling range: 239-276°C, 464-528°F
Flash point: 109 °C (229 °F)
Evaporation rate: Not available.

Flammability (solid, gas)

Flammability limit – lower (%): 1.2%
Flammability limit – upper (%): 6%
Explosive limit – lower (%): Not available.
Explosive limit – upper (%): Not available.

Vapor pressure: 0.02 mm Hg @ 20 °C (68°F)
Vapor density: 6.7

Solubility(ies)

Solubility (water): Insoluble.
Partition coefficient (n-octanol/water): Not available.
Auto-ignition temperature: 216°C, 421°F
10. Stability and reactivity

Reactivity
The 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 reaction known under conditions of normal use.

Conditions to avoid
Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials
Strong oxidizing agents.

Hazardous decomposition products
No hazardous decomposition products are known. Hazardous gases and vapors produced in fire are oxides of carbon.

11. Toxicological information

Information on likely routes of exposure

Ingestion
Droplets of the product aspirated into the lungs through ingestion 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
Causes eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Information on toxicological effects

Acute toxicity
May be fatal if swallowed and enters airways. Narcotic effects.

Components

<table>
<thead>
<tr>
<th>Species</th>
<th>Test Results</th>
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<tbody>
<tr>
<td>Rabbit</td>
<td>&gt; 2000 mg/kg, bw</td>
</tr>
<tr>
<td>Rat</td>
<td>&gt; 5.28 mg/l, 4 hours</td>
</tr>
<tr>
<td>Rat</td>
<td>&gt; 5000 mg/kg, bw</td>
</tr>
</tbody>
</table>

Distillates (petroleum), Hydrotreated Light (CAS 64742-47-8)

Acute

Dermal
LD50
Rabbit
> 2000 mg/kg, bw

Inhalation
LC50
Rat
> 5.28 mg/l, 4 hours

Oral
LD50
Rat
> 5000 mg/kg, bw

Skin corrosion/irritation
Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation
Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

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.

Specific target organ toxicity – single exposure
May cause drowsiness and dizziness.

Specific target organ toxicity – repeated exposure
Not classified.

Aspiration hazard
May be fatal if swallowed and enters airways.

Chronic effects
Prolonged inhalation may be harmful.
12. Ecological information

Ecotoxicity: Toxic to aquatic life.

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.

13. Disposal considerations

Disposal instructions: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Waste from residues / unused products: 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).

14. Transport information

DOT: Not regulated.

IATA: Not regulated.

IMDG: Not regulated.

15. Regulatory information

US federal regulations: This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt D): Not regulated.


SARA 302 Extremely hazardous substance: Not listed.

SARA 311/312 Hazardous chemical: No.

SARA 313 (TRI reporting): Not regulated.

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.


US state regulations: US Massachusetts RTK - Substance List: Distillates (petroleum), Hydrotreated Light (CAS 64742-47-8).
US New Jersey Worker and Community Right-to-Know Act
Distillates (petroleum), Hydrotreated Light (CAS 64742-47-8)

US Pennsylvania RTK - Hazardous Substances
Distillates (petroleum), Hydrotreated Light (CAS 64742-47-8)

US Rhode Island RTK
Not regulated.

US California Proposition 65
WARNING: This product does not contain chemicals known to the State of California to cause cancer.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance
None.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDLS)</td>
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<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
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<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
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<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
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<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
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<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
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<td>New Zealand</td>
<td>New Zealand Inventory</td>
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<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
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<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

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

16. Other information, including date of preparation or last revision

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Issue date</td>
<td>11-November-2014</td>
</tr>
<tr>
<td>Revision date</td>
<td>14-December-2017</td>
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<td>Version #</td>
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<td>HMIS® ratings</td>
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</table>

List of abbreviations
LC50: Lethal Concentration, 50%.
LD50: Lethal Dose, 50%.
TWA: Time weighted average

References
HSDB® - Hazardous Substances Data Bank

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