

# SAFETY DATA SHEET

Rite, Laundry Sour

EM SYSTEMS INC.

Revision Date: November 7, 2014

## SECTION 1: IDENTIFICATION

### Product Identifier:

**Product Name:** Rite, Laundry Sour

### Recommended Use of the Chemical and Restrictions on Use

**Recommended Use:** Laundry Product.

### Details of the Supplier of the Safety Data Sheet

**Supplier Address:** E.M. Systems, Inc. 1931 West 2425 South Woods Cross, UT 84087

### Emergency Telephone Number

**Company Phone Number:** 801-292-8051

**Emergency Telephone:** CHEMTREC: 1-800-424-9300

## SECTION 2: HAZARDS IDENTIFICATION

### **GHS Classification:**

Skin corrosion	Category 1
Serious eye damage	Category 1
Eye Irritation	Category 1

### **GHS Label element:**

**Signal Word:** Danger

### **Symbol:**



**Hazard statements:** Causes severe skin burns and eye damage.

### Precautionary Statements:

**Prevention:** Wear protective gloves. Wear eye or face protection. Wear protective clothing. Wash hands thoroughly after handling.

**Response:** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

**Storage:** No other specific measures identified.

**Disposal:** See section 13 for waste disposal information

**Other Hazards:** None Known.

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## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Product AS SOLD, Pure substance or Mixture: <u>Mixture</u>		
Chemical Name	CAS No	Concentration-%
formic acid	64-18-6	10-30%
citric acid	77-92-9	1-5%

Hazardous Ingredients:

## SECTION 4: FIRST AID MEASURES

### Product AS SOLD:

<b>Eye contact:</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
<b>Skin contact:</b>	Take off immediately all contaminated clothing. Rinse skin with water or shower. Get medical attention immediately. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Swallowed:</b>	Get medical attention immediately. Rinse mouth. Do not induce vomiting.
<b>Inhalation:</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately.
<b>Protection of first-aiders:</b>	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
<b>Notes to physician :</b>	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled..

### Product AT USE DILUTION:

<b>Eye contact:</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
<b>Skin contact:</b>	Take off immediately all contaminated clothing. Rinse skin with water or shower. Get medical attention immediately. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Swallowed:</b>	Get medical attention immediately. Rinse mouth. Do not induce vomiting.
<b>Inhalation:</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately.

**See toxicology information (Section 11)**

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## SECTION 5: FIRE-FIGHTING MEASURES

### Suitable fire extinguishing

**Media:** Use water spray, fog or foam.

### Specific hazards arising

**From the chemical:** In a fire or if heated, a pressure increase will occur and the container may burst.

### Hazardous thermal

**Decomposition products:** Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides

### Specific fire-fighting

**Methods:** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

### Special protective

**equipment for fire-fighters:** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

	<b>Product: AS SOLD</b>	<b>Product: AT USE, DILUTION</b>
<b>Personal Precautions</b>	Initiate company's spill response procedures immediately. Keep people out of area. Put on appropriate personal protective equipment (see section 8). Do not touch or walk through spilled material.	Initiate company's spill response procedures immediately. Keep people out of area. Put on appropriate personal protective equipment (see section 8). Do not touch or walk through spilled material.
<b>Environmental Precautions</b>	Avoid contact of spilled material and runoff with soil and surface waterways.	Avoid contact of spilled material and runoff with soil and surface waterways.
<b>Methods for Cleaning up</b>	Follow company's spill procedures. Keep people away from spill. Put on appropriate personal protective equipment (see section 8). Absorb/neutralize liquid material. Use a tool to scoop up solid or absorbed material and put into appropriate labeled container. Use a tool to scoop up solid or absorbed material and place into appropriate labeled waste container. Use a water rinse for final clean-up.	Follow company's spill procedures. Keep people away from spill. Put on appropriate personal protective equipment (see section 8). Absorb/neutralize liquid material. Use a tool to scoop up solid or absorbed material and put into appropriate labeled container. Use a tool to scoop up solid or absorbed material and place into appropriate labeled waste container. Use a water rinse for final clean-up.

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## SECTION 7: HANDLING AND STORAGE

	Product: AS SOLD	Product: AT USE, DILUTION
Handling	Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Use only with adequate ventilation. Wash thoroughly after handling.	Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Use only with adequate ventilation. Wash thoroughly after handling.
Storage	Keep out of reach of children. Keep container tightly closed.  Store between the following temperatures: 0 and 50°C	Keep out of reach of children. Keep container tightly closed.

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control Parameters:

Ingredient Name:	CAS-No.	Form of Exposure	Permissible Concentration	Basis
Formic Acid	64-18-6	TWA	5 ppm	ACGIH
		STEL	10 ppm	ACGIH
		TWA	5 ppm 9mg/m3	NIOSH REL
		TWA	5 ppm 9 mg/m3	OSHA z1

	Product: AS SOLD	Product: AT USE, DILUTION
Appropriate engineering controls	Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard	Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

### Personal Protection:

**Eye Protection:** Use chemical splash goggles. For continued or severe exposure wear a face shield over the goggles.

**Hand protection:** Use chemical-resistant, impervious gloves.

**Skin protection:** Use synthetic apron, or protective equip. as necessary to prevent skin contact.

**Respiratory:** A respirator is not needed under normal and intended conditions of product use.

**Protection**

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**Hygiene measures:** Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b> Liquid	<b>Odor:</b> Floral
<b>Color:</b> Green	<b>pH:</b> 0.9 to 1, 100%
<b>Flash point:</b> >100°C	<b>Boiling point:</b> >100°C (>212°F)
<b>Odor Threshold:</b> No data available	<b>Melting point/freezing point:</b> No data available
<b>Initial boiling point:</b> No data available	<b>Evaporation rate:</b> any data available
<b>Flammability (solid, gas) :</b> No data available	<b>Upper explosion limit :</b> No data available
<b>Lower explosion limit :</b> No data available	<b>Vapor pressure :</b> No data available
<b>Relative vapor density:</b> No data available	<b>Relative density:</b> 1.06 (Water =1)
<b>Solubility:</b> Easily soluble in the following materials: cold water and hot water.	<b>Partition coefficient:</b> No data available
<b>Solubility in other solvents:</b> No data available	<b>Thermal decomposition :</b> No data available
<b>Autoignition temperature :</b> No data available	<b>VOC :</b> No data available
<b>Viscosity, kinematic :</b> No data available	<b>Oxidizing properties :</b> No data available
<b>Explosive properties :</b> No data available	
<b>Molecular weight :</b> No data available	

## SECTION 10: STABILITY AND REACTIVITY

<b>Chemical stability:</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid:</b>	None known.
<b>Materials to avoid:</b>	Slightly reactive or incompatible with the following materials: organic materials, metals, acids, alkalis and moisture.
<b>Hazardous decomposition products:</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Likely Routes of Exposure

#### **Product Information: Potential Health Effects**

<b>Inhalation:</b>	Avoid inhalation of vapors, or mist, may cause nose, throat, and lung irritation.
<b>Eye Contact:</b>	Causes serious eye damage.
<b>Skin Contact:</b>	Causes severe skin burns.
<b>Ingestion:</b>	Do not taste or swallow. Causes digestive tract burns.

#### **Product Information: Experience with human exposure.**

<b>Eye contact:</b>	Redness, Pain, Corrosion
<b>Skin contact:</b>	Redness, Pain, Corrosion
<b>Ingestion:</b>	Corrosion, Abdominal pain
<b>Inhalation:</b>	Respiratory irritation, Cough

#### **Toxicity data:**

**Product/ingredient name:** Not applicable

Product/ingredient	Result LC50	Species	Dose
Citric Acid	ORAL	RAT	11,700 mg/kg

#### **Chronic toxicity:**

**Carcinogenicity:** No known significant effects or critical hazards.

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**Mutagenicity:** No known significant effects or critical hazards  
**Teratogenicity:** No known significant effects or critical hazards  
**Developmental effects:** No known significant effects or critical hazards  
**Fertility effects:** No known significant effects or critical hazards

## SECTION 12: ECOLOGICAL INFORMATION

**Ecotoxicity:** This material is harmful to aquatic life.

### Aquatic and terrestrial toxicity

Product/ingredient name	Result	Species	Exposure
Formic Acid	> 100 mg/l	Fish	96 Hours
Citric Acid	> 100 mg/l	Fish	96 Hours

**Other Adverse effects:** No known significant effects or critical hazards.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Disposal methods:** Avoid disposal. Attempt to use product completely in accordance with intended use. Disposal should be in accordance with applicable regional, national and local laws and regulations.

**RCRA Classification:** Unused product is D002 (Corrosive)

## SECTION 14: TRANSPORT INFORMATION

*Certain shipping modes or package sizes may have exceptions from the transport regulations. The classification provided may not reflect those exceptions and may not apply to all shipping modes or package sizes.*

### **Land transport (DOT)**

UN number: 3412  
Description of the goods: Formic Acid (II)  
Class: 8  
Packing group: II  
Environmentally hazardous: No

### **Sea transport (IMDG/IMO)**

UN number: 3412  
Description of the goods: Formic Acid (II)  
Class: 8  
Packing group: II  
Marine pollutant: No

## SECTION 15: REGULATORY INFORMATION

### **U.S. Federal regulations**

#### **CERCLA Reportable Quantity**

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Formic Acid	64-18-6	5000	42735

**SARA311/312:** Acute Health Hazard

**SARA 302/304 extremely hazardous substances:** No listed substance

**SARA 302/304 emergency planning and notification:** No listed substance

SARA 313	Product name	CAS number	Concentration
Sara Title III, Sec. 313	Formic Acid	64-18-6	11.7%
California Prop. 65	No listed substance	-	-

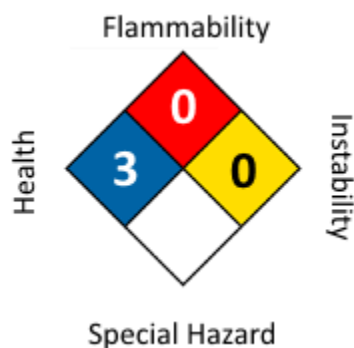
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## SECTION 16: OTHER INFORMATION



### HMIS III:

**HEALTH**

**3**

**FLAMMABILITY**

**0**

**PHYSICAL HAZARD**

**0**

0 = not significant, 1 = Slight, 2 = Moderate,  
3 = High, 4 = Extreme, \* = Chronic

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of publication. The information is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet