

Novachem Pty Ltd

Version No: 2.3

Safety Data Sheet according to WHS and ADG requirements

Chemwatch Hazard Alert Code: 3

Issue Date: **12/09/2018** Print Date: **12/09/2018** S.GHS.AUS.EN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	Ergotamine - Dried down standard
Chemical Name	ergotamine
Synonyms	B-MYC3600-5 (C33-H35-N5-O5)2.C4-H6-O6, 12'-hydroxy-2'-methyl-5'alpha-(phenylmethyl)ergotaman-3',6'18-trione
Proper shipping name	ALKALOIDS, SOLID, N.O.S. or ALKALOID SALTS, SOLID, N.O.S. (contains ergotamine)
Chemical formula	C33-H35-N5-O5
Other means of identification	Not Available
CAS number	113-15-5*

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Use according to manufacturer's directions.	

Details of the supplier of the safety data sheet

Registered company name	Novachem Pty Ltd
Address	25 Crissane Road, Heidelberg West Victoria 3081 Australia
Telephone	+61384151255
Fax	+61386250088
Website	www.novachem.com.au
Email	novachem@novachem.com.au

Emergency telephone number

Association / Organisation	Victorian Poisons Information Centre
Emergency telephone numbers	13 11 26
Other emergency telephone numbers	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Poisons Schedule	S4	
Classification ^[1]	Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 3, Acute Toxicity (Inhalation) Category 3	
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI	

Label elements

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SIGNAL WORD DANGER

Hazard statement(s)

H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.

Precautionary statement(s) Prevention

P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P261	Avoid breathing dust/fumes.

Precautionary statement(s) Response

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P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P330	Rinse mouth.
P363	Wash contaminated clothing before reuse.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.

Precautionary statement(s) Storage

P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Precautionary statement(s) Disposal

P501	Dispose of contents/container in accordance with local regulations.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

CAS No	%[weight]	Name
113-15-5	>98	ergotamine

Mixtures

See section above for composition of Substances

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	 If this product comes in contact with the eyes: Immediately hold eyelids apart and flush the eye continuously with running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	 If skin or hair contact occurs: Quickly but gently, wipe material off skin with a dry, clean cloth. Immediately remove all contaminated clothing, including footwear. Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. Transport to hospital, or doctor.
Inhalation	 If furnes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor, without delay.
Ingestion	 IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY. For advice, contact a Poisons Information Centre or a doctor. Urgent hospital treatment is likely to be needed. In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition. If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist. If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS. Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise: INDUCE vomiting with fingers down the back of the throat, ONLY IF CONSCIOUS. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. NOTE: Wear a protective glove when inducing vomiting by mechanical means.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Ergot alkaloids are incompletely absorbed from the gastrointestinal tract and are probably metabolised in the liver. They are mainly excreted in the bile with small amounts appearing in the urine. For acute ergot intoxication:

- the stomach should be emptied by aspiration and lavage.
- amyl nitrate inhalations may be given.
- nausea and vomiting may be controlled by intramuscular injections of 25-50 mg chlorpromazine or a comparable dose of a related phenothiazine.

MARTINDALE: The Extra Pharmacopoeia, 27th Ed.

Peripheral and coronary vasoconstriction due to ergot alkaloids may be antagonised by nitrites or papaverine and short acting barbiturates are indicated. Administration of sodium nitroprusside, anti-coagulants and dextran, with continuous monitoring of blood pressure, proved beneficial in one case of overdose due to misuse of ergotamine. GOSSELIN, SMITH HODGE: Clinical Toxicology of Commercial Products, 5th Ed.

Caffeine increase the rate and completeness of intestinal absorption of ergot alkaloids, perhaps by increasing the dissolution rate in the alkaline pH of the intestine. ELLENHORN, M.J., and Barceloux D.G.; Medical Toxicology - Diagnosis and Treatment of Human Poisoning. 1988.

SECTION 5 FIREFIGHTING MEASURES

Fire Incompatibility

Extinguishing media

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

Special hazards arising from the substrate or mixture

Advice for firefighters	
Fire Fighting	 Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use fire fighting procedures suitable for surrounding area.
Fire/Explosion Hazard	 Combustible solid which burns but propagates flame with difficulty; it is estimated that most organic dusts are combustible (circa 70%) - according to the circumstances under which the combustion process occurs, such materials may cause fires and / or dust explosions. Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions). Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust (420 micron or less) may burn rapidly and fiercely if ignited - particles exceeding this limit will generally not form flammable dust clouds; once initiated, however, larger particles up to 1400 microns diameter will contribute to the propagation of an explosion. Combustion products include: carbon monxide (CO) carbon dioxide (CO2) nitrogen oxides (NOX) other pyrolysis products typical of burning organic material.
HAZCHEM	2X

+ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	 Clean up waste regularly and abnormal spills immediately. Avoid breathing dust and contact with skin and eyes. Wear protective clothing, gloves, safety glasses and dust respirator. Use dry clean up procedures and avoid generating dust.
Major Spills	 Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	 Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps.

	 Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions) Minimise airborne dust and eliminate all ignition sources. Keep away from heat, hot surfaces, sparks, and flame. Establish good housekeeping practices. Remove dust accumulations on a regular basis by vacuuming or gentle sweeping to avoid creating dust clouds.
Other information	 Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers.

Conditions for safe storage, including any incompatibilities

Suitable container	 Glass container is suitable for laboratory quantities Lined metal can, lined metal pail/ can. Plastic pail. Polyliner drum. Packing as recommended by manufacturer. For low viscosity materials Drums and jerricans must be of the non-removable head type. Where a can is to be used as an inner package, the can must have a screwed enclosure. For materials with a viscosity of at least 2680 cSt. (23 deg. C) and solids (between 15 C deg. and 40 deg C.): Removable head packaging; Cans with friction closures and low pressure tubes and cartridges may be used. All inner and sole packaging for substances that have been assigned to Packaging Groups I or II on the basis of inhalation toxicity criteria, must be hermetically sealed.
Storage incompatibility	Avoid reaction with oxidising agents

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
Ergotamine - Dried down standard	Not Available	Not Available	Not Available	Not Available
Ingredient	Original IDLH		Revised IDLH	
ergotamine	Not Available		Not Available	

Exposure	controls
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Appropriate engineering controls	 Unless written procedures, specific to the workplace are available, the following is intended as a guide: For Laboratory-scale handling of Substances assessed to be toxic by inhalation. Quantities of up to 25 grams may be handled in Class II biological safety cabinets *; Quantities of 25 grams to 1 kilogram may be handled in Class II biological safety cabinets *; Quantities of 25 grams to 1 kilogram may be handled in Class II biological safety cabinets *; Quantities exceeding 1 kg may be handled either using specific containment, a hood or Class II biological safety cabinets*, HEPA terminated local exhaust ventilation should be considered at point of generation of dust, fumes or vapours. The need for respiratory protection should also be assessed where incidental or accidental exposure is anticipated. Dependent on levels of containment, pAPR, full face air purifying devices with P2 or P3 filters or air supplied respirators should be evaluated. For potent pharmacological agents: Powders To prevent contamination and overexposure, no open handling of powder should be allowed. Powder handling operations are to be done in a powders weighing hood, a glove box, or other equivalent ventilated containment system. In situations where these ventilated containment hoods have not been installed, a non-ventilated enclosed containment hood should be used. Pending changes resulting from additional air monitoring data, up to 300 mg can be handled outside of an enclosure provided that no grinding, crushing or other dust-generating process occurs.
Personal protection	
Eye and face protection	 Chemical protective goggles with full seal. Shielded mask (gas-type). Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.
Skin protection	See Hand protection below
Hands/feet protection	 The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care. Rubber gloves (nitrile or low-protein, powder-free latex, latex/ nitrile). Employees allergic to latex gloves should use nitrile gloves in preference. Double gloving should be considered. PVC gloves.

Body protection	See Other protection below
Other protection	 For quantities up to 500 grams a laboratory coat may be suitable. For quantities up to 1 kilogram a disposable laboratory coat or coverall of low permeability is recommended. Coveralls should be buttoned at collar and cuffs. For quantities over 1 kilogram and manufacturing operations, wear disposable coverall of low permeability and disposable shoe covers.

Respiratory protection

Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:001, ANSI Z88 or national equivalent)

Required Minimum Protection Factor up to 10 x ES up to 50 x ES up to 100 x ES	Half-Face Respirator P1 Air-line* Air-line** -	Full-Face Respirator - - P2 P3	Powered Air Respirator PAPR-P1 - PAPR-P2 -
100+ x ES	-	Air-line* Air-line**	- PAPR-P3

* - Negative pressure demand ** - Continuous flow

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

+ Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.

The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).

Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.

Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.

Use approved positive flow mask if significant quantities of dust becomes airborne.

Try to avoid creating dust conditions.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

NICE A STREET

Appearance	Not Available		
Physical state	Divided Solid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Applicable	Decomposition temperature	Not Available
Melting point / freezing point (°C)	212-214	Viscosity (cSt)	Not Applicable
Initial boiling point and boiling range (°C)	Not Applicable	Molecular weight (g/mol)	581.73
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Negligible
Vapour pressure (kPa)	Negligible	Gas group	Not Available
Solubility in water (g/L)	Partly miscible	pH as a solution (1%)	Not Applicable
Vapour density (Air = 1)	Not Applicable	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	 Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Inhalation of dusts, generated by the material, during the course of normal handling, may produce toxic effects. The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of dusts, or fumes, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if Inhaled excessive concentrations of particulate are inhaled. If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures. Toxic effects may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 40 gram may be fatal or may produce serious damage to the health of the individual. Indestion The ergot alkaloids are a group of biogenic amines which act as agonists on alpha-adrenergic receptors. Symptoms of acute poisoning are due to central nervous system stimulation, and include nausea, vomiting, diarrhoea, thirst, coldness of the skin, itchiness, weak pulse, numbness and tingling of the extremeties, fast heart beat, dilated pupils, confusion and unconsciousness Skin contact with the material may produce toxic effects; systemic effects may result following absorption. The material is not thought to be a skin irritant (as classified by EC Directives using animal models). Abrasive damage however, may result from prolonged exposures Skin Contact Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may cause transient discomfort Eye characterised by tearing or conjunctival redness (as with windburn). Slight abrasive damage may also result. Ample evidence exists, from results in experimentation, that developmental disorders are directly caused by human exposure to the material. Ample evidence from experiments exists that there is a suspicion this material directly reduces fertility. Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis, caused by particles less than 0.5 micron Chronic penetrating and remaining in the lung. Chronic "ergotism" (resulting from overdose during treatment) produces disturbances in circulation due to constriction of blood vessels and formation of clots. Initial symptoms include coldness of the skin, severe muscle pain, and stagnation of the blood, resulting in dry peripheral gangrene. ΤΟΧΙΟΙΤΥ IRRITATION Ergotamine - Dried down standard Not Available Not Available TOXICITY IRRITATION ergotamine Not Available Not Available Legend: 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances Subcutaneous infant) TDLo: 4.4 mg/kg/4d-l Nil reported 0.171 mg/kg/17d-l Vascular constriction, musculoskeletal changes in teeth and supporting FRGOTAMINE structures, corrosion after typical exposure

Acute Toxicity	✓	Carcinogenicity	\otimes
Skin Irritation/Corrosion	\otimes	Reproductivity	0
Serious Eye Damage/Irritation	\otimes	STOT - Single Exposure	\otimes
Respiratory or Skin sensitisation	0	STOT - Repeated Exposure	0
Mutagenicity	0	Aspiration Hazard	0
		Legend: 🗙 – D	Data available but does not fill the criteria for classification

Data available to make classification

🚫 – Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity ENDPOINT TEST DURATION (HR) SPECIES VALUE SOURCE Ergotamine - Dried down standard Not Available Not Available Not Available Not Available Not Available ENDPOINT TEST DURATION (HR) SOURCE SPECIES ergotamine Not Available Not Available Not Available Not Available Not Available Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 Legend: (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient

Persistence: Air

Version No: 2.3

Ergotamine - Dried down standard

ergotamine	HIGH	HIGH
-		
Bioaccumulative potential		
Ingredient	Bioaccumulation	
ergotamine	LOW (LogKOW = 2.5344)	
Mobility in soil		

Ingredient	Mobility
ergotamine	LOW (KOC = 1650000)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	 Containers may still present a chemical hazard/ danger when empty. Return to supplier for reuse/ recycling if possible. Otherwise: If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. Where possible retain label warnings and SDS and observe all notices pertaining to the product. Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: Reduction Reuse Recycling Disposal (if all else fails) This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. D NOT allow wash water from cleaning or process equipment to enter drains. It may be necessary to collect all wash water for treatment before disposal. In all cases disposal to sever may be subject to local laws and regulations and these should be considered first.
	 It may be necessary to consider an wash watch for realinein before disposal. In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. Where in doubt contact the responsible authority.

SECTION 14 TRANSPORT INFORMATION

Labels Required

	6
Marine Pollutant	NO
HAZCHEM	2X

Land transport (ADG)

UN number	1544
UN proper shipping name	ALKALOIDS, SOLID, N.O.S. or ALKALOID SALTS, SOLID, N.O.S. (contains ergotamine)
Transport hazard class(es)	Class 6.1 Subrisk Not Applicable
Packing group	III
Environmental hazard	Not Applicable
Special precautions for user	Special provisions 43 223 274 Limited quantity 5 kg

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee)

UN number	1544
UN proper shipping name	ALKALOIDS, SOLID, N.O.S. or ALKALOIDS SALTS, SOLID, N.O.S. (contains ergotamine)
Transport hazard class(es)	IMDG Class 6.1 IMDG Subrisk Not Applicable
Packing group	III
Environmental hazard	Not Applicable

	EMS Number	F-A , S-A	
Special precautions for user	Special provisions	43 223 274	
	Limited Quantities	5 kg	

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture

ERGOTAMINE(113-15-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4

National Inventory Status

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (ergotamine)
China - IECSC	N (ergotamine)
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (ergotamine)
Korea - KECI	N (ergotamine)
New Zealand - NZIoC	N (ergotamine)
Philippines - PICCS	N (ergotamine)
USA - TSCA	N (ergotamine)
Legend:	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

Revision Date	12/09/2018
Initial Date	23/11/2017

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chernwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

- PC-TWA: Permissible Concentration-Time Weighted Average
- PC-STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit。 IDLH: Immediately Dangerous to Life or Health Concentrations
- OSF: Odour Safety Factor
- NOAEL :No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors BEI: Biological Exposure Index

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