Taxol: sc-201439

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Taxol
Product Number: sc-201439

Supplier: Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, CA 95060
800.457.3801 or 831.457.3800

Emergency: ChemWatch
Within the US & Canada: 877-715-9305
Outside the US & Canada: +800 2436 2255 (1-800-CHEMCALL) or call +613 9573 3112

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Target Organ Effect, Toxic by inhalation, Toxic by ingestion, Toxic by skin absorption, Skin sensitizer, Respiratory sensitizer, Irritant, Carcinogen, Teratogen, Mutagen

Target Organs

Cardiovascular system, Nerves, Eyes, Kidney, Liver, Bone marrow, Heart, Central nervous system, Gastrointestinal tract

GHS Classification

Acute toxicity, Oral (Category 5)
Skin irritation (Category 2)
Serious eye damage (Category 1)
Respiratory sensitization (Category 1)
Skin sensitization (Category 1)
Germ cell mutagenicity (Category 2)
Reproductive toxicity (Category 2)
Specific target organ toxicity - single exposure (Category 1)
Specific target organ toxicity - single exposure (Category 3)

GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)

H303	May be harmful if swallowed.
H315	Causes 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.
H335	May cause respiratory irritation
H341	Suspected of causing genetic defects.
H361	Suspected of damaging fertility or the unborn child.
H370	Causes damage to organs.

Precautionary statement(s)

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.

HMIS Classification

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	0
Physical hazards:	0

NFPA Rating

Health hazard:	2
Fire:	0
Reactivity Hazard:	0

Potential Health Effects

Inhalation	Toxic if inhaled. Causes respiratory tract irritation.
Skin	Toxic if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.
Ingestion	Toxic if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Paclitaxel
Formula: C47H51NO14
Molecular Weight: 853.91

CAS-No.	*EC-No.*	*Index-No.*	*Concentration*
Taxol			
33069-62-4	-	-	90 - 100%
Methanol			
67-56-1	200-659-6	603-001-00-X	1 - 5%
2-Propanol			
67-63-0	200-661-7	603-117-00-0	1 - 5%
Ethanol			
64-17-5	200-578-6	603-002-00-5	1 - 5%

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability
Not flammable or combustible.
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special protective equipment for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.
Hazardous combustion products
Hazardous decomposition products formed under fire conditions: carbon oxides, nitrogen oxides (NOx).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Store at 4° C. Keep in a dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Methanol	67-56-1	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Headache Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption			
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Headache Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption			
		STEL	250 ppm	USA. OSHA - TABLE Z-1 Limits for Air Contaminants -
			325 mg/m3	1910.1000
	Skin notation			
		TWA	200 ppm 260 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	The value in mg/m3 is approximate.			
		TWA	200 ppm 260 mg/m3	USA. NIOSH Recommended Exposure Limits
	Potential for dermal absorption			
		ST	250 ppm 325 mg/m3	USA. NIOSH Recommended Exposure Limits
	Potential for dermal absorption			

2-Propanol	67-63-0	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Eye & Upper Respiratory Tract irritation Central Nervous System impairment Not classifiable as a human carcinogen			
		STEL	400 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Eye & Upper Respiratory Tract irritation Central Nervous System impairment Not classifiable as a human carcinogen			
		TWA	400 ppm 980 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		STEL	500 ppm 1,225 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	400 ppm 980 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	The value in mg/m3 is approximate.			
		TWA	400 ppm 980 mg/m3	USA. NIOSH Recommended Exposure Limits
		ST	500 ppm 1,225 mg/m3	USA. NIOSH Recommended Exposure Limits
Ethanol	64-17-5	TWA	1,000 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Upper Respiratory Tract irritation Confirmed animal carcinogen with unknown relevance to humans			
		TWA	1,000 ppm 1,900 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	The value in mg/m3 is approximate.			
		TWA	1,000 ppm 1,900 mg/m3	USA. NIOSH Recommended Exposure Limits

Personal protective equipment

Respiratory protection

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).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	powder	pH	3.0 - 8.0
Melting point/range:	213 °C - dec.	Boiling point	no data available
Flash point	no data available	Ignition temperature	no data available
Auto-ignition temperature	no data available	Lower explosion limit	no data available
Upper explosion limit	no data available	Vapor pressure	no data available
Density	0.2 g/cm3	Water solubility	insoluble

Relative vapor density	no data available	Odor	no data available
Odor Threshold	no data available	Evaporation rate	no data available
Partition coefficient: n-octanol/water	log Pow: > 99		

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.
Possibility of hazardous reactions
no data available
Conditions to avoid
no data available
Materials to avoid
no data available
Hazardous decomposition products
Hazardous decomposition products formed under fire conditions: carbon oxides, nitrogen oxides (NOx).
Other decomposition products
no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50 no data available
Inhalation LC50 Irritating to respiratory system.
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 respiratory and skin reactions
Germ cell mutagenicity
Laboratory experiments have shown mutagenic effects.

Genotoxicity in vitro:	Hamster - Lungs Cytogenetic analysis
Genotoxicity in vivo:	Mouse - Subcutaneous Micronucleus test

Carcinogenicity

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (2-Propanol)

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by 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 OSHA.

Reproductive toxicity
Reproductive toxicity - rat - Intravenous

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).
Effects on Newborn:
Growth statistics (e.g., reduced weight gain), behavioral, and 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.
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
Inhalation Toxic if inhaled. Causes respiratory tract irritation.
Skin Toxic if absorbed through skin. Causes skin irritation.
Eyes Causes eye irritation.
Ingestion Toxic if swallowed.
Signs and Symptoms of Exposure
Alopecia, nausea, headache, vomiting, and bone marrow depression. Liver and kidney injury may occur.
Synergistic effects
no data available
Additional Information
RTECS: DA8340700

12. ECOLOGICAL INFORMATION

Toxicity
no data available
Bioaccumulative potential
no data available
PBT and vPvB assessment
no data available
Persistence and degradability
no data available
Mobility in soil
no data available
Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)	IMDG	IATA
Not dangerous goods	Not dangerous goods	Not dangerous goods

15. REGULATORY INFORMATION

OSHA Hazards
Target Organ Effect, Toxic by inhalation, Toxic by ingestion, Toxic by skin absorption, Skin sensitizer, Respiratory sensitizer, Irritant, Carcinogen, Teratogen, Mutagen
SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:
Methanol CAS-No. 67-56-1
2-Propanol CAS-No. 67-63-0

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard
Methanol CAS-No. 67-56-1
2-Propanol CAS-No. 67-63-0
Ethanol CAS-No. 64-17-5

Pennsylvania Right To Know Components
Paclitaxel CAS-No. 33069-62-4
Methanol CAS-No. 67-56-1
2-Propanol CAS-No. 67-63-0
Ethanol CAS-No. 64-17-5

New Jersey Right To Know Components
Paclitaxel CAS-No. 33069-62-4
Methanol CAS-No. 67-56-1
2-Propanol CAS-No. 67-63-0
Ethanol CAS-No. 64-17-5

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-No. 33069-62-4
Methanol CAS-No. 67-56-1

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.

10/02/2013