

Revision date: 06-Apr-2015 Version: 3.0 Page 1 of 12

IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

Product Identifier

Material Name: Voriconazole Tablets (Greenstone LLC)

Trade Name: Not applicable Chemical Family: Mixture

Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Intended Use: Pharmaceutical product used as antifungal agent

Details of the Supplier of the Safety Data Sheet

Greenstone LLC 100 Route 206 North Peapack, NJ 07977 800-435-7095 Pfizer Ltd Ramsgate Road Sandwich, Kent CT13 9NJ

United Kingdom +00 44 (0)1304 616161

Emergency telephone number:

International CHEMTREC (24 hours): +1-703-527-3887

CHEMTREC (24 hours): 1-800-424-9300 Contact E-Mail: pfizer-MSDS@pfizer.com

2. HAZARDS IDENTIFICATION

Emergency telephone number:

Classification of the Substance or Mixture GHS - Classification

Acute Oral Toxicity: Category 4 Reproductive Toxicity: Category 1B

Carcinogenicity: Category 2

Specific target organ systemic toxicity (repeated exposure): Category 2

Acute aquatic toxicity: Category 3

EU Classification:

EU Indication of danger: Harmful

Toxic to Reproduction: Category 2

Carcinogenic: Category 3

EU Risk Phrases:

R22 - Harmful if swallowed.

R40 - Limited evidence of a carcinogenic effect.

R48/22 - Harmful: danger of serious damage to health by prolonged exposure if swallowed.

R61 - May cause harm to the unborn child.

Label Elements

Signal Word: Danger

Hazard Statements: H302 - Harmful if swallowed

H351 - Suspected of causing cancer H360D - May damage the unborn child

H373 - May cause damage to organs through prolonged or repeated exposure

H402 - Harmful to aquatic life

Material Name: Voriconazole Tablets (Greenstone LLC)

Revision date: 06-Apr-2015 Version: 3.0

Precautionary Statements: P202 - Do not handle until all safety precautions have been read and understood

P264 - Wash hands thoroughly after handling

P270 - Do not eat, drink or smoke when using this product P281 - Use personal protective equipment as required

P301+ P312 - IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel

Page 2 of 12

unwell

P330 - Rinse mouth

P308 + P313 - IF exposed or concerned: Get medical attention/advice

P314 - Get medical attention/advice if you feel unwell

P405 - Store locked up

P501 - Dispose of contents/container in accordance with all local and national regulations

P273 - Avoid release to the environment



Other Hazards
Australian Hazard Classification
(NOHSC):

No data available

Non-Dangerous Goods. Hazardous Substance.

Note:

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

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous

Trazar dous								
Ingredient	CAS Number	EU EINECS/ELINCS List	EU Classification	GHS Classification	%			
Voriconazole	137234-62-9	Not Listed	Carc. Cat.3;R40 Repr. Cat.2;R61 Xn;R22 Xn;R48/22	Acute Tox.3 (H301) Carc. 2 (H351) Repr. 1B (H360D) STOT RE 2 (H373) Aquatic Acute 3 (H402)	33.3			
Titanium dioxide	13463-67-7	236-675-5	Not Listed	Not Listed	*			
Croscarmellose sodium	74811-65-7	Not Listed	Not Listed	Not Listed	*			
Magnesium stearate	557-04-0	209-150-3	Not Listed	Not Listed	*			
Starch, pregelatinized	9005-25-8	232-679-6	Not Listed	Not Listed	*			

Ingredient	CAS Number	EU EINECS/ELINCS List	EU Classification	GHS Classification	%
Hydroxypropyl methylcellulose	9004-65-3	Not Listed	Not Listed	Not Listed	*
Triacetin	102-76-1	203-051-9	Not Listed	Not Listed	*
Lactose NF, monohydrate	64044-51-5	Not Listed	Not Listed	Not Listed	*
Povidone	9003-39-8	Not Listed	Not Listed	Not Listed	*

DZMOOF

Material Name: Voriconazole Tablets (Greenstone LLC)

Revision date: 06-Apr-2015 Version: 3.0

Water, purified 7732-18-5 231-791-2 Not Listed *

Additional Information: * Proprietary

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

Page 3 of 12

been withheld as a trade secret.

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

4. 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.

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 For information on potential signs and symptoms of exposure, See Section 2 - Hazards

Exposure: Identification and/or Section 11 - Toxicological Information.

Medical Conditions None known

Aggravated by Exposure:

Indication of the Immediate Medical Attention and Special Treatment Needed

Notes to Physician: None

5. FIRE FIGHTING MEASURES

Extinguishing Media: Use carbon dioxide, dry chemical, or water spray.

Special Hazards Arising from the Substance or Mixture

Hazardous Combustion Carbon monoxide, carbon dioxide, nitrogen oxides and fluorine-containing compounds

Products:

Fire / Explosion Hazards: Not applicable

Advice for Fire-Fighters

During all fire fighting activities, wear appropriate protective equipment, including self-contained breathing apparatus.

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

Material Name: Voriconazole Tablets (Greenstone LLC)

Revision date: 06-Apr-2015

Page 4 of 12

Version: 3.0

Measures for Cleaning /

Collecting:

Contain the source of spill if it is safe to do so. Collect spilled material by a method that controls dust generation. A damp cloth or a filtered vacuum should be used to clean spills of

dry solids. Clean spill area thoroughly.

Additional Consideration for

Large Spills:

Non-essential personnel should be evacuated from affected area. Report emergency situations immediately. Clean up operations should only be undertaken by trained personnel.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Minimize dust generation and accumulation. If tablets or capsules are crushed and/or broken, avoid breathing dust and avoid contact with eyes, skin, and clothing. When handling, use appropriate personal protective equipment (see Section 8). Wash hands and any exposed skin after removal of PPE. Refer to Section 12 - Ecological Information, for information on potential effects on the environment. 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.

Specific end use(s): Pharmaceutical drug product

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

Refer to available public information for specific member state Occupational Exposure Limits.

Voriconazole

Pfizer OEL TWA-8 Hr: 100µg/m³

Titanium dioxide

ACGIH Threshold Limit Value (TWA) 10 mg/m³ **ACGIH OELs - Notice of Intended Changes** Listed 10 mg/m³ **Australia TWA** Austria OEL - MAKs 5 mg/m³ **Belgium OEL - TWA** 10 mg/m³ 10.0 mg/m³ **Bulgaria OEL - TWA Denmark OEL - TWA** 6 mg/m³ 5 mg/m^3 Estonia OEL - TWA France OEL - TWA 10 mg/m³ **Greece OEL - TWA** 10 mg/m³ 5 mg/m^3 Ireland OEL - TWAs 10 mg/m³ 4 mg/m^3

Latvia OEL - TWA 10 mg/m³ Lithuania OEL - TWA 5 mg/m³ **OSHA - Final PELS - TWAs:** 15 ma/m³ **Poland OEL - TWA** 10.0 mg/m³ 10 mg/m³ Portugal OEL - TWA Romania OEL - TWA 10 mg/m³ **Russia OEL - TWA** 10 mg/m³ 10 mg/m³ Spain OEL - TWA Sweden OEL - TWAs 5 mg/m³ 3 mg/m³ **Switzerland OEL -TWAs**

Material Name: Voriconazole Tablets (Greenstone LLC)

Revision date: 06-Apr-2015

Page 5 of 12

Version: 3.0

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Vietnam OEL - TWAs 6 mg/m³

5 mg/m³

Magnesium stearate

ACGIH Threshold Limit Value (TWA) 10 mg/m³
Lithuania OEL - TWA 5 mg/m³
Sweden OEL - TWAs 5 mg/m³

Starch, pregelatinized

ACGIH Threshold Limit Value (TWA) 10 mg/m³ 10 mg/m³ **Australia TWA** 10 mg/m³ **Belgium OEL - TWA Bulgaria OEL - TWA** 10.0 mg/m³ 4.0 mg/m³ Czech Republic OEL - TWA 10 mg/m³ **Greece OEL - TWA** 5 mg/m^3 Ireland OEL - TWAs 10 ma/m³ 4 mg/m^3

 OSHA - Final PELS - TWAs:
 15 mg/m³

 Portugal OEL - TWA
 10 mg/m³

 Slovakia OEL - TWA
 4 mg/m³

 Spain OEL - TWA
 10 mg/m³

 Switzerland OEL -TWAs
 3 mg/m³

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).

Hands: Impervious gloves are recommended if skin contact with drug product is possible and for bulk

processing operations.

Eyes: Wear safety glasses or goggles if eye contact is possible.

Skin: Impervious protective clothing is recommended if skin contact with drug product is possible and

for bulk processing operations.

Respiratory protection: 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Tablets Color: White

Odor: No data available. Odor Threshold: No data available.

Molecular Formula: Mixture Molecular Weight: Mixture

Solvent Solubility:
Water Solubility:
PH:
No data available
No data available
No data available.
No data available.
No data available.
No data available
No data available.
Partition Coefficient: (Method, pH, Endpoint, Value)

Magnesium stearate

Material Name: Voriconazole Tablets (Greenstone LLC)

Revision date: 06-Apr-2015

Version: 3.0

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9. PHYSICAL AND CHEMICAL PROPERTIES

No data available

Water, purified

No data available

Starch, pregelatinizedNo data available

Lactose NF, monohydrate

No data available

Croscarmellose sodium

No data available

Povidone

No data available

Voriconazole

Measured 7 Log P 1.75 **Hydroxypropyl methylcellulose**

No data available

Triacetin

No data available Titanium dioxide

No data available

Decomposition Temperature (°C): No data available.

Evaporation Rate (Gram/s):

Vapor Pressure (kPa):

Vapor Density (g/ml):

Relative Density:

No data available

Flammablity:

Autoignition Temperature (Solid) (°C):

Flammability (Solids):

Flash Point (Liquid) (°C):

Upper Explosive Limits (Liquid) (% by Vol.):

Lower Explosive Limits (Liquid) (% by Vol.):

Polymerization:

No data available
No data available
Will not occur

10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical Stability: Stable under normal conditions of use.

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 No data available

Products:

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

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

ingredients.

Short Term: May produce slight eye irritation. Accidental ingestion may cause effects similar to those seen

in clinical use.

Material Name: Voriconazole Tablets (Greenstone LLC)

Revision date: 06-Apr-2015 Version: 3.0

11. TOXICOLOGICAL INFORMATION

Long Term: Adverse reproductive effects seen in repeat-dose animal studies are consistent with the

pharmacologic action of this drug and are expected to be relevant to humans. Animal studies indicate that this material may cause adverse effects on the liver the developing fetus.

Page 7 of 12

Known Clinical Effects:The most common adverse effects reported with clinical use of voriconazole include visual disturbances, elevations of liver function tests and skin rash. Voriconazole has been

disturbances, elevations of liver function tests and skin rash. Voriconazole has been associated with photosensitivity skin reactions especially during long term therapy.

Acute Toxicity: (Species, Route, End Point, Dose)

Magnesium stearate

Rat Oral LD50 > 2000 mg/kg Rat Inhalation LC50 > 2000 mg/m³

Povidone

Rat Oral LD50 100 g/kg

Voriconazole

Rat/Mouse Oral LD50 < 300 mg/kg Rat/Mouse Oral LDmin. > 100mg/kg Rat IV LD50 > 100mg/kg Rat Dermal LD50 > 2000mg/kg

Hydroxypropyl methylcellulose

Rat Oral LD50 > 10,000 mg/kg

Triacetin

Rat Oral LD 50 3000 mg/kg Mouse Oral LD 50 1100mg/kg

Titanium dioxide

Rat Oral LD50 > 7500 mg/kg Rat Subcutaneous LD50 50 mg/kg

Acute Toxicity Comments: A g

A greater than symbol (>) indicates that the toxicity endpoint being tested was not achievable

at the highest dose used in the test.

Irritation / Sensitization: (Study Type, Species, Severity)

Voriconazole

Skin Irritation Rabbit Non-irritating

Skin Sensitization - GPMT Guinea Pig Negative

Eye Irritation Rabbit Minimal

Repeated Dose Toxicity: (Duration, Species, Route, Dose, End Point, Target Organ)

Voriconazole

1 Month(s) Oral30 mg/kg/day NOAEL Rat Liver 6 Month(s) Rat Oral 3 mg/kg/day NOAEL Liver, Kidney 12 Month(s) Dog Oral 8 mg/kg/day Liver NOAEL 6 Month(s) Intravenous 10 mg/kg/day NOAEL Rat Liver 6 Month(s) Dog Oral 6 mg/kg/day NOAEL Liver

Reproduction & Developmental Toxicity: (Study Type, Species, Route, Dose, End Point, Effect(s))

PZ01395

Page 8 of 12

Material Name: Voriconazole Tablets (Greenstone LLC)

Revision date: 06-Apr-2015 Version: 3.0

11. TOXICOLOGICAL INFORMATION

Voriconazole

Reproductive & Fertility Rat Oral3 mg/kg/day NOAEL Fetotoxicity Embryo / Fetal Development Rat Oral 10 mg/kg/day LOAEL Teratogenic

Liver Reproductive system

Genetic Toxicity: (Study Type, Cell Type/Organism, Result)

Voriconazole

Bacterial Mutagenicity (Ames) Bacteria Negative In Vitro Human Lymphocytes Equivocal In Vivo Micronucleus Mouse Negative

Carcinogenicity: (Duration, Species, Route, Dose, End Point, Effect(s))

Voriconazole

2 Year(s) Rat Oral 18 mg/kg/day NOEL Benign tumors, Liver

2 Year(s) Mouse Oral 30 mg/kg/day NOAEL Malignant tumors, Liver

Carcinogen Status: See below

Povidone

IARC: Group 3 (Not Classifiable)

Titanium dioxide

IARC: Group 2B (Possibly Carcinogenic to Humans)

12. ECOLOGICAL INFORMATION

Environmental Overview: In the environment, the active ingredient in this formulation is expected to remain in water or

migrate through the soil to groundwater and degrade slowly Harmful effects to aquatic

organisms could occur.

Toxicity:

Aquatic Toxicity: (Species, Method, End Point, Duration, Result)

Voriconazole

Mysidopsis bahia (Mysid Shrimp) NPDES LC50 48 Hours 62 mg/L

Red Algae IC50 73 mg/L

Skeletonema costatum (Marine Diatom) NPDES IC-50 48 Hours 74.7 mg/L Green Algae OECD EbC50/72hr (OECD) EC50 72 Hours > 97 mg/L Oncorhynchus mykiss (Rainbow Trout) OECD LC50 96 Hours 110 mg/L

Aquatic Toxicity Comments: A greater than symbol (>) indicates that aquatic toxicity was not observed at the maximum

dose tested.

Bacterial Inhibition: (Inoculum, Method, End Point, Result)

Voriconazole

Activated sludge OECD EC50 > 810 mg/L

Polytox MIC > 100 mg/L

PZ01395

Material Name: Voriconazole Tablets (Greenstone LLC)

Revision date: 06-Apr-2015 Version: 3.0

Chronic Aquatic Toxicity: (Species, Method, Duration, Endpoint, Result, Adverse Endpoint)

Voriconazole

Daphnia magna (Water Flea) OECD 21 Day(s) NOEC > 1 mg/L

Pimephales promelas (Fathead Minnow) OECD 32 Day(s) NOEC 1.2 mg/L

Chironomus riparius (Sediment-Dwelling Midges) OECD 28 Day(s) NOEC 100 mg/L

Persistence and Degradability:

Biodegradation: (Method, Inoculum, Biodeg Study, Result, Endpoint, Duration, Classification)

Voriconazole

OECD Activated sludge Ultimate (CO2 Evolution) -0.24% After 28 Day(s) Not Ready

Bio-accumulative Potential:

Partition Coefficient: (Method, pH, Endpoint, Value)

Voriconazole

Measured 7 Log P 1.75

Mobility in Soil: No data available

13. DISPOSAL CONSIDERATIONS

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.

Page 9 of 12

14. TRANSPORT INFORMATION

The following refers to all modes of transportation unless specified below.

Not regulated for transport under USDOT, EUADR, IATA, or IMDG regulations.

15. REGULATORY INFORMATION

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

Canada - WHMIS: Classifications
WHMIS hazard class:
Class D, Division 2, Subdivision A

PZ01395

Page 10 of 12

Material Name: Voriconazole Tablets (Greenstone LLC)

Revision date: 06-Apr-2015 Version: 3.0

15. REGULATORY INFORMATION



Voriconazole

CERCLA/SARA 313 Emission reporting Not Listed **California Proposition 65** Not Listed Standard for the Uniform Scheduling Schedule 4

for Drugs and Poisons:

EU EINECS/ELINCS List Not Listed

Hydroxypropyl methylcellulose

CERCLA/SARA 313 Emission reporting Not Listed **California Proposition 65** Not Listed Inventory - United States TSCA - Sect. 8(b) Present Australia (AICS): Present Standard for the Uniform Scheduling Schedule 4

for Drugs and Poisons:

EU EINECS/ELINCS List Not Listed

Triacetin

CERCLA/SARA 313 Emission reporting Not Listed Not Listed **California Proposition 65** Inventory - United States TSCA - Sect. 8(b) Present Australia (AICS): Present **EU EINECS/ELINCS List** 203-051-9

Titanium dioxide

CERCLA/SARA 313 Emission reporting Not Listed

California Proposition 65 carcinogen initial date 9/2/11 airborne, unbound particles of

respirable size

Inventory - United States TSCA - Sect. 8(b) Present Australia (AICS): Present **EU EINECS/ELINCS List** 236-675-5

Croscarmellose sodium

CERCLA/SARA 313 Emission reporting Not Listed **California Proposition 65** Not Listed Australia (AICS): Present **EU EINECS/ELINCS List** Not Listed

Lactose NF, monohydrate

Not Listed **CERCLA/SARA 313 Emission reporting California Proposition 65** Not Listed Present Australia (AICS): **REACH - Annex IV - Exemptions from the** Present

obligations of Register:

EU EINECS/ELINCS List Not Listed

Material Name: Voriconazole Tablets (Greenstone LLC) Page 11 of 12 Version: 3.0 Revision date: 06-Apr-2015

15. REGULATORY INFORMATION

Magnesium stearate

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** 209-150-3

Povidone

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** Not Listed

Water, purified

CERCLA/SARA 313 Emission reporting Not Listed **California Proposition 65** Not Listed Inventory - United States TSCA - Sect. 8(b) Present Australia (AICS): Present **REACH - Annex IV - Exemptions from the** Present obligations of Register:

EU EINECS/ELINCS List 231-791-2

Starch, pregelatinized

Not Listed **CERCLA/SARA 313 Emission reporting California Proposition 65** Not Listed Inventory - United States TSCA - Sect. 8(b) Present Australia (AICS): Present **REACH - Annex IV - Exemptions from the** Present

obligations of Register:

232-679-6 **EU EINECS/ELINCS List**

16. OTHER INFORMATION

Text of R phrases and GHS Classification abbreviations mentioned in Section 3

Acute toxicity, oral-Cat.3; H301 - Toxic if swallowed

Carcinogenicity-Cat.2; H351 - Suspected of causing cancer

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

Specific target organ toxicity, repeated exposure-Cat.2; H373 - May cause damage to organs through prolonged or repeated exposure Hazardous to the aquatic environment, acute toxicity-Cat.3; H402 - Harmful to aquatic life

Carcinogenic: Category 3

Toxic to Reproduction: Category 2

Xn - Harmful

R22 - Harmful if swallowed.

R40 - Limited evidence of a carcinogenic effect

R61 - May cause harm to the unborn child.

R48/22 - Harmful: danger of serious damage to health by prolonged exposure if swallowed.

Material Name: Voriconazole Tablets (Greenstone LLC)

Revision date: 06-Apr-2015

Page 12 of 12

Version: 3.0

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Data Sources: Pfizer proprietary drug development information. Safety data sheets for individual ingredients.

Reasons for Revision: Updated Section 2 - Hazard Identification. Updated Section 7 - Handling and Storage. Updated

Section 11 - Toxicology Information. Updated Section 12 - Ecological Information. Updated Section 3 - Composition / Information on Ingredients. Updated Section 1 - Identification of the

Substance/Preparation and the Company/Undertaking. Updated Section 16 - Other

Information.

Revision date: 06-Apr-2015

Prepared by:

Product Stewardship Hazard Communication Global Environment, Health, and Safety Operations

Pfizer Inc believes that the information contained in this Material Safety Data Sheet is accurate, and while it is provided in good faith, it is without warranty of any kind, expressed or implied. If data for a hazard are not included in this document there is no known information at this time.

End of Safety Data Sheet
