MATERIAL SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG/PRODUCT#: FNR02

NAME: FIBRONECTIN, ISOLATED FROM BOVINE PLASMA, LABELED WITH Hilyte Fluor™ 488

HiLyte Fluor™ 488 is a trademark of Anaspec Inc. (CA, USA).

USE: LABORATORY CHEMICALS

MANUFACTURER/SUPPLIER:

CYTOSKELETON INC.
1830 S. Acoma St.
Denver, CO 80223
PHONE: 303-322-2254
FAX: 303-322-2257

24H EMERGENCY TOLL-FREE NUMBER: CALL INFOTRAC DAY OR NIGHT
WITHIN USA AND CANADA: 1-800-535-5053
OUTSIDE USA AND CANADA: +1 352-323-3500 (COLLECT CALLS ACCEPTED)

SECTION 2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

OSHA HAZARDS
THIS PRODUCT IS NOT CONSIDERED HAZARDOUS

GHS CLASSIFICATION
THIS PRODUCT IS NOT CONSIDERED HAZARDOUS

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

PICTOGRAM  NONE
SIGNAL WORD  NONE

HAZARD STATEMENTS
NONE

PRECAUTIONARY STATEMENTS
NONE

NFPA RATINGS (SCALE 0-4)
FIRE = 0
HEALTH = 0
POTENTIAL HEALTH EFFECTS

INHALATION: MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION
SKIN: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE SKIN IRRITATION
EYES: MAY CAUSE EYE IRRITATION
INGESTION: MAY BE HARMFUL IF SWALLOWED

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS#</th>
<th>EINECS#</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUCROSE</td>
<td>57-50-1</td>
<td>200-334-9</td>
</tr>
<tr>
<td>HILYTE FLUOR™ 488 AMINE, TFA SALT</td>
<td>NONE</td>
<td>NONE</td>
</tr>
<tr>
<td>FIBRONECTIN</td>
<td>86088-83-7</td>
<td>289-149-2</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST-AID MEASURES

AFTER INHALATION: SUPPLY FRESH AIR. IF NOT BREATHING, IF BREATHING IS IRREGULAR OR IF RESPIRATORY ARREST OCCURS, PROVIDE ARTIFICIAL RESPIRATION.
AFTER SKIN CONTACT: IMMEDIATELY WASH SKIN WITH SOAP AND RINSE WITH COPIOUS AMOUNTS OF WATER.
AFTER EYE CONTACT: CHECK FOR AND REMOVE ANY CONTACT LENSES. RINSE OPENED EYE FOR AT LEAST 15 MINUTES UNDER RUNNING WATER.
AFTER SWALLOWING: WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.

WASH CONTAMINATED CLOTHING BEFORE REUSE.

SECTION 5. FIREFIGHTING MEASURES

CONDITIONS OF FLAMMABILITY
NOT FLAMMABLE OR COMBUSTIBLE

EXTINGUISHING MEDIA

SUITEABLE EXTINGUISHING AGENTS: USE DRY CHEMICAL POWDER, WATER SPRAY, ALCOHOL-RESISTANT FOAM OR CARBON DIOXIDE.

ADVICE FOR FIREFIGHTERS

PROTECTIVE EQUIPMENT: MOUNT RESPIRATORY PROTECTIVE DEVICE
PREVENT CONTACT WITH SKIN, FACE AND EYES
HAZARDOUS COMBUSTION PRODUCTS
HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS:
CARBON OXIDES, NITROGEN OXIDES, SULPHUR OXIDES

SECTION 6.  ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: WEAR PROTECTIVE CLOTHING, RESPIRATOR, CHEMICAL SAFETY GOGGLES, GLOVES.
ENVIRONMENTAL PRECAUTIONS: DILUTE WITH PLENTY OF WATER. DO NOT ALLOW TO ENTER SEWERS/SURFACE OR GROUND WATER.
METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP: ABSORB WITH LIQUID-BINDING MATERIAL (SAND, DIATOMITE, ACID BINDERS, UNIVERSAL BINDERS, SAWDUST). DISPOSE CONTAMINATED MATERIAL AS WASTE ACCORDING TO SECTION 13. ENSURE ADEQUATE VENTILATION.
REFERENCE TO OTHER SECTIONS: SEE SECTION 8 FOR INFORMATION ON PERSONAL PROTECTION EQUIPMENT. SEE SECTION 13 FOR DISPOSAL INFORMATION.

SECTION 7.  HANDLING AND STORAGE

HANDLING
PRECAUTIONS FOR SAFE HANDLING: ENSURE GOOD VENTILATION/EXHAUSTION AT THE WORKPLACE. WEAR APPROPRIATE PROTECTIVE CLOTHING (SEE SECTION 8). DO NOT RE-USE CONTAINER. DO NOT EAT, DRINK OR SMOKE IN AREAS WHERE THIS PRODUCT IS HANDLED, STORED OR PROCESSED. WASH HANDS AFTER WORKING WITH MATERIAL.
INFORMATION ABOUT PROTECTION AGAINST EXPLOSIONS AND FIRES: STORE IN CONTAINER PROTECTED FROM DIRECT SUNLIGHT IN A DRY, COOL, WELL-VENTILATED PLACE. STORE AT -70 DEGREES C OR 4 DEGREES C WITH DESICCANT. ELIMINATE ALL IGNITION SOURCES AND SEPARATE FROM OXIDIZING MATERIALS. KEEP CONTAINERS CLOSED AND SEALED.
CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES
STORAGE REQUIREMENTS TO BE MET BY STOREROOMS AND RECEPTACLES: STORE AT 2-8°C WITH DESICCANT (OR -70 DEGREES C). KEEP CONTAINER TIGHTLY CLOSED AND SEALED UNTIL READY FOR USE. STORE DESICCATED.
FURTHER INFORMATION ABOUT STORAGE CONDITIONS: KEEP RECEPTACLE TIGHTLY SEALED AND PROTECTED FROM LIGHT. LIGHT SENSITIVE.

SECTION 8.  EXPOSURE CONTROLS/PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT
GENERAL PROTECTIVE AND HYGIENIC MEASURES
KEEP AWAY FROM FOODSTUFFS, BEVERAGES AND FEED
WASH HANDS BEFORE BREAKS AND AT THE END OF WORK
IMMEDIATELY REMOVE ALL SOILED AND CONTAMINATED CLOTHING
AVOID CONTACT WITH THE EYES AND SKIN
BREATHING EQUIPMENT
SHORT TERM FILTER DEVICE: FILTER P1
DO NOT BREATHE. USE MECHANICAL EXHAUST SYSTEM

PROTECTION OF HANDS
PROTECTIVE GLOVES.
THE GLOVE MATERIAL HAS TO BE IMPERMEABLE AND RESISTANT TO THE
PRODUCT/SUBSTANCE/PREPARATION. AS THE PRODUCT IS A PREPARATION OF
SEVERAL SUBSTANCES, THE RESISTANCE OF THE GLOVE MATERIAL CANNOT BE
CALCULATED IN ADVANCE AND THEREFORE HAS TO BE CHECKED PRIOR TO
APPLICATION. NO RECOMMENDATION CAN BE GIVEN FOR THE GLOVE
MATERIAL FOR THIS PRODUCT. SELECT GLOVE MATERIALS BASE ON
PENETRATION TIMES, RATES OF DIFFUSION AND DEGRADATION OF MATERIAL.

MATERIAL OF GLOVES
THE SELECTION OF SUITABLE GLOVES DEPENDS NOT ONLY ON THE MATERIAL
BUT ON QUALITY OF MATERIAL AND VARIES FROM MANUFACTURER TO
MANUFACTURER.

PENETRATION TIME OF GLOVE MATERIAL
THE EXACT BREAK THROUGH TIME HAS TO BE FOUND OUT BY THE
MANUFACTURER OF THE PROTECTIVE GLOVES AND HAS TO BE OBSERVED.

FOR THE PERMANENT CONTACT OF A MAXIMUM OF 15 MINUTES, GLOVES
MADE OF THE FOLLOWING MATERIALS ARE SUITABLE:
NEOPRENE GLOVES

EYE PROTECTION: TIGHTLY SEALED GOGGLES

BODY PROTECTION: PROTECTIVE WORK CLOTHING

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES
GENERAL INFORMATION
FORM: SOLID (LYOPHILIZED POWDER)
COLOR: PALE GREEN
CHANGE IN CONDITION
MELTING POINT/MELTING RANGE: N/A
BOILING POINT/BOILING RANGE: N/A
FLASH POINT: N/A.
SELF-IGNITING: PRODUCT IS NOT SELF-IGNITING
DANGER OF EXPLOSION: PRODUCT IS NOT EXPLOSIVE.
DENSITY: NOT DETERMINED
SOLUBILITY IN/MISCIBILITY WITH WATER: FULLY MISCELLABLE

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY
CHEMICAL STABILITY: THE PRODUCT IS STABLE UNDER RECOMMENDED
STORAGE CONDITIONS.
**THERMAL DECOMPOSITION/CONDITIONS TO BE AVOIDED:** AVOID CREATION OF DUST WHEN HANDLING AND AVOID ALL POSSIBLE SOURCES OF IGNITION. PREVENT DUST ACCUMULATION. REACTIVE OR INCOMPATIBLE WITH STRONG OXIDIZING MATERIALS.

**POSSIBILITY OF HAZARDOUS REACTIONS:** NO DANGEROUS REACTIONS KNOWN

**HAZARDOUS DECOMPOSITION PRODUCTS:** NO DANGEROUS PRODUCTS KNOWN

**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**

**ORAL LD_{50}:** NO DATA AVAILABLE  
**INHALATION LC_{50}:** NO DATA AVAILABLE  
**DERMAL LD_{50}:** 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 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, NTP OR OSHA.

**REPRODUCTIVE TOXICITY**

NO DATA AVAILABLE  
**TERATOGENICITY**

NO DATA AVAILABLE

**SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (GLOBALLY HARMONIZED SYSTEM)**

NO DATA AVAILABLE

**SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE (GLOBALLY HARMONIZED SYSTEM)**

NO DATA AVAILABLE

**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.
SYNERGISTIC EFFECTS
NO DATA AVAILABLE

SECTION 12. ECOLOGICAL INFORMATION

NO DATA AVAILABLE. NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS
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 REGIONAL LOCAL AUTHORITY REQUIREMENTS. AVOID DISPERAL OF SPILLED MATERIAL AND RUNOFF AND CONTACT WITH SOIL, WATERWAYS, DRAINS AND SEWERS. OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

DISPOSE OF CONTAMINATED PACKAGING AS UNUSED PRODUCT

SECTION 14. TRANSPORT INFORMATION

DOT CLASSIFICATION: THIS PRODUCT IS CONSIDERED TO BE NON-HAZARDOUS FOR TRANSPORT. NOT REGULATED

IATA-DGR CLASSIFICATION: THIS PRODUCT IS CONSIDERED TO BE NON-HAZARDOUS FOR TRANSPORT. NOT REGULATED

IMDG CLASSIFICATION: THIS PRODUCT IS CONSIDERED TO BE NON-HAZARDOUS FOR TRANSPORT. NOT REGULATED

SECTION 15. REGULATORY INFORMATION

UNITED STATES REGULATORY INFORMATION

NO KNOWN OSHA HAZARDS AT THE PRESENT CONCENTRATIONS

NONE OF THE INGREDIENTS IS LISTED.

SARA (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986-USA) SECTION 302/304/311/312:
NO PRODUCTS WERE LISTED

SARA (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986-USA) SECTION 313:
THIS MATERIAL DOES NOT CONTAIN ANY CHEMICAL COMPONENTS WITH
KNOWN CAS NUMBERS THAT EXCEED THE THRESHOLD (DE MINIMIS) REPORTING
LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313.

CANADA REGULATORY INFORMATION
WHMIS CLASSIFICATION: NOT CONTROLLED

EU REGULATORY INFORMATION
THIS PRODUCT IS NOT CLASSIFIED ACCORDING TO EU LEGISLATION.

PA AND NJ RIGHT TO KNOW COMPONENTS
FIBRONECTIN CAS#: 86088-83-7

CALIFORNIA PROP. 65 COMPONENTS
THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALS KNOWN TO THE STATE OF
CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR ANY OTHER
REPRODUCTIVE HARM.

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.

COPYRIGHT 2018 CYTOSKELETON, INC.