

MATERIAL SAFETY DATA SHEET**SECTION 1. CHEMICAL IDENTIFICATION**

CATALOG/PRODUCT#: TXD01
NAME: PACLITAXEL (TAXOL)
USE: LABORATORY CHEMICALS
MANUFACTURER/SUPPLIER:
CYTOSKELETON INC.
1830 S. Acoma St.
Denver, CO 80223
PHONE: 303-322-2254
FAX: 303-322-2257

24 H EMERGENCY TOLL-FREE NUMBER: CALL CHEMTREC DAY OR NIGHT
WITHIN USA AND CANADA: 1-800-424-9300
OUTSIDE USA AND CANADA: +1 703-527-3887 (COLLECT CALLS ACCEPTED)

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

FORMULA $C_{47}H_{51}NO_{14}$
MOLECULAR WEIGHT 853.92 g/mol

<u>CAS#</u>	<u>EC#</u>	<u>INDEX#</u>	<u>CONCENTRATION</u>
33069-62-4	UNLISTED		

SECTION 3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW****OSHA HAZARDS**

TARGET ORGAN EFFECT, SKIN SENSITIZER, IRRITANT, REPRODUCTIVE HAZARD, MUTAGEN

TARGET ORGANS

CARDIOVASCULAR SYSTEM, NERVES, EYES, KIDNEYS, LIVER, BONE MARROW

GHS CLASSIFICATION

SKIN IRRITATION (CATEGORY 2)
SERIOUS EYE DAMAGE (CATEGORY 1)
SKIN SENSITIZATION (CATEGORY 1)
REPRODUCTIVE TOXICITY (CATEGORY 2)
SPECIFIC TARGET ORGAN TOXICITY -SINGLE EXPOSURE (CATEGORY 3)
CHRONIC AQUATIC TOXICITY (CATEGORY 4)

SIGNAL WORD: DANGER

HAZARD STATEMENTS

H315 CAUSES SKIN IRRITATION
H317 MAY CAUSE AN ALLERGIC SKIN REACTION
H318 CAUSES SERIOUS EYE DAMAGE
H335 MAY CAUSE RESPIRATORY IRRITATION
H361 SUSPECTED OF DAMAGING FERTILITY OR THE UNBORN CHILD
H413 MAY CAUSE LONG LASTING HARMFUL EFFECTS TO AQUATIC LIFE

PRECAUTIONARY STATEMENTS

P261 AVOID BREATHING 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 APPLICABLE AND EASY TO DO. CONTINUE TO RINSE

NFPA RATINGS (SCALE 0-4)

FIRE = 0
HEALTH = 2
REACTIVITY = 0

HMIS RATINGS

HEALTH = 2
FIRE = 0
REACTIVITY = 0

POTENTIAL HEALTH EFFECTS

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

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. 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

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 DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS: CARBON OXIDES, NITROGEN 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, VAPORS, MIST OR GAS. ENSURE ADEQUATE VENTILATION.

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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTAINS NO SUBSTANCES WITH OCCUPATIONAL EXPOSURE 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:

3.0-8.0

MELTING POINT/MELTING RANGE:

MELTING POINT/RANGE: 213°C
(415°F) - DEC

BOILING POINT/BOILING RANGE:

NO DATA AVAILABLE

FLASH POINT:

NO DATA AVAILABLE

SELF-IGNITING:	NO DATA AVAILABLE
DANGER OF EXPLOSION:	NO DATA AVAILABLE
DENSITY:	0.200 g/cm ³
SOLUBILITY IN/MISCIBILITY WITH WATER:	INSOLUBLE

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: CARBON OXIDES, NITROGEN OXIDES

THERMAL DECOMPOSITION:
100°C

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 LD50

NO DATA AVAILABLE

INHALATION LC50

DERMAL LD50

NO DATA AVAILABLE

OTHER INFORMATION ON ACUTE TOXICITY

NO DATA AVAILABLE

SKIN CORROSION/IRRITATION

NO DATA AVAILABLE

SERIOUS EYE DAMAGE/EYE IRRITATION

NO DATA AVAILABLE

RESPIRATORY OR SKIN SENSITIZATION

MAY CAUSE ALLERGIC SKIN REACTION

GERM CELL MUTAGENICITY

LABORATORY EXPERIMENTS HAVE SHOWN MUTAGENIC EFFECTS

GENOTOXICITY IN VITRO -HAMSTER- LUNGS
CYTOGENETIC ANALYSIS

GENOTOXICITY IN VIVO -MOUSE- SUBCUTANEOUS
MICRONUCLEUS TEST

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

REPRODUCTIVE TOXICIT -RAT- INTRAVENOUS
MATERNAL EFFECTS: OTHER EFFECTS. EFFECTS ON FERTILITY: PRE-
IMPLANTATION MORTALITY (e.g., REDUCTION IN NUMBER OF IMPLANTS PER
FEMALE; TOTAL NUMBER OF IMPLANTS PER CORPORA LUTEA). EFFECTS ON
EMBRYO OR FETUS: EXTRA EMBRYONIC STRUCTURES (e.g., PLACENTA,
UMBILICAL CORD).

REPRODUCTIVE TOXICITY -RAT- INTRAVENOUS
EFFECTS ON NEWBORN: GROWTH STATISTICS (e.g., REDUCED WEIGHT GAIN).
EFFECTS ON NEWBORN: BEHAVIORAL. EFFECTS ON NEWBORN: PHYSICAL.

OVEREXPOSURE MAY CAUSE REPRODUCTIVE DISORDER(S) BASED ON TESTS
WITH LABORATORY ANIMALS

TERATOGENICITY

DEVELOPMENTAL TOXICITY -RAT- INTRAVENOUS
SPECIFIC DEVELOPMENTAL ABNORMALITIES: MUSCULOSKELETAL SYSTEM.
EFFECTS ON NEWBORN: DELAYED EFFECTS

SUSPECTED HUMAN REPRODUCTIVE TOXICANT

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

INHALATION -MAY CAUSE RESPIRATORY IRRITATION

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

NO DATA AVAILABLE

ASPIRATION HAZARD

NO DATA AVAILABLE

POTENTIAL HEALTH EFFECTS

ON THE SKIN: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CAUSES SKIN
IRRITATION

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CAUSES
SKIN IRRITATION

ON THE EYE: CAUSES EYE IRRITATION

INHALATION: MAY BE HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION

INGESTION: MAY BE HARMFUL IF SWALLOWED

SIGNS AND SYMPTOMS OF EXPOSURE

ALOPECIA, LIVER INJURY MAY OCCUR. KIDNEY INJURY MAY OCCUR. NAUSEA, HEADACHE, VOMITING, BONE MARROW DEPRESSION

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

DOT CLASSIFICATION:

NOT DANGEROUS GOODS

IMDG CLASSIFICATION:

NOT DANGEROUS GOODS

IATA CLASSIFICATION:

NOT DANGEROUS GOODS

SECTION 15. REGULATORY INFORMATION

OSHA HAZARDS

TARGET ORGAN EFFECT, SKIN SENSITIZER, IRRITANT, REPRODUCTIVE HAZARD, MUTAGEN

DSL STATUS

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

PACLITAXEL CAS#: 33069-62-4

**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 REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313

SARA 311/312 HAZARDS

ACUTE HEALTH HAZARD, CHRONIC HEALTH HAZARD

MASSACHUSETTS RIGHT TO KNOW COMPONENTS

NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

PACLITAXEL CAS#: 33069-62-4

NEW JERSEY RIGHT TO KNOW COMPONENTS

PACLITAXEL CAS#: 33069-62-4

CALIFORNIA PROP. 65 COMPONENTS

WARNING! THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

PACLITAXEL CAS#: 33069-62-4

EUROPEAN REGULATIONS

HAZARD SYMBOLS: XN

RISK PHRASES

R40: LIMITED EVIDENCE OF A CARCINOGENIC EFFECT

R41: RISK OF SERIOUS DAMAGE TO EYES

SAFETY PHRASES

S26: IN CASE OF CONTACT WITH EYES, RINSES IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE

S36/37/39: WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION

S45: IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY

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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