1 Product and Company Identification

1.1 Product Name: Y-27632 (Dihydrochloride)
1.2 Catalog Number: 72302, 72304, 72305, 72308
1.3 Synonyms: 4-[[1R]-1-aminooethyl]-N-4-pyridinyl-trans-cyclohexanecarboxamide, dihydrochloride
1.4 Product Use: Rho/ROCK pathway inhibitor; inhibits ROCK
1.5 Manufacturer/Supplier: STEMCELL Technologies Inc.
   Suite 400, 570 West 7th Avenue
   Vancouver, BC V5Z 1B3
   Canada
1.6 In Case of Emergency Call: 604-877-0713
1.7 Date Effective: February 4, 2015
1.8 Prepared By: Quality Control

2 Composition / Information on Ingredients

2.1 Component | CAS No.     | %W/W
Y-27632 (Dihydrochloride)  | 129830-38-2  | 100

3 Hazards Identification

3.1 Emergency Overview: This product is harmful if inhaled or swallowed and is harmful in contact with skin. This product may cause eye, skin or respiratory system irritation. The toxicological properties of this product have not been fully evaluated.
3.2 Routes of Exposure: Absorbed through skin, eye contact, inhalation, and ingestion.
3.3 Potential Health Effects:
   3.3.1 Eye: May cause eye irritation.
   3.3.2 Skin: Harmful if absorbed through skin. May cause skin irritation.
   3.3.3 Inhalation: Toxic if inhaled. May cause respiratory tract irritation.
   3.3.4 Ingestion: Harmful if swallowed.
3.4 Chronic Effects/Carcinogenicity: Not Available
3.5 OSHA Regulatory Status: Toxic by inhalation, Harmful by ingestion, Harmful by skin absorption.

4 First Aid Measures

4.1 Eyes: In case of contact with eyes, hold eyelids apart and flush thoroughly with water for at least 20 minutes. Call a physician.
4.2 Skin: In case of contact with skin, wash the affected area immediately with soap and copious amounts of water for at least 20 minutes. Remove contaminated clothing. Call a physician.
4.3 Ingestion: If swallowed, wash out mouth with water provided person is conscious. Call a physician. Do not induce vomiting unless directed to do so by medical personnel.
4.4 Inhalation: If inhaled, remove person to fresh air. If not breathing, give artificial respiration. Call a physician.

4.5 Puncture Wounds: Wash thoroughly with soap and water. Allow to bleed freely. Call a physician.

4.6 Note to Physician: Not Available

5 Fire Fighting Measures

5.1 Flash Point/Method: Not Available

5.2 Explosive Limits:
   5.2.1 Upper: Not Available
   5.2.2 Lower: Not Available

5.3 Autoignition Temperature: Not Available

5.4 Hazardous Combustion Products: Hazardous decomposition products formed under fire conditions: Carbon oxides, nitrogen oxides (NOx), hydrogen chloride gas

5.5 Conditions of Flammability: Not Available

5.6 Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water or dry chemical spray.

5.7 Fire Fighting Procedures: Not Available

5.8 Explosion Data:
   5.8.1 Sensitivity to Mechanical Impact: Not Available
   5.8.2 Sensitivity to Static Discharge: Not Available

6 Accidental Release Measures

6.1 Leak and Spill Procedure: Use personal protective equipment as conditions warrant. Avoid raising and breathing dust and provide adequate ventilation. Take steps to avoid release into the environment if safe to do so. Transfer to a chemical waste container for disposal in accordance with local regulations.

7 Handling and Storage

7.1 Handling: Should be handled by trained personnel observing good laboratory practices. Avoid contact with eyes and skin. Avoid formation of dust and aerosols. Avoid prolonged or repeated exposure. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Storage: Store at -20°C. Keep container tightly closed.

8 Exposure Controls / Personal Protection

8.1 Engineering Controls: Use mechanical exhaust or laboratory fumehood to avoid exposure.

8.2 Personal Protective Equipment:
   8.2.1 Respiratory Protection: Respirator that meets CAN/CSA Z94.4-93 (R1997) or NIOSH approved respirator, as conditions warrant.
   8.2.2 Eye Protection: Safety glasses.
8.2.3 Skin Protection: Lab coat, compatible chemical-resistant gloves.

8.3 General Hygiene Considerations: Wash hands after use. Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.

8.4 Exposure Limits:
8.4.1 ACGIH TLV-TWA: Not Available
8.4.2 OSHA PEL-TWA: Not Available

9 Physical / Chemical Properties
9.1 Appearance: A crystalline solid
9.2 Odor: Not Available
9.3 Physical State: Solid
9.4 pH: Not Available
9.5 Boiling Point: Not Available
9.6 Melting Point: Not Available
9.7 Freezing Point: Not Available
9.8 Vapor Pressure: Not Available
9.9 Vapor Density: Not Available
9.10 Specific Density: Not Available
9.11 Evaporation Rate: Not Available
9.12 Solubility in Water: ~10 mg/mL in PBS (pH 7.2); ~5 mg/mL in EtOH; ~20 mg/mL in DMSO; ~30 mg/mL in DMF
9.13 Odor Threshold: Not Available
9.14 Coefficient of Water/Oil Distribution: Not Available

10 Stability / Reactivity
10.1 Chemical Stability: Stable
10.2 Conditions to Avoid: Not Available
10.3 Incompatibility (Material to Avoid): Strong oxidizing agents
10.4 Hazardous Decomposition/By-Products: Hazardous decomposition products formed under fire conditions - Carbon dioxide, carbon monoxide, nitrogen oxides, hydrogen chloride gas
10.5 Hazardous Polymerization: Will not occur

11 Toxicological Information
11.1 Effects of Short-Term Exposure: Not Available
11.2 Effects of Long-Term Exposure: Not Available
11.3 Irritancy of Product: Not Available
11.4 Sensitization to Product: Not Available
11.5 Carcinogenicity: Not Available
11.6 Reproductive Toxicity: Not Available
11.7 Teratogenicity and Embryotoxicity: Not Available
11.8 Mutagenicity: Not Available
11.9 Name of Toxicologically Synergistic Products: Not Available
11.10 LD50 (specify species and route): Not Available
11.11 LC50 (specify species): Not Available

12 Ecological Information
12.1 Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

13 Disposal Considerations
13.1 Waste Disposal Method: Disposal should be in accordance with existing practices at your institution. Observe all Federal, Provincial/State and Local Laws.

14 Transport Information
14.1 Transport Canada
14.1.1 PIN No.: Not Available
14.2 U.S. Department of Transportation:
14.2.1 Proper Shipping Name: Not Available
14.2.2 Hazard Class: This substance is not known to be hazardous for transport.
14.2.3 ID. Number: Not Available
14.2.4 Packing Group: Not Available
14.2.5 Label Statement: Not Available

15 Regulatory Information
15.1 WHMIS Classification: D1B
15.2 Note: This MSDS was prepared according to the Canadian Controlled Products Regulation and contains all the information required by those regulations.

16 Other Information
16.1 Preparation Information: Refer to PIS No. 72302, 72304, 72305, 72308
16.2 This MSDS has been revised in the following section(s): 1.2, 16.1
16.3 Original Issue Date: June 5, 2014
16.4 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 Material Safety Data Sheet (MSDS) is current as of the Date Prepared shown in Section 1.7 of this document and may be subject to amendment by STEMCELL Technologies Inc.
16.5 Disclaimer: THIS PRODUCT IS FOR RESEARCH USE ONLY. NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES.