

**MATERIAL SAFETY DATA SHEET****SECTION 1. CHEMICAL IDENTIFICATION****CATALOG/PRODUCT#:** CN06**NAME:** Rho PATHWAY INHIBITOR I, Rho KINASE (ROCK) INHIBITOR Y-27632**USE:** LABORATORY CHEMICALS**MANUFACTURER/SUPPLIER:**

CYTOSKELETON INC.

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**EMERGENCY CONTACT:**

24H EMERGENCY TOLL-FREE NUMBER: CALL INFOTRAC DAY OR NIGHT

WITHIN USA AND CANADA: 1-800-535-5053

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**SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS**

(R)-(+)-TRANS-4-(1-AMINOETHYL)-N-(4-PYRIDYL) CYCLOHEXANECARBOXAMIDE DIHYDROCHLORIDE MONOHYDRATE	CAS#: 146986-50-7 EINECS#: NONE	<1%
WATER	CAS#: 7732-18-5 EINECS#: 231-791-2	>99%
SUCROSE	CAS#: 57-50-1 EINECS#: 200-334-9	5%
DEXTRAN	CAS#: 9004-54-0 EINECS#: 232-677-5	1%

**SECTION 3. HAZARDS IDENTIFICATION****GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELING OF CHEMICALS (GHS):****SYMBOL:** NO SYMBOL**HAZARD CATEGORY:** 5: ACUTE TOXICITY**SIGNAL WORD:** WARNING**HAZARD STATEMENT:** H303 + H313 + H333: MAY BE HARMFUL IF SWALLOWED, IN CONTACT WITH SKIN OR IF INHALED**GHS PRECAUTIONARY STATEMENTS:****PREVENTION:** P281: USE PERSONAL PROTECTIVE EQUIPMENT AS REQUIRED**RESPONSE:** P308 + P313: IF EXPOSED OR CONCERNED: GET MEDICAL

ADVICE/ATTENTION. P312: CALL A POISON CENTER/DOCTOR/PHYSICIAN IF YOU FEEL UNWELL.

**STORAGE:** P403 + P233: STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED.

**DISPOSAL:** P501: DISPOSE OF CONTENT/CONTAINER IN ACCORDANCE WITH LOCAL REGULATIONS.

#### **REGISTRATION, EVALUATION, AUTHORIZATION AND RESTRICTION OF CHEMICALS (REACH):**

**SYMBOL:** NO SYMBOL

**SYMBOL LETTER:** NONE APPLICABLE

**HAZARD:** NONE APPLICABLE

**RISK PHRASE:** NONE APPLICABLE

#### **SECTION 4. FIRST-AID MEASURES**

**AFTER INHALATION:** SUPPLY FRESH AIR IMMEDIATELY. IF BREATHING IS DIFFICULT OR STOPS, SEEK IMMEDIATE MEDICAL ATTENTION. SYMPTOMS OF EXPOSURE: POSSIBLE RESPIRATORY TRACT AND MUCOUS MEMBRANE IRRITATION

**AFTER SKIN CONTACT:** IMMEDIATELY WASH SKIN WITH MILD SOAP AND RINSE WITH COPIOUS AMOUNTS OF WATER. IF THIS CHEMICAL PENETRATES CLOTHING, IMMEDIATELY REMOVE THE CLOTHING AND FLUSH THE SKIN WITH WATER. SEEK MEDICAL ATTENTION IMMEDIATELY. SYMPTOMS OF EXPOSURE: POSSIBLE SKIN IRRITATION WITH REPEATED OR PROLONGED EXPOSURE

**AFTER EYE CONTACT:** RINSE OPENED EYE FOR AT LEAST 15 MINUTES UNDER RUNNING WATER. CONSULT PHYSICIAN IMMEDIATELY. SYMPTOMS OF EXPOSURE: POSSIBLE EYE IRRITATION, REDNESS AND LACRIMATION

**AFTER SWALLOWING:** SEEK MEDICAL ATTENTION IMMEDIATELY. NEVER GIVE AN UNCONSCIOUS PERSON ANYTHING BY MOUTH. SYMPTOMS OF EXPOSURE: POSSIBLE GASTROINTESTINAL IRRITATION CAUSING NAUSEA AND VOMITING

WASH CONTAMINATED CLOTHING BEFORE REUSE.

#### **SECTION 5. FIREFIGHTING MEASURES**

##### **EXTINGUISHING MEDIA**

**SUITABLE EXTINGUISHING AGENTS:** USE EXTINGUISHING MEDIA APPROPRIATE FOR THE SURROUNDING FIRE. THIS PRODUCT IS COMPATIBLE WITH COMMERCIALY AVAILABLE EXTINGUISHING MEDIA.

##### **ADVICE FOR FIREFIGHTERS**

**PROTECTIVE EQUIPMENT:** THIS PRODUCT DOES NOT REQUIRE THE USE OF ANY ADDITIONAL FIRE FIGHTING EQUIPMENT BEYOND WHAT IS APPROPRIATE TO THE SURROUNDING FIRE.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

##### **PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY**

**PROCEDURES:** WEAR PROTECTIVE CLOTHING, RESPIRATOR, CHEMICAL SAFETY GOGGLES, GLOVES, CHEMICAL-RESISTANT BOOTS (SEE SECTION 8).

**ENVIRONMENTAL PRECAUTIONS:** COLLECT AND DISPOSE OF CONTAMINATED MATERIALS ACCORDING TO INTERNATIONAL, FEDERAL, STATE AND LOCAL REGULATIONS. DO NOT ALLOW TO ENTER DRAINS/SEWERS/SURFACE OR GROUND WATER OR SOIL.

**METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:** FOR SMALL SPILLS: IDENTIFY THE SPILLED MATERIAL AND BARRICADE THE SPILL AREA AND NOTIFY OTHERS IN SURROUNDING AREA. CONTROL ALL SOURCES OF IGNITION IF THE SUBSTANCE IS FLAMMABLE. DON THE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (SEE SECTION 8). CONTROL THE MOVEMENT OF THE SPILLED PRODUCT (INTO DRAINS, SOIL, ACROSS FLOORS, ETC) WITH ABSORBENT SPILL MATERIALS. COLLECT CONTAMINATED SPILL MATERIAL AND PLACE IN CONTAINER MEETING APPROPRIATE U.N. PACKAGING REQUIREMENTS. DECONTAMINATE USED EQUIPMENT AND AFFECTED SPILL AREA APPROPRIATELY. FOR LARGE SPILLS: IN ADDITION TO SMALL SPILL PRECAUTIONS, DETERMINE PERSONNEL EVACUATION DISTANCES AND NOTIFY APPROPRIATE AUTHORITIES IF NECESSARY.

## **SECTION 7. HANDLING AND STORAGE**

**HANDLING:** SEEK APPROPRIATE TRAINING TO SAFELY HANDLE THIS PRODUCT UNDER NORMAL CONDITIONS. USE THE RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (SEE SECTION 8) TO PREVENT CHEMICAL EXPOSURE. WASH HANDS WITH SOAP AND WATER BEFORE EATING, DRINKING, OR TOUCHING COMMON ITEMS TO PREVENT CROSS-CONTAMINATION. USE THIS PRODUCT WITH ADEQUATE VENTILATION. SEE PRODUCT TECHNICAL DATASHEET.

**STORAGE:** SEE PRODUCT TECHNICAL DATASHEET.

**SPECIFIC USE:** SEE PRODUCT TECHNICAL DATASHEET.

## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

(R)-(+)-TRANS-4-(1-AMINOETHYL)-N-(4-PYRIDYL)CYCLOHEXANECARBOXAMIDE DIHYDROCHLORIDE MONOHYDRATE

OSHA PEL: NOT LISTED  
NIOSH REL: NOT LISTED  
ACGIH TLV: NOT LISTED  
OTHER: NONE

### **ENGINEERING CONTROLS**

**NORMAL HANDLING CONDITIONS:** GENERAL ROOM VENTILATION IS ADEQUATE FOR THIS PRODUCT

**EMERGENCY RESPONSE CONDITIONS:** PROVIDE NEGATIVE PRESSURE VENTILATION

### **RESPIRATORY PROTECTION**

**NORMAL HANDLING CONDITIONS:** USE APPROPRIATE RESPIRATORY PROTECTION

**EMERGENCY RESPONSE CONDITIONS:** USE APPROPRIATE RESPIRATORY PROTECTION

**EYE PROTECTION**

**NORMAL HANDLING CONDITIONS:** SAFETY GLASSES WITH SIDE SHIELDS

**EMERGENCY RESPONSE CONDITIONS:** CHEMICAL SPLASH GOGGLES OR OTHER FACE PROTECTION AS APPROPRIATE

**SKIN PROTECTION**

**NORMAL HANDLING CONDITIONS:** LABORATORY COAT, ADEQUATE CHEMICAL-RESISTANT GLOVES

**EMERGENCY RESPONSE CONDITIONS:** CHEMICALLY RESISTANT BOOTS, CLOTHES, AND IMPERMEABLE GLOVES AS APPROPRIATE

**ENVIRONMENTAL EXPOSURE CONTROLS**

**NORMAL HANDLING CONDITIONS:** NOT AVAILABLE

**EMERGENCY RESPONSE CONDITIONS:** NOT AVAILABLE

**OTHER EQUIPMENT:** SAFETY SHOWER, EYEWASH STATIONS, AND HAND WASHING EQUIPMENT SHOULD BE AVAILABLE CLOSE TO THE WORK AREA AS NEEDED

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

FORM: SOLID (LYOPHILIZED POWDER)

ODOR: NOT AVAILABLE

ODOR THRESHOLD: NOT AVAILABLE

pH: NOT AVAILABLE

MELTING POINT/FREEZING POINT: ESSENTIALLY THAT OF WATER

INITIAL BOILING POINT AND BOILING RANGE: ESSENTIALLY THAT OF WATER

FLASH POINT: NOT AVAILABLE

EVAPORATION RATE: NOT AVAILABLE

FLAMMABILITY (SOLID/GAS): NOT AVAILABLE

EXPLOSIVE LIMITS: LEL: NOT AVAILABLE

UEL: NOT AVAILABLE

VAPOR PRESSURE: NOT AVAILABLE

VAPOR DENSITY: NOT AVAILABLE

RELATIVE DENSITY (WATER = 1): ESSENTIALLY THAT OF WATER

SOLUBILITY: SOLUBLE IN WATER

PARTITION COEFFICIENT (N-OCTANOL/WATER): NOT AVAILABLE

AUTO IGNITION TEMPERATURE: NOT AVAILABLE

DECOMPOSITION TEMPERATURE: NOT AVAILABLE

OXIDIZING PROPERTIES: NONE

VISCOSITY, CENTIPOISE: NOT AVAILABLE

**SECTION 10. STABILITY AND REACTIVITY**

**CHEMICAL STABILITY:** PRODUCT IS STABLE UNDER NORMAL OPERATING CONDITIONS AND USE AS DESCRIBED IN THE PRODUCT TECHNICAL DATASHEET.

**CONDITIONS TO AVOID:** EXTREME TEMPERATURES.

**INCOMPATIBLE MATERIALS TO AVOID:** STRONG ACIDS OR BASES AND STRONG OXIDIZERS.

**HAZARDOUS DECOMPOSITION PRODUCTS:** HEATING TO DECOMPOSITION TEMPERATURE MAY PRODUCE CARBON MONOXIDE, CARBON DIOXIDE, NITROGEN OXIDES

## **SECTION 11. TOXICOLOGICAL INFORMATION**

### **INFORMATION ON TOXICOLOGICAL EFFECTS**

TO THE BEST OF OUR KNOWLEDGE, THE TOXICOLOGICAL PROPERTIES OF THIS PRODUCT HAVE NOT BEEN THOROUGHLY INVESTIGATED.

**ACUTE TOXICITY:** NO DATA AVAILABLE

**SKIN CORROSION/IRRITATION:** NO DATA AVAILABLE

**SERIOUS EYE DAMAGE/EYE IRRITATION:** NO DATA AVAILABLE

**RESPIRATORY OR SKIN SENSITIZATION:** NO DATA AVAILABLE

**GERM CELL MUTAGENICITY:** NO DATA AVAILABLE

**CARCINOGENICITY:** NO DATA AVAILABLE

**REPRODUCTIVE TOXICITY:** NO DATA AVAILABLE

**STOST-SINGLE EXPOSURE:** NO DATA AVAILABLE

**STOST-REPEATED EXPOSURE:** NO DATA AVAILABLE

**ASPIRATION HAZARD:** NO DATA AVAILABLE

**CARCINOGENICITY:** CARCINOGENETIC INFORMATION FOR THIS PRODUCT AS A WHOLE DOES NOT EXIST. BELOW IS DATA FOR THE INDIVIDUAL COMPONENTS:

(R)-(+)-TRANS-4-(1-AMINOETHYL)-N-(4-PYRIDYL)CYCLOHEXANECARBOXAMIDE DIHYDROCHLORIDE MONOHYDRATE

OSHA: NOT LISTED

NTP: NOT LISTED

IARC: NOT LISTED

## **SECTION 12. ECOLOGICAL INFORMATION**

**ECOTOXICITY:** NO DATA AVAILABLE

**MOBILITY:** NO DATA AVAILABLE

**PERSISTENCE AND DEGRADATION:** NO DATA AVAILABLE

**BIO ACCUMULATIVE POTENTIAL:** NO DATA AVAILABLE

**RESULTS OF PBT ASSESSMENT:** NO DATA AVAILABLE

**OTHER ADVERSE EFFECTS:** NO DATA AVAILABLE

## **SECTION 13. DISPOSAL CONSIDERATIONS**

**SUBSTANCE:** CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL. DISPOSAL OF THIS PRODUCT, SOLUTIONS AND

ANY BY-PRODUCTS SHOULD AT ALL TIMES COMPLY WITH THE REQUIREMENTS OF ENVIRONMENTAL PROTECTION AND WASTE DISPOSAL LEGISLATION AND ANY INTERNATIONAL, FEDERAL, STATE AND LOCAL AUTHORITY REQUIREMENTS. AVOID DISPERSAL OF SPILLED MATERIAL AND RUNOFF AND CONTACT WITH SOIL, WATERWAYS, DRAINS AND SEWERS. OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

**CONTAMINATED PACKAGING:** DISPOSE OF AS UNUSED PRODUCT IN COMPLIANCE WITH THE REQUIREMENTS OF ENVIRONMENTAL PROTECTION AND WASTE DISPOSAL LEGISLATION AND ANY INTERNATIONAL, FEDERAL, STATE AND LOCAL AUTHORITY REQUIREMENTS.

#### **SECTION 14. TRANSPORT INFORMATION**

THIS PRODUCT IS SUBJECT TO THE DE MINIMIS EXCEPTIONS FOR DANGEROUS GOODS/HAZARDOUS MATERIALS IN ACCORDANCE WITH THE FOLLOWING REGULATIONS: IATA 2.6.10, ADR 3.5.1.4, AND U.S. DOT 49 CFR 173.4b.

DOT CLASSIFICATION: THIS PRODUCT IS CONSIDERED TO BE NON-HAZARDOUS FOR TRANSPORT.

IATA-DGR CLASSIFICATION: THIS PRODUCT IS CONSIDERED TO BE NON-HAZARDOUS FOR TRANSPORT.

IMDG CLASSIFICATION: THIS PRODUCT IS CONSIDERED TO BE NON-HAZARDOUS FOR TRANSPORT.

#### **SECTION 15. REGULATORY INFORMATION**

**AUSTRALIA:**

HAZCHEM CODE: NOT LISTED

**CALIFORNIA:**

POISONS SCHEDULE NUMBER: NOT LISTED

**CANADA:**

PROPOSITION 65: NOT LISTED

**EUROPEAN UNION:**

WHMIS: NOT LISTED

REACH: CHEMICAL SAFETY ASSESSMENT FOR THE SUBSTANCE OR SUBSTANCES IN THE PREPARATION NOT REQUIRED

SUBSTANCES OF VERY HIGH CONCERN (SVHC): THIS PRODUCT DOES NOT CONTAIN SVHCS IN CONCENTRATIONS ABOVE 0.1% WEIGHT/WEIGHT

CATEGORY OF DANGER: NONE APPLICABLE

RISK PHRASES: NONE APPLICABLE

SAFETY PHRASES: S7/9: KEEP CONTAINER TIGHTLY CLOSED AND IN A WELL-VENTILATED PLACE. S20/S21: WHEN USING DO NOT EAT, DRINK OR SMOKE. S26: IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE. S27/S28: AFTER CONTACT WITH SKIN, TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING AND WASH IMMEDIATELY WITH PLENTY OF SOAP AND TEPID WATER. S29/35: DO NOT EMPTY INTO DRAINS. DISPOSE OF THIS MATERIAL AND ITS

CONTAINER IN A SAFE WAY. S36/37/39: WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION. S45: IN CASE OF ACCIDENT OR IF YOU FEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY.

OECD/HIGH PRODUCTION VOLUME (HPV) CHEMICALS:  
WATER

RoHS: THIS PRODUCT DOES NOT CONTAIN RoHS LISTED SUBSTANCES IN CONCENTRATIONS ABOVE THE ESTABLISHED THRESHOLDS

**JAPAN:**

POISONOUS AND DELETERIOUS SUBSTANCES CONTROL LAW: NOT LISTED

## **SECTION 16. OTHER INFORMATION**

THIS INFORMATION IS BASED ON OUR PRESENT KNOWLEDGE. HOWEVER, THIS SHALL NOT CONSTITUTE A GUARANTEE FOR ANY SPECIFIC PRODUCT FEATURES AND SHALL NOT ESTABLISH A LEGALLY VALID CONTRACTUAL RELATIONSHIP. THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT, BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. CYTOSKELETON INC. SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM CONTACT WITH THE ABOVE PRODUCT.

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