

Cytoskeleton, Inc.

MSDS COVERSHEET

CATALOG # BK005

F-ACTIN VISUALIZATION KIT

PART/CATALOG #	DESCRIPTION
PHDR1	Rhodamine-labeled phalloidin
WB33	Wash buffer
PB123	Permeabilization buffer
FX446	Fixative stock
MM324	Mounting medium
BX376	Rhodamine phalloidin dark box (No MSDS required)

MATERIAL SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG/PRODUCT#: PHDR1

NAME: PHALLOIDIN-TETRAMETHYLRHODAMINE B ISOTHIOCYANATE, *Amanita phalloides*

USE: LABORATORY CHEMICALS

MANUFACTURER/SUPPLIER:

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

EMERGENCY CONTACT:

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

HIGHLY TOXIC BY INHALATION, HIGHLY TOXIC BY INGESTION, HIGHLY TOXIC BY SKIN ABSORPTION

TARGET ORGANS

LIVER, KIDNEY

GHS CLASSIFICATION

ACUTE TOXICITY, ORAL (CATEGORY 2)
ACUTE TOXICITY, INHALATION (CATEGORY 2)
ACUTE TOXICITY, DERMAL (CATEGORY 2)

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

PICTOGRAM



SIGNAL WORD

DANGER

HAZARD STATEMENTS

H300

HARMFUL IF SWALLOWED

H310 + H330

TOXIC IF IN CONTACT WITH SKIN OR IF INHALED

PRECAUTIONARY STATEMENTS

P260 DO NOT BREATHE DUST / FUME / GAS / MIST / VAPORS /
SPRAY
P262 DO NOT GET IN EYES OR ON SKIN OR CLOTHING
P264 WASH HANDS THOROUGHLY AFTER HANDLING
P280 WEAR PROTECTIVE GLOVES / PROTECTIVE CLOTHING
P284 WEAR RESPIRATORY PROTECTION
P302 + P350 IF ON SKIN: GENTLY WASH WITH PLENTY OF SOAP AND
WATER
P304 + P340 IF INHALED, REMOVE TO FRESH AIR
P310 IMMEDIATELY CALL A POISON CENTER OR PHYSICIAN
P501 DISPOSE OF CONTENTS IN AN APPROVED WASTE SITE

NFPA RATINGS (SCALE 0-4)

FIRE = 0
HEALTH = 4
REACTIVITY = 0

HMIS RATINGS

HEALTH = 3
FIRE = 0
REACTIVITY = 0

POTENTIAL HEALTH EFFECTS

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

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

FORMULA $C_{62}H_{72}N_{12}O_{12}S_4$
MOLECULAR WEIGHT 1,305.56 g/mol

CAS# **EC#** **INDEX#** **CONCENTRATION**

PHALLOIDIN-TETRAMETHYLRHODAMINE B ISOTHIOCYANATE, *Amanita phalloides*

SECTION 4. FIRST-AID MEASURES

GENERAL ADVICE: CONSULT A PHYSICIAN. SHOW THIS MSDS TO THE DOCTOR. MOVE
OUT OF DANGEROUS AREA.

AFTER INHALATION: SUPPLY FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL
RESPIRATION. CONSULT PHYSICIAN

AFTER SKIN CONTACT: IMMEDIATELY WASH SKIN WITH SOAP AND RINSE WITH
COPIOUS AMOUNTS OF WATER. TRANSPORT VICTIM IMMEDIATELY TO HOSPITAL.
CONSULT A PHYSICIAN.

AFTER EYE CONTACT: RINSE OPENED EYE FOR AT LEAST 15 MINUTES UNDER RUNNING WATER. THEN CONSULT PHYSICIAN

AFTER SWALLOWING: WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL FOR PHYSICIAN

WASH CONTAMINATED CLOTHING BEFORE REUSE.

SECTION 5. FIREFIGHTING MEASURES

CONDITIONS OF FLAMMABILITY

NOT FLAMMABLE OR COMBUSTIBLE

EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING AGENTS: CARBON DIOXIDE, EXTINGUISHING POWDER, ALCOHOL RESISTANT FOAM, OR WATER SPRAY.

ADVICE FOR FIREFIGHTERS

PROTECTIVE EQUIPMENT: MOUNT RESPIRATORY PROTECTIVE DEVICE

PREVENT CONTACT WITH SKIN AND EYES

HAZARDOUS COMBUSTION PRODUCTS: HAZARDOUS DECOMBUSTION PRODUCTS FORMED UNDER FIRE CONDITIONS - CARBON OXIDES, NITROGEN OXIDES (NO_x), SULPHUR OXIDES

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY

PROCEDURES: WEAR PROTECTIVE CLOTHING, RESPIRATOR, CHEMICAL SAFETY GOGGLES, GLOVES. AVOID DUST FORMATION AND AVOID BREATHING DUST. ENSURE ADEQUATE VENTILATION. AVOID BREATHING VAPORS, MIST, OR GAS.

ENVIRONMENTAL PRECAUTIONS: PREVENT FURTHER LEAKAGE OR SPILLAGE. DO NOT ALLOW TO ENTER DRAINS, SEWERS/SURFACE OR GROUND WATER.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP: PICK UP AND ARRANGE DISPOSAL WITHOUT CREATING DUST. KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL. 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: AVOID CONTACT WITH SKIN AND EYES. AVOID FORMATION OF DUST AND AEROSOLS. ENSURE GOOD VENTILATION/EXHAUSTION AT THE WORKPLACE. WEAR APPROPRIATE PROTECTIVE CLOTHING (SEE SECTION 8). DO NOT RE-USE CONTAINER. EMPLOY NORMAL MEASURES FOR PREVENTIVE FIRE PROTECTION.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES
STORAGE

REQUIREMENTS TO BE MET BY STOREROOMS AND RECEPTACLES: STORE AT -20°C. KEEP CONTAINER TIGHTLY CLOSED AND SEALED UNTIL READY FOR USE. STORE DESICCATED.

FURTHER INFORMATION ABOUT STORAGE CONDITIONS: KEEP RECEPTACLE TIGHTLY SEALED IN A DRY, WELL-VENTILATED PLACE

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTAINS NO SUBSTANCES WITH OCCUPATIONAL LIMIT VALUES

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

WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE, USE A FULL-FACE PARTICLE RESPIRATOR TYPE N100 (US) OR TYPE P3 (EN 143) RESPIRATOR CARTRIDGES AS A BACKUP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU).

PROTECTION OF HANDS

PROTECTIVE GLOVES.

THE GLOVE MATERIAL HAS TO BE IMPERMEABLE AND RESISTANT TO THE PRODUCT/SUBSTANCE/PREPARATION. 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: FACE SHIELD AND TIGHTLY SEALED GOGGLES

BODY PROTECTION: PROTECTIVE WORK CLOTHING

HYGIENE MEASURES: AVOID CONTACT WITH SKIN, EYES AND CLOTHING. WASH HANDS BEFORE BREAKS AND IMMEDIATELY AFTER HANDLING THE PRODUCT.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

GENERAL INFORMATION

FORM: SOLID (LYOPHILIZED POWDER)

pH:	NO DATA AVAILABLE
MELTING POINT/MELTING RANGE:	NO DATA AVAILABLE
BOILING POINT/BOILING RANGE:	NO DATA AVAILABLE
FLASH POINT:	NO DATA AVAILABLE
SELF-IGNITING:	NO DATA AVAILABLE
DANGER OF EXPLOSION:	NO DATA AVAILABLE
DENSITY:	NO DATA AVAILABLE
SOLUBILITY IN/MISCIBILITY WITH WATER:	NO DATA AVAILABLE

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY

CHEMICAL STABILITY

STABLE WHEN STORED AS DIRECTED

THERMAL DECOMPOSITION/CONDITIONS TO BE AVOIDED: STRONG OXIDIZING AGENTS

POSSIBILITY OF HAZARDOUS REACTIONS: NO DATA AVAILABLE

HAZARDOUS DECOMPOSITION PRODUCTS: HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS: CARBON OXIDES, NITROGEN OXIDES (NO_x), SULPHUR 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.

SIGNS AND SYMPTOMS OF EXPOSURE

THE PATHOLOGICAL FINDING IN FATALITIES FROM MUSHROOM POISONING ARE FATTY DEGENERATION OF THE LIVER, KIDNEYS, HEART AND SKELETAL MUSCLES

POTENTIAL HEALTH EFFECTS

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

TARGET ORGANS: LIVER, KIDNEY

CHRONIC EXPOSURE

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 PROBABLE, POSSIBLE OR CONFIRMED HUMAN CARCINOGEN BY ACGIH

NTP: 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 NTP

OSHA: 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 OSHA

SECTION 12. ECOLOGICAL INFORMATION

NO DATA AVAILABLE

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 DISPERSAL OF SPILLED MATERIAL AND RUNOFF AND CONTACT WITH SOIL, WATERWAYS, DRAINS AND SEWERS. OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

PRODUCT

BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.

CONTAMINATED PACKAGING

DISPOSE OF AS UNUSED PRODUCT.

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.

IN CURRENT PACKAGING SIZE, NOT A HAZARDOUS SUBSTANCE BY DOT, IATA, AND IMDG

SUBSTANCES WITH AN LD50 VALUE \leq 300 mg/kg (ORAL) OR \leq 1000 mg/kg (DERMAL) OR AN LC50 VALUE \leq 4000 ml/m³ (INHALATION OF DUSTS OR MISTS). AMOUNT SHIPPED DOES NOT MEET CLASSIFICATION FOR HAZARD CLASS IF LESS THAN 1 GRAM

WEIGHT OF PRODUCT WITHOUT CONTAINER. IF OVER 1 GRAM, THEN THE FOLLOWING APPLY.

DOT CLASSIFICATION: UN # 2811, CLASS 6, PACKING GROUP II
SHIPPING NAME: TOXIC SOLID, ORGANIC, N.O.S. RHODAMINE PHALLOIDIN

IATA CLASSIFICATION: UN # 2811, CLASS 6, PACKING GROUP II
SHIPPING NAME: TOXIC SOLID, ORGANIC, N.O.S. RHODAMINE PHALLOIDIN

IMDG CLASSIFICATION: UN # 2811, CLASS 6, PACKING GROUP II
SHIPPING NAME: TOXIC SOLID, ORGANIC, N.O.S. RHODAMINE PHALLOIDIN

SECTION 15. REGULATORY INFORMATION

OSHA HAZARDS

HIGHLY TOXIC BY INHALATION, HIGHLY TOXIC BY INGESTION, HIGHLY TOXIC BY SKIN ABSORPTION

DSL STATUS

THIS PRODUCT CONTAINS THE FOLLOWING COMPONENTS THAT ARE NOT ON THE CANADIAN DSL NOR NDSL LISTS

PHALLOIDIN-TETRAMETHYLRHODAMINE B ISOTHIOCYANATE, *Amanita phalloides*

UNITED STATES REGULATORY INFORMATION

SARA (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986-USA) SECTIONS 302/313

NO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III, SECTION 302.

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

MASSACHUSETTS RIGHT TO KNOW COMPONENTS

NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

PHALLOIDIN-TETRAMETHYLRHODAMINE B ISOTHIOCYANATE, *Amanita phalloides*

NEW JERSEY RIGHT TO KNOW COMPONENTS

PHALLOIDIN-TETRAMETHYLRHODAMINE B ISOTHIOCYANATE, *Amanita phalloides*

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.

CANADA REGULATORY INFORMATION

WHMIS CLASSIFICATION: NOT CONTROLLED UNDER WHMIS.

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.

MATERIAL SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG/PRODUCT#: WB33

NAME: WASH BUFFER (PBS TABLET)

USE: LABORATORY CHEMICALS

MANUFACTURER/SUPPLIER:

CYTOSKELETON INC.

1830 S. Acoma St.

Denver, CO 80223

PHONE: 303-322-2254

FAX: 303-322-2257

EMERGENCY CONTACT:

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

HARMFUL BY INGESTION, IRRITANT

GHS CLASSIFICATION

SKIN IRRITATION (CATEGORY 2)

EYE IRRITATION (CATEGORY 2A)

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

PICTOGRAM:



SIGNAL WORD: WARNING

HAZARD STATEMENTS

H315 CAUSES SKIN IRRITATION

H319 CAUSES SERIOUS EYE IRRITATION

PRECAUTIONARY STATEMENTS

P305+P351+P338 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES IF PRESENT AND EASY TO DO. CONTINUE RINSING.

NFPA RATINGS (SCALE 0-4)

FIRE = 1

HEALTH HAZARD = 2

REACTIVITY HAZARD = 0

HMIS RATINGS

HEALTH HAZARD = 2

FIRE = 1

PHYSICAL HAZARDS = 0

POTENTIAL HEALTH EFFECTS

INHALATION	HAZARDOUS IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION.
SKIN	HAZARDOUS WITH SKIN CONTACT. CAUSES SKIN IRRITATION.
EYES	HAZARDOUS IN CASE OF EYE CONTACT. CAUSES EYE IRRITATION.
INGESTION	HAZARDOUS IF SWALLOWED.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

PBS TABLET

CAS#: NONE

EINECS#: NOT AVAILABLE

SECTION 4. FIRST-AID MEASURES

GENERAL ADVICE: MOVE OUT OF DANGEROUS AREA. CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.

AFTER INHALATION: SUPPLY FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. CONSULT PHYSICIAN.

AFTER SKIN CONTACT: IMMEDIATELY WASH SKIN WITH SOAP AND RINSE WITH COPIOUS AMOUNTS OF WATER. CONSULT PHYSICIAN.

AFTER EYE CONTACT: RINSE OPENED EYE FOR AT LEAST 15 MINUTES UNDER RUNNING WATER. CONSULT PHYSICIAN.

AFTER SWALLOWING: WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CONSULT PHYSICIAN.

WASH CONTAMINATED CLOTHING BEFORE REUSE.

SECTION 5. FIREFIGHTING MEASURES**CONDITIONS OF FLAMMABILITY**

MAY BE COMBUSTIBLE AT HIGH TEMPERATURE

EXTINGUISHING MEDIA

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

ADVICE FOR FIREFIGHTERS

PROTECTIVE EQUIPMENT: MOUNT RESPIRATORY PROTECTIVE DEVICE.
PREVENT CONTACT WITH SKIN AND EYES.

HAZARDOUS COMBUSTION PRODUCTS: HAZARDOUS DECOMPOSITION PRODUCTS
FORMED UNDER FIRE CONDITIONS: NITROGEN OXIDES

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY

PROCEDURES: WEAR PROTECTIVE CLOTHING, RESPIRATOR, CHEMICAL SAFETY
GOGGLES, GLOVES. AVOID BREATHING VAPORS, MIST OR GAS. ENSURE ADEQUATE
VENTILATION.

ENVIRONMENTAL PRECAUTIONS: DILUTE WITH PLENTY OF WATER. DO NOT ALLOW
TO ENTER SEWERS/SURFACE OR GROUND WATER. PREVENT FURTHER LEAKAGE IF
SAFE TO DO SO. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP: SOAK UP WITH
INERT ABSORBENT MATERIAL AND DISPOSE OF ACCORDING TO LOCAL AND REGIONAL
AUTHORITY REQUIREMENTS. KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.

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: KEEP AWAY FROM HEAT. KEEP AWAY FROM
SOURCES OF IGNITION. EMPTY CONTAINERS POSE A FIRE RISK. EVAPORATE THE
RESIDUE UNDER A FUME HOOD. GROUND ALL EQUIPMENT CONTAINING MATERIAL.
AVOID CONTACT WITH SKIN AND EYES. AVOID INHALATION OF DUST, VAPOR, OR MIST.
ENSURE GOOD VENTILATION/EXHAUSTION AT THE WORKPLACE. WEAR APPROPRIATE
PROTECTIVE CLOTHING (SEE SECTION 8). DO NOT RE-USE CONTAINER.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES STORAGE

REQUIREMENTS TO BE MET BY STOREROOMS AND RECEPTACLES: STORE AT 4°C.
KEEP CONTAINER TIGHTLY CLOSED AND SEALED UNTIL READY FOR USE IN A DRY AND
WELL-VENTILATED PLACE.

FURTHER INFORMATION ABOUT STORAGE CONDITIONS: KEEP RECEPTACLE TIGHTLY
SEALED.

STORE AS RECOMMENDED (2-8°C).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THERE ARE NO PRODUCTS THAT HAVE OCCUPATIONAL LIMIT VALUES

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

WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE, USE A DUST RESPIRATOR. BE SURE TO USE AN APPROVED/CERTIFIED RESPIRATOR OR EQUIVALENT.

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 OR SAFETY GLASSES WITH SIDE-SHIELDS.

BODY PROTECTION: PROTECTIVE WORK CLOTHING

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES GENERAL INFORMATION

FORM: SOLID

COLOR: WHITE

SAFETY DATA

pH: NO DATA AVAILABLE

MELTING POINT/MELTING RANGE: NO DATA AVAILABLE

BOILING POINT/BOILING RANGE: NO DATA AVAILABLE

FLASH POINT: NO DATA AVAILABLE

IGNITION TEMPERATURE: NO DATA AVAILABLE

AUTOIGNITION TEMPERATURE: NO DATA AVAILABLE

LOWER EXPLOSION LIMIT: NO DATA AVAILABLE

UPPER EXPLOSION LIMIT: NO DATA AVAILABLE

VAPOR PRESSURE: NO DATA AVAILABLE

DENSITY: NO DATA AVAILABLE SOLUBILITY IN/MISCIBILITY WITH WATER: VERY SOLUBLE IN WATER
ODOR: NO DATA AVAILABLE

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY

CHEMICAL STABILITY

STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

THERMAL DECOMPOSITION/CONDITIONS TO BE AVOIDED: NO DATA AVAILABLE

POSSIBILITY OF HAZARDOUS REACTIONS: NO DATA AVAILABLE

HAZARDOUS DECOMPOSITION PRODUCTS: HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS: NITROGEN OXIDES

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

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

ACUTE TOXICITY

LD50 ORAL: NO DATA AVAILABLE

INHALATION LC50

LC50 INHALATION: NO DATA AVAILABLE

DERMAL LD50

LD50 DERMAL: NO DATA AVAILABLE

SKIN IRRITATION AND CORROSION

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 A CARCINOGEN OR POTENTIAL 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

ASPIRATION HAZARD

NO DATA AVAILABLE

POTENTIAL HEALTH EFFECTS

INHALATION	HAZARDOUS IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION.
SKIN	HAZARDOUS WITH SKIN CONTACT. CAUSES SKIN IRRITATION.
EYES	HAZARDOUS IN CASE OF EYE CONTACT. CAUSES EYE IRRITATION.
INGESTION	HAZARDOUS IF SWALLOWED.

SIGNS AND SYMPTOMS OF EXPOSURE

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

SYNERGISTIC EFFECTS

NO DATA AVAILABLE

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY

NO DATA AVAILABLE

PERSISTENCE AND DEGRADABILITY

NO DATA AVAILABLE

BIOACCUMULATIVE POTENTIAL

NO DATA AVAILABLE

MOBILITY IN SOIL

NO DATA AVAILABLE

PBT AND vPvB ASSESSMENT

NO DATA AVAILABLE

OTHER ADVERSE EFFECTS

NO DATA AVAILABLE

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 DISPERSAL OF SPILLED MATERIAL AND RUNOFF AND CONTACT WITH SOIL, WATERWAYS, DRAINS AND SEWERS. OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS. DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.

DISPOSE OF CONTAMINATED PACKAGING AS UNUSED PRODUCT

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

OSHA HAZARDS

IRRITANT

UNITED STATES REGULATORY INFORMATION

**SARA (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986-USA)
SECTION 302/304 (40CFR355.30/40CFR355.40):**

NONE OF THE INGREDIENTS IS 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.

SARA 311/312 HAZARDS

NO PRODUCTS WERE FOUND.

CALIFORNIA PROP. 65 COMPONENTS

THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALS KNOWN TO 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.

MATERIAL SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG/PRODUCT#: PB123

NAME: PERMEABILIZATION BUFFER

USE: LABORATORY CHEMICALS

MANUFACTURER/SUPPLIER:

CYTOSKELETON INC.

1830 S. Acoma St.

Denver, CO 80223

PHONE: 303-322-2254

FAX: 303-322-2257

EMERGENCY CONTACT:

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

REACTIVITY = 0

HMIS RATINGS

HEALTH = 0
FIRE = 0
REACTIVITY = 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

SODIUM CHLORIDE	CAS#: 7647-14-5	<1%
	EINECS#: 231-598-3	
POTASSIUM CHLORIDE	CAS#: 7447-40-7	<1%
	EINECS#: 231-211-8	
TRITON X-100	CAS#: 9002-93-1	<0.1%
SODIUM PHOSPHATE DIBASIC	CAS#: 7558-79-4	<1%
	EINECS#: 231-448-7	
POTASSIUM PHOSPHATE MONOBASIC	CAS#: 7778-77-0	<1%
	EINECS#: 231-913-4	

SECTION 4. FIRST-AID MEASURES

AFTER INHALATION: SUPPLY FRESH AIR. CONSULT PHYSICIAN IN CASE OF COMPLAINTS

AFTER SKIN CONTACT: IMMEDIATELY WASH SKIN WITH SOAP AND RINSE WITH COPIOUS AMOUNTS OF WATER

AFTER EYE CONTACT: RINSE OPENED EYE FOR AT LEAST 15 MINUTES UNDER RUNNING WATER. THEN CONSULT PHYSICIAN

AFTER SWALLOWING: WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL FOR PHYSICIAN

WASH CONTAMINATED CLOTHING BEFORE REUSE.

SECTION 5. FIREFIGHTING MEASURES

EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING AGENTS: CARBON DIOXIDE, EXTINGUISHING POWDER OR WATER SPRAY.

ADVICE FOR FIREFIGHTERS

PROTECTIVE EQUIPMENT: MOUNT RESPIRATORY PROTECTIVE DEVICE
PREVENT CONTACT WITH SKIN AND EYES

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.

INFORMATION ABOUT PROTECTION AGAINST EXPLOSIONS AND FIRES: NOT IGNITABLE

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES
STORAGE

REQUIREMENTS TO BE MET BY STOREROOMS AND RECEPTACLES: STORE AT 2-8°C. KEEP CONTAINER TIGHTLY CLOSED AND SEALED UNTIL READY FOR USE. STORE DESICCATED.

FURTHER INFORMATION ABOUT STORAGE CONDITIONS: KEEP RECEPTACLE TIGHTLY SEALED.

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 P2

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: LIQUID

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 MISCIBLE

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY

CHEMICAL STABILITY

STABLE WHEN STORED AS DIRECTED.

THERMAL DECOMPOSITION/CONDITIONS TO BE AVOIDED: NO DECOMPOSITION IF USED ACCORDING TO SPECIFICATIONS

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.

NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

ON THE SKIN: MAY CAUSE SKIN IRRITATION

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN

ON THE EYE: MAY CAUSE EYE IRRITATION

INHALATION: MAY IRRITATE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.

MAY BE HARMFUL IF INHALED

INGESTION: MAY BE HARMFUL IF SWALLOWED

SECTION 12. ECOLOGICAL INFORMATION

NO DATA AVAILABLE

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 DISPERSAL 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

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. NOT REGULATED

SECTION 15. REGULATORY INFORMATION

UNITED STATES REGULATORY INFORMATION

NO KNOWN OSHA HAZARDS AT THE PRESENT CONCENTRATIONS

SARA (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986-USA)

SECTION 302/304 (40CFR355.30/40CFR355.40):
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.

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.

MATERIAL SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG/PRODUCT#: FX446

NAME: FIXATIVE STOCK

USE: LABORATORY CHEMICALS

MANUFACTURER/SUPPLIER:

CYTOSKELETON INC.

1830 S. Acoma St.

Denver, CO 80223

PHONE: 303-322-2254

FAX: 303-322-2257

EMERGENCY CONTACT:

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

CARCINOGEN, TARGET ORGAN EFFECT, HAZARDOUS BY INHALATION, HAZARDOUS BY INGESTION, HAZARDOUS BY SKIN ABSORPTION, SKIN AND RESPIRATORY SENSITIZER, CORROSIVE

TARGET ORGANS

KIDNEY, LIVER, EYES, HEART, CENTRAL NERVOUS SYSTEM

GHS CLASSIFICATION

ACUTE TOXICITY, ORAL (CATEGORY 4)

SKIN IRRITATION (CATEGORY 3)

SERIOUS EYE DAMAGE (CATEGORY 1)

RESPIRATORY SENSITIZATION (CATEGORY 1)

SKIN SENSITIZATION (CATEGORY 1)

CARCINOGENICITY (CATEGORY 2)

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (CATEGORY 1)

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

PICTOGRAM:



SIGNAL WORD: DANGER

HAZARD STATEMENTS

H302 HARMFUL IF SWALLOWED
H316 CAUSES MILD SKIN IRRITATION
H317 MAY CAUSE AN ALLERGIC SKIN REACTION
H318 CAUSES SERIOUS EYE DAMAGE
H334 MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED
H351 SUSPECTED OF CAUSING CANCER
H370 CAUSES DAMAGE TO ORGANS

PRECAUTIONARY STATEMENTS

P260 DO NOT BREATHE DUST/FUME/GAS/MIST/VAPORS/SPRAY
P280 WEAR PROTECTIVE GLOVES/EYE PROTECTION/FACE PROTECTION
P305+P351+P338 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES IF PRESENT AND EASY TO DO. CONTINUE RINSING.
P307+P311 IF EXPOSED, CALL A POISON CENTER OR DOCTOR/PHYSICIAN

NFPA RATINGS (SCALE 0-4)

FIRE = 0
HEALTH = 2
REACTIVITY HAZARD = 0

HMIS RATINGS

HEALTH = 2
FIRE = 0
PHYSICAL HAZARDS = 0
CHRONIC HEALTH HAZARD = *

POTENTIAL HEALTH EFFECTS

INHALATION HAZARDOUS IF INHALED. MATERIAL IS EXTREMELY DESTRUCTIVE TO THE TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.
SKIN HAZARDOUS IF ABSORBED THROUGH SKIN. CAUSES SKIN BURNS.
EYES CAUSES EYE BURNS.
INGESTION HAZARDOUS IF SWALLOWED.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENT

FORMALDEHYDE	CAS#: 50-00-0 EINECS#: 200-001-8	3-4% BY WEIGHT
METHANOL	CAS#: 67-56-1 EINECS#: 200-659-6	1-1.5% BY WEIGHT
WATER	CAS#: 7732-18-5	93% BY WEIGHT

SODIUM PHOSPHATE MONOBASIC, CAS#: 7558-80-7 <1% BY WEIGHT
ANHYDROUS

SODIUM PHOSPHATE DIBASIC CAS#: 7558-79-4 1% BY WEIGHT

SECTION 4. FIRST-AID MEASURES

GENERAL ADVICE: MOVE OUT OF DANGEROUS AREA. CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.

AFTER INHALATION: SUPPLY FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. CONSULT PHYSICIAN.

AFTER SKIN CONTACT: IMMEDIATELY WASH SKIN WITH SOAP AND RINSE WITH COPIOUS AMOUNTS OF WATER. TAKE VICTIM IMMEDIATELY TO HOSPITAL. CONSULT PHYSICIAN.

AFTER EYE CONTACT: RINSE OPENED EYE FOR AT LEAST 15 MINUTES UNDER RUNNING WATER. CONTINUE RINSING EYES DURING TRANSPORT TO HOSPITAL. CONSULT PHYSICIAN.

AFTER SWALLOWING: DO NOT INDUCE VOMITING. WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CONSULT PHYSICIAN.

WASH CONTAMINATED CLOTHING BEFORE REUSE.

SECTION 5. FIREFIGHTING MEASURES

CONDITIONS OF FLAMMABILITY

NON-FLAMMABLE

EXTINGUISHING MEDIA

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

ADVICE FOR FIREFIGHTERS

PROTECTIVE EQUIPMENT: MOUNT RESPIRATORY PROTECTIVE DEVICE (SELF CONTAINED BREATHING APPARATUS). PREVENT CONTACT WITH SKIN AND EYES.

HAZARDOUS COMBUSTION PRODUCTS: HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS: CARBON OXIDES

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY

PROCEDURES: WEAR PROTECTIVE CLOTHING, RESPIRATOR, CHEMICAL SAFETY GOGGLES, GLOVES. AVOID BREATHING VAPORS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. EVACUATE PERSONNEL TO SAFE AREAS. VAPORS CAN ACCUMULATE IN LOW AREAS.

ENVIRONMENTAL PRECAUTIONS: DILUTE WITH PLENTY OF WATER. DO NOT ALLOW TO ENTER SEWERS/SURFACE OR GROUND WATER. PREVENT FURTHER LEAKAGE IF SAFE TO DO SO. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP: SOAK UP WITH INERT ABSORBENT MATERIAL AND DISPOSE OF AS HAZARDOUS WASTE. KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.

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: AVOID CONTACT WITH SKIN AND EYES. AVOID INHALATION OF VAPOR OR MIST. ENSURE GOOD VENTILATION/EXHAUSTION AT THE WORKPLACE. WEAR APPROPRIATE PROTECTIVE CLOTHING (SEE SECTION 8). DO NOT RE-USE CONTAINER.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

STORAGE

REQUIREMENTS TO BE MET BY STOREROOMS AND RECEPTACLES: STORE AT 4°C. KEEP CONTAINER TIGHTLY CLOSED AND SEALED UNTIL READY FOR USE IN A DRY AND WELL-VENTILATED PLACE. CONTAINERS WHICH ARE OPENED MUST BE CAREFULLY RESEALED AND KEPT UPRIGHT TO PREVENT LEAKAGE.

FURTHER INFORMATION ABOUT STORAGE CONDITIONS: KEEP RECEPTACLE TIGHTLY SEALED.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

FORMALDEHYDE GAS

STEL: 0.3 PPM FROM ACGIH (UNITED STATES)
STEL: 0.37 (mg/m³) FROM ACGIH (TLV) (UNITED STATES)
TWA: 0.75 STEL: 2 PPM FROM OSHA (PEL) (UNITED STATES)
TWA: 2 STEL: 2 PPM (UNITED KINGDOM)
TWA: 2.5 STEL (mg/m³) (UNITED KINGDOM)

METHANOL

TWA: 200 FROM OSHA (PEL) (UNITED STATES)
TWA: 200 STEL: 250 PPM FROM ACGIH (TLV) (UNITED STATES)
STEL: 250 FROM NIOSH (UNITED STATES)
TWA: 200 STEL: 250 PPM FROM NIOSH SKIN
TWA: 200 STEL: 250 PPM (CANADA)

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

WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE, USE A FULL-FACE RESPIRATOR WITH MULTI-PURPOSE COMBINATION OR TYPE ABEK RESPIRATOR CARTRIDGES AS A BACK-UP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR.

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 OR SAFETY GLASSES WITH SIDE-SHIELDS. ALSO USE FACESHIELD (8 INCH MINIMUM).

BODY PROTECTION: PROTECTIVE WORK CLOTHING

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

GENERAL INFORMATION

FORM: LIQUID

COLOR: CLEAR, COLORLESS

ODOR: NO DATA AVAILABLE

TASTE: NO DATA AVAILABLE

SAFETY DATA

pH: NO DATA AVAILABLE

MELTING POINT/MELTING RANGE: MAY START TO SOLIDIFY AT -97.8°C (-144°F) BASED ON DATA FOR METHANOL

BOILING POINT/BOILING RANGE: THE LOWEST KNOWN VALUE IS 64.5°C (148.1°F) (METHANOL). WEIGHTED AVERAGE: 99.53°C (211.2°F)

FLASH POINT: NO DATA AVAILABLE

IGNITION TEMPERATURE: NO DATA AVAILABLE
AUTOIGNITION TEMPERATURE: NO DATA AVAILABLE
LOWER EXPLOSION LIMIT: NO DATA AVAILABLE
UPPER EXPLOSION LIMIT: NO DATA AVAILABLE
VAPOR PRESSURE: THE HIGHEST KNOWN VALUE IS 12.3 kPa (@ 20°C) (METHANOL).
WEIGHTED AVERAGE: 2.43 kPa (@ 20°C)
DENSITY: NO DATA AVAILABLE
SOLUBILITY IN/MISCIBILITY WITH WATER: EASILY SOLUBLE IN WATER
ODOR: NO DATA AVAILABLE

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY

CHEMICAL STABILITY

STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

THERMAL DECOMPOSITION/CONDITIONS TO BE AVOIDED: SLIGHTLY REACTIVE TO REACTIVE WITH OXIDIZING AGENTS, REDUCING AGENTS, ACIDS, ALKALIS

POSSIBILITY OF HAZARDOUS REACTIONS: ALSO INCOMPATIBLE WITH UREA, PHENOL, ISOCYANATES, ANHYDRIDES, AMINES, AZO COMPOUNDS, CARBONYL COMPOUNDS, OXIDES (e.g., NITROGEN DIOXIDE), PERFORMIC ACID, DITHIOCARBAMATES, OR PEROXIDASES.

HAZARDOUS DECOMPOSITION PRODUCTS: HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS: CARBON OXIDES, NITROGEN OXIDES, SULPHUR OXIDES, HYDROGEN CHLORIDE GAS, SODIUM OXIDES

POLYMERIZATION: WILL NOT OCCUR

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

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

ACUTE TOXICITY

LD50 ORAL : 42 mg/kg (MOUSE) (FORMALDEHYDE GAS)

LD50 ORAL : 100 mg/kg (RAT) (FORMALDEHYDE GAS)

LD50 ORAL : 5628 mg/kg (RAT) (METHANOL)

INHALATION LC50

LC50 INHALATION: 0.454 mg/m³ 4 HOURS (MOUSE) (FORMALDEHYDE GAS)

LC50 INHALATION: 64000 PPM 4 HOURS (RAT) (METHANOL)

ACUTE DERMAL LD50

LD50 DERMAL: 15800 mg/kg (RABBIT) (METHANOL)

LD50 DERMAL: 270 UI/kg (RABBIT) (FORMALDEHYDE GAS)

SKIN IRRITATION AND CORROSION

NO DATA AVAILABLE

SERIOUS EYE DAMAGE/EYE IRRITATION

NO DATA AVAILABLE

RESPIRATORY OR SKIN SENSITIZATION

NO DATA AVAILABLE

MUTAGENICITY

MUTAGENIC FOR MAMMALIAN SOMATIC CELLS (FORMALDEHYDE). MUTAGENIC FOR BACTERIA AND/OR YEAST (FORMALDEHYDE). MUTAGENIC FOR MAMMALIAN SOMATIC CELLS (METHANOL). MUTAGENIC FOR BACTERIA AND/OR YEAST (METHANOL)

CARCINOGENICITY

CLASSIFIED A2 (SUSPECTED FOR HUMAN) BY ACGIH, 2A (PROBABLE FOR HUMAN) BY IARC (FORMALDEHYDE)

TERATOGENICITY

CLASSIFIED POSSIBLE FOR HUMAN (METHANOL)

DEVELOPMENTAL TOXICITY

CLASSIFIED REPRODUCTIVE SYSTEM/TOXIN/FEMALE, REPRODUCTIVE SYSTEM/TOXIN/MALE (POSSIBLE) (METHANOL)

SPECIFIC TARGET ORGAN TOXICITY –SINGLE EXPOSURE (GLOBALLY HARMONIZED SYSTEM)

NO DATA AVAILABLE

SPECIFIC TARGET ORGAN TOXICITY –REPEATED EXPOSURE (GLOBALLY HARMONIZED SYSTEM)

NO DATA AVAILABLE

ASPIRATION HAZARD

NO DATA AVAILABLE

POTENTIAL HEALTH EFFECTS

INHALATION	HAZARDOUS IF INHALED. MATERIAL IS EXTREMELY DESTRUCTIVE TO THE TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.
SKIN	HAZARDOUS IF ABSORBED THROUGH SKIN. CAUSES SKIN BURNS.
EYES	CAUSES EYE BURNS.
INGESTION	HAZARDOUS IF SWALLOWED.

SYNERGISTIC EFFECTS

NO DATA AVAILABLE

SPECIAL REMARKS ON CHRONIC EFFECTS ON HUMANS

MAY AFFECT GENETIC MATERIAL; MAY CAUSE ADVERSE REPRODUCTIVE EFFECTS (PATERNAL AND MATERNAL EFFECTS AND FETOTOXICITY) AND BIRTH DEFECTS; MAY CAUSE CANCER

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY

NO DATA AVAILABLE

PERSISTENCE AND DEGRADABILITY

NO DATA AVAILABLE

BIOACCUMULATIVE POTENTIAL

NO DATA AVAILABLE

MOBILITY IN SOIL

NO DATA AVAILABLE

PBT AND vPvB ASSESSMENT

NO DATA AVAILABLE

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 DISPERSAL OF SPILLED MATERIAL AND RUNOFF AND CONTACT WITH SOIL, WATERWAYS, DRAINS AND SEWERS. OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS. DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.

DISPOSE OF CONTAMINATED PACKAGING AS UNUSED PRODUCT

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

OSHA HAZARDS

CARCINOGEN, TARGET ORGAN EFFECT, HAZARDOUS BY INHALATION, HAZARDOUS BY INGESTION, HAZARDOUS BY SKIN ABSORPTION, SKIN AND RESPIRATORY SENSITIZER, CORROSIVE

UNITED STATES REGULATORY INFORMATION

**SARA (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986-USA)
SECTION 302/304 (40CFR355.30/40CFR355.40):**

FORMALDEHYDE IS LISTED AS AN EXTREMELY HAZARDOUS SUBSTANCE.

**SARA (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986-USA)
SECTION 313:**

THIS MATERIAL CONTAINS FORMALDEHYDE (3.725%) AND METHANOL (1.25%).

SARA 311/312 HAZARDS

EXTREMELY HAZARDOUS SUBSTANCE: FORMALDEHYDE. ACUTE HEALTH HAZARD;
CHRONIC HEALTH HAZARD

TSCA 8(b) INVENTORY

FORMALDEHYDE; METHANOL; WATER; SODIUM PHOSPHATE MONOBASIC, ANHYDROUS;
SODIUM PHOSPHATE DIBASIC

TSCA 4 (f) PRIORITY RISK REVIEW

FORMALDEHYDE

MA RIGHT TO KNOW COMPONENTS:

METHANOL	CAS#: 67-56-1
FORMALDEHYDE	CAS#: 50-00-0

PA AND NJ RIGHT TO KNOW COMPONENTS:

METHANOL	CAS#: 67-56-1
FORMALDEHYDE	CAS#: 50-00-0
WATER	CAS#: 7732-18-5

CANADA:

PRODUCTS LISTED ON CANADIAN DOMESTIC SUBSTANCE LIST (DSL).

WHMIS (CANADA):

CLASS D-2B: MATERIAL CAUSING OTHER TOXIC EFFECTS (TOXIC).

CALIFORNIA PROP. 65 COMPONENTS

THIS PRODUCT CONTAINS THE FOLLOWING INGREDIENTS FOR WHICH THE STATE OF CALIFORNIA HAS FOUND TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM, WHICH WOULD REQUIRE A WARNING UNDER THE STATUTE: FORMALDEHYDE.

CALIFORNIA PROP. 65 (NO SIGNIFICANT RISK LEVEL): FORMALDEHYDE: 0.04 mg/day (INHALATION)

CALIFORNIA PROP. 65: THIS PRODUCT CONTAINS THE FOLLOWING INGREDIENTS FOR WHICH THE STATE OF CALIFORNIA HAS FOUND TO CAUSE CANCER WHICH WOULD REQUIRE A WARNING UNDER THE STATUTE: FORMALDEHYDE.

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.

MATERIAL SAFETY DATA SHEET

SECTION 1. CHEMICAL IDENTIFICATION

CATALOG/PRODUCT#: MM324

NAME: MOUNTING MEDIUM

USE: LABORATORY CHEMICALS

MANUFACTURER/SUPPLIER:

CYTOSKELETON INC.

1830 S. Acoma St.

Denver, CO 80223

PHONE: 303-322-2254

FAX: 303-322-2257

EMERGENCY CONTACT:

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

TARGET ORGAN EFFECT, HARMFUL BY INGESTION, IRRITANT

TARGET ORGANS

KIDNEY

GHS CLASSIFICATION

SKIN IRRITATION (CATEGORY 2)

EYE IRRITATION (CATEGORY 2A)

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

PICTOGRAM:



SIGNAL WORD: WARNING

HAZARD STATEMENTS

H315 CAUSES SKIN IRRITATION

H319 CAUSES SERIOUS EYE IRRITATION

PRECAUTIONARY STATEMENTS

P305+P351+P338 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES IF PRESENT AND EASY TO DO. CONTINUE RINSING.

NFPA RATINGS (SCALE 0-4)

FIRE = 1
HEALTH HAZARD = 2
REACTIVITY HAZARD = 0

HMIS RATINGS

HEALTH HAZARD = 2
FIRE = 1
PHYSICAL HAZARDS = 0

POTENTIAL HEALTH EFFECTS

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

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

GLYCEROL	CAS#: 56-81-5	10-30% (CONC.)
	EINECS#: 200-289-5	
TRIS (HYDROXYMETHYL) AMINOMETHANE	CAS#: 77-86-1	10-30% (CONC.)
	EINECS#: 201-064-4	
1,4 DIAZABICYCLOOCTANE	CAS#: 280-57-9	1-5% (CONC.)
	EINECS#: 205-999-9	

SECTION 4. FIRST-AID MEASURES

GENERAL ADVICE: MOVE OUT OF DANGEROUS AREA. CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.

AFTER INHALATION: SUPPLY FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. CONSULT PHYSICIAN.

AFTER SKIN CONTACT: IMMEDIATELY WASH SKIN WITH SOAP AND RINSE WITH COPIOUS AMOUNTS OF WATER. CONSULT PHYSICIAN.

AFTER EYE CONTACT: RINSE OPENED EYE FOR AT LEAST 15 MINUTES UNDER RUNNING WATER. CONSULT PHYSICIAN.

AFTER SWALLOWING: WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CONSULT PHYSICIAN.

WASH CONTAMINATED CLOTHING BEFORE REUSE.

SECTION 5. FIREFIGHTING MEASURES

CONDITIONS OF FLAMMABILITY

NOT FLAMMABLE OR COMBUSTIBLE

EXTINGUISHING MEDIA

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

ADVICE FOR FIREFIGHTERS

PROTECTIVE EQUIPMENT: MOUNT RESPIRATORY PROTECTIVE DEVICE.

PREVENT CONTACT WITH SKIN AND EYES.

HAZARDOUS COMBUSTION PRODUCTS: HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS: CARBON OXIDES, NITROGEN OXIDES, HYDROGEN CHLORIDE GAS

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY

PROCEDURES: WEAR PROTECTIVE CLOTHING, RESPIRATOR, CHEMICAL SAFETY GOGGLES, GLOVES. AVOID BREATHING VAPORS, MIST OR GAS. ENSURE ADEQUATE VENTILATION.

ENVIRONMENTAL PRECAUTIONS: DILUTE WITH PLENTY OF WATER. DO NOT ALLOW TO ENTER SEWERS/SURFACE OR GROUND WATER. PREVENT FURTHER LEAKAGE IF SAFE TO DO SO. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP: SOAK UP WITH INERT ABSORBENT MATERIAL AND DISPOSE OF AS HAZARDOUS WASTE. KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.

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: AVOID CONTACT WITH SKIN AND EYES. AVOID INHALATION OF VAPOR OR MIST. ENSURE GOOD VENTILATION/EXHAUSTION AT THE WORKPLACE. WEAR APPROPRIATE PROTECTIVE CLOTHING (SEE SECTION 8). DO NOT RE-USE CONTAINER.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

STORAGE

REQUIREMENTS TO BE MET BY STOREROOMS AND RECEPTACLES: STORE AT 4°C. KEEP CONTAINER TIGHTLY CLOSED AND SEALED UNTIL READY FOR USE IN A DRY AND WELL-VENTILATED PLACE. CONTAINERS WHICH ARE OPENED MUST BE CAREFULLY RESEALED AND KEPT UPRIGHT TO PREVENT LEAKAGE.

FURTHER INFORMATION ABOUT STORAGE CONDITIONS: KEEP RECEPTACLE TIGHTLY SEALED.

STORE AS RECOMMENDED (2-8°C).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

COMPONENTS	CAS#	VALUE	CONTROL PARAMETERS	BASIS
GLYCEROL	56-81-5	TWA	10 mg/m ³	USA. OSHA-TABLE Z-1 LIMITS FOR AIR CONTAMINANTS-1910.1000
		TWA	5 mg/m ³	USA. OSHA-TABLE Z-1 LIMITS FOR AIR CONTAMINANTS-1910.1000
		TWA	10 mg/m ³	USA. ACGIH THRESHOLD LIMIT VALUES (TLV)
REMARKS:	UPPER RESPIRATORY TRACT IRRITATION	TWA	15 mg/m ³	USA. OCCUPATIONAL EXPOSURE LIMITS (OSHA) –TABLE Z-1 LIMITS FOR AIR CONTAMINANTS
		TWA	5 mg/m ³	USA. OCCUPATIONAL EXPOSURE LIMITS (OSHA) –TABLE Z-1 LIMITS FOR AIR CONTAMINANTS
		SEE APPENDIX D – SUBSTANCES WITH NO ESTABLISHED RELS		

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

WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE, USE A FULL-FACE RESPIRATOR WITH MULTI-PURPOSE COMBINATION OR TYPE ABEK RESPIRATOR CARTRIDGES AS A BACK-UP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR.

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 OR SAFETY GLASSES WITH SIDE-SHIELDS.

BODY PROTECTION: PROTECTIVE WORK CLOTHING

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES GENERAL INFORMATION

FORM: LIQUID
COLOR: CLEAR, COLORLESS

SAFETY DATA

pH: 8.7
MELTING POINT/MELTING RANGE: NO DATA AVAILABLE
BOILING POINT/BOILING RANGE: NO DATA AVAILABLE
FLASH POINT: 100°C (212°F) - CLOSED CUP
IGNITION TEMPERATURE: NO DATA AVAILABLE
AUTOIGNITION TEMPERATURE: NO DATA AVAILABLE
LOWER EXPLOSION LIMIT: NO DATA AVAILABLE
UPPER EXPLOSION LIMIT: NO DATA AVAILABLE
VAPOR PRESSURE: NO DATA AVAILABLE
DENSITY: 1.08 g/mL at 20°C (68°F)
SOLUBILITY IN/MISCIBILITY WITH WATER: NO DATA AVAILABLE
ODOR: NO DATA AVAILABLE

SECTION 10. STABILITY AND REACTIVITY

REACTIVITY

CHEMICAL STABILITY

STABLE UNDER RECOMMENDED STORAGE CONDITIONS.

THERMAL DECOMPOSITION/CONDITIONS TO BE AVOIDED: BASES, STRONG BASES, STRONG OXIDIZING AGENTS, STRONG ACIDS

POSSIBILITY OF HAZARDOUS REACTIONS: NO DATA AVAILABLE

HAZARDOUS DECOMPOSITION PRODUCTS: HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS: CARBON OXIDES, NITROGEN OXIDES, HYDROGEN CHLORIDE GAS

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

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

ACUTE TOXICITY

LD50 ORAL: NO DATA AVAILABLE

INHALATION LC50

LC50 INHALATION: NO DATA AVAILABLE

DERMAL LD50

LD50 DERMAL: NO DATA AVAILABLE

SKIN IRRITATION AND CORROSION

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

IARC:

3 - GROUP 3: NOT CLASSIFIABLE AS TO ITS
CARCINOGENICITY TO HUMANS (ETHENOL, HOMOPOLYMER)

ACGIH, 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 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

ASPIRATION HAZARD

NO DATA AVAILABLE

POTENTIAL HEALTH EFFECTS

INHALATION

MAY BE HARMFUL IF INHALED. CAUSES RESPIRATORY
TRACT IRRITATION.

SKIN	HARMFUL IF ABSORBED THROUGH SKIN. CAUSES SKIN IRRITATION.
EYES	CAUSES EYE IRRITATION.
INGESTION	HARMFUL IF SWALLOWED.

SIGNS AND SYMPTOMS OF EXPOSURE

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

SYNERGISTIC EFFECTS

NO DATA AVAILABLE

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY

NO DATA AVAILABLE

PERSISTENCE AND DEGRADABILITY

NO DATA AVAILABLE

BIOACCUMULATIVE POTENTIAL

NO DATA AVAILABLE

MOBILITY IN SOIL

NO DATA AVAILABLE

PBT AND vPvB ASSESSMENT

NO DATA AVAILABLE

OTHER ADVERSE EFFECTS

NO DATA AVAILABLE

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 DISPERSAL OF SPILLED MATERIAL AND RUNOFF AND CONTACT WITH SOIL, WATERWAYS, DRAINS AND SEWERS. OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS. DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.

DISPOSE OF CONTAMINATED PACKAGING AS UNUSED PRODUCT

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

OSHA HAZARDS

TARGET ORGAN EFFECT, HARMFUL BY INGESTION, IRRITANT

UNITED STATES REGULATORY INFORMATION

SARA (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986-USA) SECTION 302/304 (40CFR355.30/40CFR355.40):

NONE OF THE INGREDIENTS IS 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.

SARA 311/312 HAZARDS

ACUTE HEALTH HAZARD, CHRONIC HEALTH HAZARD

MA RIGHT TO KNOW COMPONENTS

HYDROCHLORIC ACID	CAS#: 7647-01-0
GLYCEROL	CAS#: 56-81-5

PA AND NJ RIGHT TO KNOW COMPONENTS

WATER	CAS#: 7732-18-5
HYDROCHLORIC ACID	CAS#: 7647-01-0
GLYCEROL	CAS#: 56-81-5
TRIS (HYDROXYMETHYL) AMINOMETHANE	CAS#: 77-86-1
1,4-DIAZABICYCLOOCTANE	CAS#: 280-57-9
ETHENOL, HOMOPOLYMER	CAS#: 9002-89-5

CALIFORNIA PROP. 65 COMPONENTS

THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALS KNOWN TO 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.