

HUMAN RECOMBINANT M-CSF, ACF EFFECTIVE DATE: 2017-04-10

1 Product and Company Identification

1.1 Product Name: Human Recombinant M-CSF, ACF

1.2 Catalog Number: 78150, 78150.1, 78150.2

1.3 Product Use: Cell Culture

1.4 Manufacturer/Supplier: STEMCELL Technologies

Suite 500-1618 Station Street

Vancouver, British Columbia V6A 1B6 Canada

1.5 In Case of Emergency Call: 1-800-667-0322

2 Hazards Identification

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS).

2.2 Label elements

Not a hazardous substance or mixture.

2.3 Other hazards No data available

3 Composition / Information on Ingredients

3.1 Mixtures

No components need to be disclosed according to the applicable regulations.

4 First Aid Measures

4.1 Description of first aid measures

4.1.1 If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

4.1.2 In case of skin contact

Wash off with soap and plenty of water.

4.1.3 In case of eye contact

Flush eyes with water as a precaution.

4.1.4 If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 2.2 and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

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Safety Data Sheet

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5 Fire Fighting Measures

5.1 Extinguishing Media

5.1.1 Suitable Extinguishing Media

Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.

5.1.2 Unsuitable Extinguishing Media

No data available

5.2 Special hazards arising from the substance or mixture

5.2.1 Flammable Properties and Hazards

No data available

5.2.2 Flash Pt

No data available

5.2.3 Autoignition Pt

No data available

5.2.4 Explosive Limits

LEL: No data available UEL: No data available

5.2.5 Hazardous Combustion Products

No data available

5.3 Fire Fighting Instructions

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation.

For personal protection see section 8.

6.2 Environmental precautions

No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

7 Handling and Storage

7.1 Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

7.2 Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

8 Exposure Controls/Personal Protection

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8.1 Exposure limits

Contains no substances with occupational exposure limit values.

8.2 Engineering controls

Use mechanical exhaust or laboratory fumehood to avoid exposure.

8.3 Personal protective equipment

8.3.1 Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

8.3.2 Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

8.3.3 Respiratory protection

Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Lyophilized white powder

8.3.4 General hygiene considerations

General industrial hygiene practice.

8.3.5 Environmental exposure controls

No data available

9 Physical and Chemical Properties

Appearance

1 Information on basic physical and chemical properties

Odour No data available
Odour threshold No data available
pH No data available
Melting point/freezing point No data available

Melting point/freezing point No data available Boiling point/boiling range No data available Flash point No data available Evaporation rate No data available Flammability (solid, gas) No data available Upper/lower flammability or explosive limits No data available Vapour pressure No data available Vapour density No data available Relative density No data available Solubility No data available Partition coefficient: n-octanol/water No data available

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Auto-ignition temperature

Decomposition temperature

Viscosity

No data available

No data available

No data available

10 Stability and Reactivity

10.1 Reactivity
 10.2 Chemical stability
 10.3 Possibility of hazardous reactions
 10.4 Conditions to avoid
 10.5 Incompatible materials
 10.6 Hazardous decomposition products
 No data available
 No data available
 No data available

11 Toxicological Information

11.1 Acute toxicity

Oral: No data available
Inhalation: No data available
Dermal: No data available
Other: No data available

11.2 Skin corrosion/irritation

No data available

11.3 Serious eye damage/eye irritation

No data available

11.4 Respiratory and/or skin sensitization

No data available

11.5 Germ cell mutagenicity

No data available

11.6 Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is

identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is

identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is

identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is

identified as a carcinogen or potential carcinogen by OSHA.

11.7 Reproductive toxicity

No data available

11.8 Specific target organ toxicity - single exposure

No data available

11.9 Specific target organ toxicity - repeated exposure

No data available

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11.10 Aspiration hazard

No data available

11.11 Potential health effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion: May be harmful if swallowed.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

11.12 Signs and symptoms of exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

11.13 RTECS # No data available

12 Ecological Information

12.1 Toxicity
 No data available
12.2 Persistence and degradability
 No data available
 No data available

13 Disposal Considerations

13.1 Waste disposal method

Offer surplus and non-recyclable solutions to a licensed disposal company.

13.2 Contaminated packaging

Dispose of as unused product.

14 Transport Information

14.1 UN number No data available

14.2 UN proper shipping name DOT Not dangerous goods

ADR/RID Not dangerous goods IMDG Not dangerous goods IATA Not dangerous goods

14.3 Transport hazard class(es) No data available

14.4 Packing group No data available

14.5 Environmental hazards No data available

14.6 Special precautionsNo data available

15 Regulatory Information

15.1 USA

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No data available

15.2 EU

This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

15.3 Canada

Not WHMIS controlled

This SDS was prepared in accordance with Hazardous Products Regulations (HPR) and WHMIS 2015.

16 Other Information

16.1 Prepared by: Quality Control, STEMCELL Technologies Inc.

16.2 Revision: 1_0_0

16.3 Notice: The above information is believed to be correct but does not purport to be all

> inclusive and shall be used only as a guide. STEMCELL Technologies Inc. shall not be held liable for any damage resulting from handling or from contact with the product. The information contained in this Safety Data Sheet (SDS) is current as of the Effective Date shown in this document and may be subject to

amendment by STEMCELL Technologies Inc.

16.4 Disclaimer: THIS PRODUCT IS FOR RESEARCH USE ONLY. NOT INTENDED FOR

HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES.