

# MATERIAL SAFETY DATA SHEET

Version No: MSDS/Doc-AUS/DP-003

Effective Date: 21<sup>st</sup> October 2019

## DOCETAXEL INJECTION 20 MG/1 ML, 80 MG/4 ML AND 160 MG/8 ML

### SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Docetaxel Injection 20 mg/1 mL, 80 mg/4 mL and 160 mg/8 mL

Sponsor	Manufacturer-1	Manufacturer-2
Accord Healthcare Pty Ltd Level 24, 570 Bourke Street, Melbourne, VIC, 3000, Australia	Intas Pharmaceuticals Ltd. Plot No. 457, 458 Village-Matoda, Bavla Road, Ta. Sanand, Dist. Ahmedabad-382 210, Gujarat, India	Intas Pharmaceuticals Ltd. Plot No. 5, 6 and 7, Pharmez, Near Matoda Village, Ahmedabad-382 213, Gujarat, India

### SECTION 2 – COMPOSITION, INFORMATION ON INGREDIENTS

**Active:** Docetaxel.

**Inactive:** Anhydrous Citric acid, Dehydrated alcohol and Polysorbate 80

Ingredient	CAS Number	EU EINECS/ELINCS List	GHS Classification	%
Citric acid, anhydrous	77-92-9	201-069-1	Not Listed	**
Docetaxel anhydrous	114977-28-5	Not Listed	Repr. 1B (H360D) Muta. 2 (H341) Eye Irrit. 2A (H319) Lact. (H362)	1
Ethyl alcohol (ethanol)	64-17-5	200-578-6	Flam. Liq. 2 (H225)	<40
Polysorbate 80	9005-65-6	500-019-9	Not Listed	*

#### Additional Information:

\* Proprietary

\*\* to adjust pH

Ingredient(s) indicated as hazardous have been assessed under standards for workplace safety. In accordance with 29 CFR 1910.1200, the exact percentage composition of this mixture has been withheld as a trade secret.

**For the full text of the CLP/GHS abbreviations mentioned in this Section, see Section 16**

# MATERIAL SAFETY DATA SHEET

Version No: MSDS/Doc-AUS/DP-003

Effective Date: 21<sup>st</sup> October 2019

## SECTION 3 - HAZARDS IDENTIFICATION

### Classification of the Substance or Mixture:

#### GHS – Classification:

Germ Cell Mutagenicity : Category 2  
Reproductive Toxicity : Category 1B

#### Effects on or via lactation:

Flammable liquids - Category 2

#### Label Elements:

**Signal Word:** Danger

#### Hazard Statements:

H225 - Highly flammable liquid and vapor  
H319 - Causes serious eye irritation  
H341 - Suspected of causing genetic defects  
H360D - May damage the unborn child  
H362 - May cause harm to breast-fed children

#### Precautionary Statements:

P202 - Do not handle until all safety precautions have been read and understood  
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
P233 - Keep container tightly closed  
P240 - Ground/Bond container and receiving equipment  
P241 - Use explosion-proof electrical/ventilating/lighting/equipment  
P242 - Use only non-sparking tools  
P243 - Take precautionary measures against static discharge  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
P308 + P313 - IF exposed or concerned: Get medical attention/advice  
P403 + P235 - Store in a well-ventilated place. Keep cool  
P405 - Store locked up  
P501 - Dispose of contents/container in accordance with all local and national regulations  
P370 + P378 - In case of fire: Use CO<sub>2</sub>, extinguishing powder, foam, or water for extinction



# MATERIAL SAFETY DATA SHEET

**Version No:** MSDS/Doc-AUS/DP-003

**Effective Date:** 21<sup>st</sup> October 2019

---

**Other Hazards:** An Occupational Exposure Value has been established for one or more of the ingredients (see Section 8).

**Note:** This document has been prepared in accordance with standards for workplace safety, which requires the inclusion of all known hazards of the product or its ingredients regardless of the potential risk. The precautionary statements and warning included may not apply in all cases. Your needs may vary depending upon the potential for exposure in your workplace.

## SECTION 4 - EMERGENCY & FIRST AID MEASURES

### **Description of First Aid Measures:**

**Eye Contact:** Flush with water while holding eyelids open for at least 15 minutes. Seek medical attention immediately.

**Skin Contact:** Remove contaminated clothing. Flush area with large amounts of water. Use soap. Seek medical attention. For information on potential delayed effects, see Section 2 – Hazards Identification and/or Section 11 - Toxicological Information.

**Ingestion:** Never give anything by mouth to an unconscious person. Wash out mouth with water. Do not induce vomiting unless directed by medical personnel. Seek medical attention immediately.

**Inhalation:** Remove to fresh air and keep patient at rest. Seek medical attention immediately.

### **Most Important Symptoms and Effects, Both Acute and Delayed:**

**Symptoms and Effects of Exposure:** For information on potential signs and symptoms of exposure, See Section 2 – Hazards Identification and/or Section 11 - Toxicological Information.

**Medical Conditions Aggravated by Exposure:** None known

**Indication of the Immediate Medical Attention and Special Treatment Needed:**

**Notes to Physician:** None

## SECTION 5 - FIRE FIGHTING MEASURES

**Extinguishing Media:** Extinguish fires with CO<sub>2</sub>, extinguishing powder, foam, or water.

**Special Hazards Arising from the Substance or Mixture:**

# MATERIAL SAFETY DATA SHEET

**Version No:** MSDS/Doc-AUS/DP-003

**Effective Date:** 21<sup>st</sup> October 2019

---

**Hazardous Combustion Products:** Formation of toxic gases is possible during heating or fire.

**Fire / Explosion Hazards:** Fine particles (such as dust and mists) may fuel fires/explosions.

**Advice for Fire-Fighters:** During all firefighting activities, wear appropriate protective equipment, including self-contained breathing apparatus.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment and Emergency Procedures:** Personnel involved in clean-up should wear appropriate personal protective equipment (see Section 8). Minimize exposure.

**Environmental Precautions:** Place waste in an appropriately labeled, sealed container for disposal. Care should be taken to avoid environmental release.

**Methods and Material for Containment and Cleaning Up Measures for Cleaning / Collecting:** Contain the source of spill if it is safe to do so. Collect spill with absorbent material. Clean spill area thoroughly.

**Additional Consideration for Large Spills:** Non-essential personnel should be evacuated from affected area. Report emergency situations immediately. Cleanup operations should only be undertaken by trained personnel.

## SECTION 7 - HANDLING AND STORAGE

**Precautions for Safe Handling:** Flammable liquid and vapor- keep away from ignition sources and clean up spills promptly. Eliminate possible ignition sources (e.g., heat, sparks, flame, impact, friction, electricity), and follow appropriate grounding and bonding procedures. Avoid contact with eyes, skin, and clothing. Use appropriate personal protective equipment. Wash thoroughly after handling. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. When handling, use appropriate personal protective equipment (see Section 8). Wash thoroughly after handling. Wash hands and any exposed skin after removal of PPE. Releases to the environment should be avoided. Review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure or environmental releases. Potential points of process emissions of this material to the atmosphere should be controlled with dust collectors, HEPA filtration systems or other equivalent controls.

**Conditions for Safe Storage, Including any Incompatibilities:**

**Storage Conditions:** Store as directed by product packaging.

# MATERIAL SAFETY DATA SHEET

Version No: MSDS/Doc-AUS/DP-003

Effective Date: 21<sup>st</sup> October 2019

Specific end use(s): Pharmaceutical product used as Antineoplastic

## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control Parameters:** Refer to available public information for specific member state Occupational Exposure Limits.

### Ethyl alcohol (ethanol):

<b>ACGIH Threshold Limit Value (STEL)</b>	: 1000 ppm
<b>Australia TWA</b>	: 1000 ppm 1880 mg/m <sup>3</sup>
<b>Austria OEL - MAKs</b>	: 1000 ppm 1900 mg/m <sup>3</sup>
<b>Belgium OEL - TWA</b>	: 1000 ppm 1907 mg/m <sup>3</sup>
<b>Bulgaria OEL - TWA</b>	: 1000 mg/m <sup>3</sup>
<b>Czech Republic OEL - TWA</b>	: 1000 mg/m <sup>3</sup>
<b>Denmark OEL - TWA</b>	: 1000 ppm 1900 mg/m <sup>3</sup>
<b>Estonia OEL - TWA</b>	: 500 ppm 1000 mg/m <sup>3</sup>
<b>Finland OEL - TWA</b>	: 1000 ppm 1900 mg/m <sup>3</sup>
<b>France OEL - TWA</b>	: 1000 ppm 1900 mg/m <sup>3</sup>
<b>Germany - TRGS 900 - TWAs</b>	: 500 ppm 960 mg/m <sup>3</sup>
<b>Germany (DFG) - MAK</b>	: 500 ppm 960 mg/m <sup>3</sup>
<b>Greece OEL - TWA</b>	: 1000 ppm 1900 mg/m <sup>3</sup>
<b>Hungary OEL - TWA</b>	: 1900 mg/m <sup>3</sup>
<b>Latvia OEL - TWA</b>	: 1000 mg/m <sup>3</sup>
<b>Lithuania OEL - TWA</b>	: 500 ppm 1000 mg/m <sup>3</sup>
<b>Netherlands OEL - TWA</b>	: 260 mg/m <sup>3</sup>
<b>OSHA - Final PELs - TWAs:</b>	: 1000 ppm 1900 mg/m <sup>3</sup>
<b>Poland OEL - TWA</b>	: 1900 mg/m <sup>3</sup>
<b>Portugal OEL - TWA</b>	: 1000 ppm
<b>Romania OEL - TWA</b>	: 1000 ppm 1900 mg/m <sup>3</sup>
<b>Russia OEL - TWA</b>	: 1000 mg/m <sup>3</sup>
<b>Slovakia OEL - TWA</b>	: 500 ppm

# MATERIAL SAFETY DATA SHEET

Version No: MSDS/Doc-AUS/DP-003

Effective Date: 21<sup>st</sup> October 2019

---

Slovenia OEL - TWA	: 960 mg/m <sup>3</sup> : 1000 ppm
Sweden OEL - TWAs	: 1900 mg/m <sup>3</sup> : 500 ppm
Switzerland OEL -TWAs	: 1000 mg/m <sup>3</sup> : 500 ppm
Vietnam OEL - TWAs	: 960 mg/m <sup>3</sup> : 1000 mg/m <sup>3</sup>

The purpose of the Occupational Exposure Band (OEB) classification system is to separate substances into different Hazard categories when the available data are sufficient to do so, but inadequate to establish an Occupational Exposure Limit (OEL). The OEB given is based upon an analysis of all currently available data; as such, this value may be subject to revision when new information becomes available.

## **Docetaxel anhydrous:**

**Occupational Exposure Band (OEB):** OEB 4 (control exposure to the range of 1ug/m<sup>3</sup> to <10ug/m<sup>3</sup>).

## **Exposure Controls:**

**Engineering Controls:** Engineering controls should be used as the primary means to control exposures. General room ventilation is adequate unless the process generates dust, mist or fumes. Keep airborne contamination levels below the exposure limits listed above in this section.

## **Personal Protective Equipment:**

Refer to applicable national standards and regulations in the selection and use of personal protective equipment (PPE). Contact your safety and health professional or safety equipment supplier for assistance in selecting the correct protective clothing/equipment based on an assessment of the workplace conditions, other chemicals used or present in the workplace and specific operational processes.

**Hands:** Impervious disposable gloves (e.g. Nitrile, etc.) (double recommended) if skin contact with drug product is possible and for bulk processing operations. (Protective gloves must meet the standards in accordance with EN374, ASTM F1001 or international equivalent.)

**Eyes:** Wear safety glasses or goggles if eye contact is possible. (Eye protection must meet the standards in accordance with EN166, ANSI Z87.1 or international equivalent.)

**Skin:** Impervious disposable protective clothing is recommended if skin contact with drug product is possible and for bulk processing operations. (Protective clothing must meet the standards in accordance with EN13982, ANSI 103 or international equivalent.)

**Respiratory protection:** Under normal conditions of use, if the applicable Occupational Exposure Limit (OEL) is exceeded, wear an appropriate respirator with a protection factor sufficient to control exposures to below the OEL (e.g. particulate respirator with a full mask,

# MATERIAL SAFETY DATA SHEET

Version No: MSDS/Doc-AUS/DP-003

Effective Date: 21<sup>st</sup> October 2019

P3 filter). (Respirators must meet the standards in accordance with EN136, EN143, ASTM F2704-10 or international equivalent.)

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	: Solution
<b>Color</b>	: Clear, colorless to pale yellow
<b>Odor</b>	: No data available.
<b>Odor Threshold</b>	: No data available.
<b>Molecular Formula</b>	: Mixture
<b>Molecular Weight</b>	: Mixture
<b>Solvent Solubility</b>	: No data available
<b>Water Solubility</b>	: No data available
<b>pH</b>	: 4-7
<b>Melting/Freezing Point (°C)</b>	: No data available
<b>Boiling Point (°C)</b>	: No data available.
<b>Partition Coefficient</b>	:
<b>Docetaxel anhydrous</b>	: No data available
<b>Citric acid, anhydrous</b>	: No data available
<b>Physical State</b>	: Solution
<b>Polysorbate 80</b>	: No data available
<b>Ethyl alcohol (ethanol)</b>	: No data available
<b>Decomposition Temperature (°C)</b>	: No data available
<b>Evaporation Rate (Gram/s)</b>	: No data available
<b>Vapor Pressure (kPa)</b>	: No data available
<b>Vapor Density (g/ml)</b>	: No data available
<b>Relative Density</b>	: No data available
<b>Viscosity</b>	: No data available

### Flammability:

<b>Autoignition Temperature (Solid) (°C)</b>	: No data available
<b>Flammability (Solids)</b>	: No data available
<b>Flash Point (Liquid) (°C)</b>	: 24
<b>Upper Explosive Limits (Liquid) (% by Vol.)</b>	: No data available
<b>Lower Explosive Limits (Liquid) (% by Vol.)</b>	: No data available

## SECTION 10 - STABILITY AND REACTIVITY

**Reactivity:** No data available

**Chemical Stability:** Stable under normal conditions of use.

# MATERIAL SAFETY DATA SHEET

Version No: MSDS/Doc-AUS/DP-003

Effective Date: 21<sup>st</sup> October 2019

## Possibility of Hazardous Reactions

**Oxidizing Properties:** No data available

**Conditions to Avoid:** Fine particles (such as dust and mists) may fuel fires/explosions.

**Incompatible Materials:** As a precautionary measure, keep away from strong oxidizers

**Hazardous Decomposition Products:** No data available

## SECTION 11 - TOXICOLOGY INFORMATION

### Information on Toxicological Effects:

**General Information:** The information included in this section describes the potential hazards of the individual ingredients.

**Short Term:** May cause eye irritation (based on components).

**Long Term:** Repeat-dose studies in animals have shown a potential to cause adverse effects on central nervous system, gastrointestinal system, blood and blood forming organs, and testes.

**Known Clinical Effects:** Common adverse effects include blood cell changes, nervous system/brain toxicity (neurotoxicity). Serious allergic reactions, including anaphylaxis, have been reported.

### Acute Toxicity:

#### Docetaxel anhydrous:

Species	Route	End Point	Dose
Rat	Oral	LD50	> 2000 mg/kg
Mouse	IV	LD50	138mg/kg

#### Citric acid, anhydrous:

Species	Route	End Point	Dose
Rat	Oral	LD50	3000 mg/kg

#### Polysorbate 80:

Species	Route	End Point	Dose
Rat	Intravenous	LD50	1790 mg/kg
Mouse	Oral	LD 50	25 g/kg

#### Ethyl alcohol (ethanol):

Species	Route	End Point	Dose
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# MATERIAL SAFETY DATA SHEET

Version No: MSDS/Doc-AUS/DP-003

Effective Date: 21<sup>st</sup> October 2019

Mouse	Oral	LD50	3450 mg/kg
Rat	Oral	LD50	7060mg/kg
Rat	Inhalation	LC50 10h	20,000ppm

**Acute Toxicity Comments:** A greater than symbol (>) indicates that the toxicity endpoint being tested was not achievable at the highest dose used in the test.

## Irritation / Sensitization:

### Docetaxel anhydrous:

Study Type	Species	Severity
Eye Irritation	Rabbit	Irritant
Skin Irritation	Rabbit	Non-irritating
Skin Sensitization		Negative

### Citric acid, anhydrous:

Study Type	Species	Severity
Eye Irritation	Rabbit	Severe
Skin Irritation	Rabbit	Mild

### Ethyl alcohol (ethanol):

Study Type	Species	Severity
Eye Irritation	Rabbit	Severe
Skin Irritation	Rabbit	Mild

## Repeated Dose Toxicity:

### Docetaxel anhydrous:

Duration	Species	Route	Dose	End Point	Target Organ
28-31 Day(s)	Rat	Intravenous	mg/m <sup>2</sup> /day	NOEL	Blood forming organs, Male reproductive system
6 Month(s)	Rat	Intravenous	0.2 mg/kg/day	NOEL	Blood forming organs, Male reproductive system
6 Month(s)	Dog	Intravenous	0.375 mg/kg/day	LOAEL	Male reproductive system

## Reproduction & Development Toxicity:

### Docetaxel anhydrous

Duration	Species	Route	Dose	End Point	Effect(s)
Reproductive & Fertility	Rat	Intravenous	mg/kg/day	LOAEL	Paternal toxicity
Embryo / Fetal Development	Rat	Intravenous	0.3 mg/kg/day	LOAEL	Maternal Toxicity, Embryotoxicity, Fetotoxicity, Not Teratogenic
Embryo / Fetal Development	Rabbit	Intravenous	0.03 mg/kg/day	LOAEL	Embryotoxicity, Fetotoxicity, Maternal Toxicity, Not Teratogenic

## Genetic Toxicity:

# MATERIAL SAFETY DATA SHEET

Version No: MSDS/Doc-AUS/DP-003

Effective Date: 21<sup>st</sup> October 2019

## Docetaxel anhydrous

Study Type	Cell Type/Organism	Result
<i>In Vitro</i> Bacterial Mutagenicity (Ames)	<i>Salmonella</i> , <i>E. coli</i>	Negative
<i>In Vivo</i> Micronucleus	Mouse	Positive
<i>In Vitro</i> Chromosome Aberration	Chinese Hamster Ovary (CHO) cells	Positive

**Carcinogen Status:** None of the components of this formulation are listed as a carcinogen by IARC, NTP or OSHA

## Ethyl alcohol (ethanol):

**IARC:** Group 1 (Carcinogenic to Humans)

## SECTION 12 - ENVIRONMENTAL IMPACT INFORMATION

**Environmental Overview:** Environmental properties have not been thoroughly investigated. Releases to the environment should be avoided.

## Toxicity:

### Aquatic Toxicity:

#### Docetaxel anhydrous:

Species	End Point	Duration	Result
<i>Daphnia magna</i> (Water Flea)	LC50	48 Hours	> 3.3 mg/L

#### Ethyl alcohol (ethanol):

Species	End Point	Duration	Result
<i>Oncorhynchus mykiss</i> (Rainbow Trout)	LC50	96h	12,900-15,300 mg/L

**Aquatic Toxicity Comments:** A greater than (>) symbol indicates that acute ecotoxicity was not observed at the maximum solubility. Since the substance is insoluble in aqueous solutions above this concentration, an acute ecotoxicity value (i.e. LC/EC50) is not achievable.

**Persistence and Degradability:** No data available

**Ethyl alcohol (ethanol)** Not Ready

**Bio-accumulative Potential:** No data available

**Mobility in Soil:** No data available

# MATERIAL SAFETY DATA SHEET

Version No: MSDS/Doc-AUS/DP-003

Effective Date: 21<sup>st</sup> October 2019

## SECTION 13 - DISPOSAL INFORMATION

**Waste Treatment Methods:** Dispose of waste in accordance with all applicable laws and regulations. Member State specific and Community specific provisions must be considered. Considering the relevant known environmental and human health hazards of the material, review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure and environmental release. It is recommended that waste minimization be practiced. The best available technology should be utilized to prevent environmental releases. This may include destructive techniques for waste and wastewater.

## SECTION 14 - TRANSPORTATION INFORMATION

**The following refers to all modes of transportation unless specified below:** This material is regulated for transportation as a hazardous material/dangerous good.

**UN number:** UN 1170

**UN proper shipping name:** Ethanol solution

**Transport hazard class(es):** 3

**Packing group:** III

**Flash Point (°C):** 24

## SECTION 15 - REGULATORY INFORMATION

**Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture:**

**Citric acid, anhydrous:**

<b>CERCLA/ SARA 313 Emission reporting</b>	: Not Listed
<b>California Proposition 65</b>	: Not Listed
<b>Inventory - United States TSCA - Sect. 8(b)</b>	: Present
<b>Australia (AICS):</b>	: Present
<b>EU EINECS/ELINCS Lis</b>	: 201-069-1

**Docetaxel anhydrous:**

<b>CERCLA/SARA 313 Emission reporting</b>	: Not Listed
<b>California Proposition 65</b>	: Not Listed

# MATERIAL SAFETY DATA SHEET

Version No: MSDS/Doc-AUS/DP-003

Effective Date: 21<sup>st</sup> October 2019

**Standard for the Uniform Scheduling for** : Schedule 4

**Drugs and Poisons:**

**EU EINECS/ELINCS List** : Not Listed

**Ethyl alcohol (ethanol):**

**CERCLA/SARA 313 Emission reporting** : Not Listed

**California Proposition 65** : carcinogen 4/29/2011 in alcoholic beverages developmental toxicity 10/1/1987 in alcoholic beverages

**Inventory - United States TSCA - Sect. 8(b)** : Present

**Australia (AICS):** : Present

**EU EINECS/ELINCS List** : 200-578-6

**Polysorbate 80:**

**CERCLA/SARA 313 Emission reporting** : Not Listed

**California Proposition 65** : Not Listed

**Inventory - United States TSCA - Sect. 8(b)** : Present

**Australia (AICS):** : Present

**EU EINECS/ELINCS List** : 500-019-9

## SECTION 16 - OTHER DATA

**Text of CLP/GHS Classification abbreviations mentioned in Section 3:**

Serious eye damage/eye irritation-Cat.2A; H319 - Causes serious eye irritation

Reproductive toxicity-Cat.1B; H360D - May damage the unborn child

Germ cell mutagenicity-Cat.2; H341 - Suspected of causing genetic defects

Reproductive toxicity, effects on or via lactation; H362 - May cause harm to breast-fed children

Flammable liquids-Cat.2; H225 - Highly flammable liquid and vapor

**Sources of data:** Information from published literature.

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