

01903 01904 - Stop Solution

Revision Date 10-Dec-2018 Revision Number 2

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name Stop Solution

Other means of identification

Catalog Number 01903 01904

Document Number DX21508

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory reagent

STEMCELL TECHNOLOGIES INC.'S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485. PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Details of the supplier of the safety data sheet

Manufacturer/Supplier

STEMCELL Technologies Canada Inc. Suite 500 - 1618 Station Street Vancouver, British Columbia V6A 1B6 Canada

Emergency telephone number

Emergency Telephone 1-800-667-0322

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| Skin corrosion/irritation | Category 2 |
|-----------------------------------|-------------|
| Serious eye damage/eye irritation | Category 2A |
| Carcinogenicity | Category 1A |

Hazards not otherwise classified (HNOC)

Not applicable

Label elements



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Danger

Hazard statements

Causes skin irritation Causes serious eye irritation May cause cancer



Appearance Clear

Physical state Liquid

Odor No information available

Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/protective clothing/eye protection/face protection

Wash face, hands and any exposed skin thoroughly after handling

Precautionary statements - Response

IF exposed or concerned: Get medical advice/attention

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

IF ON SKIN: Wash with plenty of water and soap

If skin irritation occurs: Get medical advice/attention

Take off contaminated clothing and wash it before reuse

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Information

Not applicable

Unknown acute toxicity

1.76544 % of the mixture consists of ingredient(s) of unknown toxicity

- 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 1.76544 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 1.76544 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
- 1.76544 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)



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3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

| Chemical name | CAS No. | Weight-% |
|---------------|-----------|----------|
| Sulfuric Acid | 7664-93-9 | 1.76544 |

^{*}The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the

doctor in attendance.

Inhalation Remove to fresh air. Get medical attention immediately if symptoms occur.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep

eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Do not rub affected area.

Skin contact Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical

attention if irritation develops and persists.

Ingestion Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth

to an unconscious person. Do NOT induce vomiting. Call a physician.

Self-protection of the first aider Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation.

Indication of any immediate medical attention and special treatment needed

5. FIRE-FIGHTING MEASURES



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surrounding environment.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the

chemical

No information available.

Explosion data

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

Special protective equipment for

fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal

protective equipment as required.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with

skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off

contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities



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Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---------------|-------------------------|------------------------------------|----------------------------|
| Sulfuric Acid | TWA: 0.2 mg/m³ thoracic | TWA: 1 mg/m ³ | IDLH: 15 mg/m ³ |
| 7664-93-9 | particulate matter | (vacated) TWA: 1 mg/m ³ | TWA: 1 mg/m ³ |

Appropriate engineering controls

Engineering controls Showers

Eyewash stations Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection If splashes are likely to occur, wear safety glasses with side-shields.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are

exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and

immediately after handling the product. Wear suitable gloves and eye/face protection. Avoid

contact with skin, eyes or clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid Appearance Clear

ColorNo information availableOdorNo information availableOdor thresholdNo information available



None known

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Property Values Remarks • Method

No data available None known Hq Melting point / freezing point No data available None known Boiling point / boiling range No data available None known Flash point None known No data available **Evaporation rate** No data available None known No data available Flammability (solid, gas) None known

Flammability Limit in Air
Upper flammability limit: No data available

Lower flammability limit: No data available

No data available

Vapor pressure No data available None known Vapor density No data available None known No data available Relative density None known No data available Water solubility None known None known Solubility in other solvents No data available None known No data available **Partition coefficient** No data available None known **Autoignition temperature** None known **Decomposition temperature** No data available No data available Kinematic viscosity None known None known

Dynamic viscosity

Explosive properties

Oxidizing properties

No data available
No information available
No information available

Other Information

Softening point
Molecular weight
Molecular formula
VOC Content (%)
Liquid Density
No information available

10. STABILITY AND REACTIVITY

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Conditions to avoidNone known based on information supplied.

Incompatible materials Strong acids. Strong oxidizing agents.

Hazardous decomposition products None known based on information supplied.

11. TOXICOLOGICAL INFORMATION



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Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. May cause irritation of

respiratory tract.

Eye contact Specific test data for the substance or mixture is not available. Irritating to eyes. (based on

components). Causes serious eye irritation.

Skin contact Specific test data for the substance or mixture is not available. Causes skin irritation. (based

on components).

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause

gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Redness. May cause redness and tearing of the eyes.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (inhalation-dust/mist) 14.44 mg/l

Unknown acute toxicity

1.76544 % of the mixture consists of ingredient(s) of unknown toxicity

- 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 1.76544 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 1.76544 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
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Component Information

| | Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---------------|--------------------|-------------|-----------------------|
| Г | Sulfuric Acid | = 2140 mg/kg (Rat) | - | = 510 mg/m³ (Rat) 2 h |
| | 7664-93-9 | | | - |

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritationClassification based on data available for ingredients. Irritating to skin.

Serious eye damage/eye irritation Classification based on data available for ingredients. Irritating to eyes.

Respiratory or skin sensitization No information available.



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Germ cell mutagenicity

No information available.

Carcinogenicity Classification based on data available for ingredients.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name | ACGIH | IARC | NTP | OSHA |
|---------------|-------|---------|-------|------|
| Sulfuric Acid | A2 | Group 1 | Known | X |
| 7664-93-9 | | , | | |

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposureNo information available.

Target organ effects Respiratory system, Eyes, Skin, Teeth.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

| Chemical name | Algae/aquatic plants | Fish | Toxicity to | Crustacea |
|---------------|----------------------|----------------------|----------------|---------------------|
| | | | microorganisms | |
| Sulfuric Acid | - | LC50: >500mg/L (96h, | - | EC50: =29mg/L (24h, |
| 7664-93-9 | | Brachydanio rerio) | | Daphnia magna) |

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

products

Waste from residues/unused

Dispose of in accordance with local regulations. Dispose of waste in accordance with

environmental legislation.

Contaminated packaging Do not reuse empty containers.



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California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

| Chemical name | California Hazardous Waste Status |
|---------------|-----------------------------------|
| Sulfuric Acid | Toxic |
| 7664-93-9 | Corrosive |

14. TRANSPORT INFORMATION

Not regulated DOT **TDG** Not regulated Not regulated **MEX** Not regulated ICAO (air) Not regulated IATA IMDG Not regulated RID Not regulated Not regulated ADR ADN Not regulated

15. REGULATORY INFORMATION

International Inventories

Complies **TSCA DSL/NDSL** Complies **EINECS/ELINCS** Complies Does not comply **ENCS IECSC** Complies **KECL** Complies **PICCS** Complies **AICS** Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances



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AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard Yes
Chronic Health Hazard Yes
Fire hazard No
Sudden release of pressure hazard No
Reactive Hazard No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

| Chemical name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|----------------------------|--------------------------------|------------------------|---------------------------|-------------------------------|
| Sulfuric Acid 7664-93-9 | 1000 lb | - | - | Х |

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

| Chemical name | Hazardous Substances RQs | Extremely Hazardous Substances RQs |
|---------------|--------------------------|------------------------------------|
| Sulfuric Acid | 1000 lb | 1000 lb |
| 7664-93-9 | | |

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

| Chemical name | California Proposition 65 |
|---------------------------|---------------------------|
| Sulfuric Acid - 7664-93-9 | Carcinogen |

U.S. State Right-to-Know Regulations

US State Regulations

| Chemical name | New Jersey | Massachusetts | Pennsylvania |
|--------------------|------------|---------------|--------------|
| Water 7732-18-5 | - | - | Х |
| Sulfuric Acid | X | X | X |



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7664-93-9

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Prepared By, Quality Control. STEMCELL Technologies Canada Inc.

Revision Date 10-Dec-2018

Revision NoteNo information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a 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. STEMCELL Technologies Inc. shall not be held liable for any damage resulting from handling or from contact with the product.

End of Safety Data Sheet