

PART I *What is the material and what do I need to know in an emergency?***1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE****IDENTIFICATION of the SUBSTANCE or PREPARATION:**

TRADE NAME (AS LABELED): **RISPERIDONE TABLET, FILM-COATED**
CHEMICAL NAME: For Active Ingredient: 3-[2-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]ethyl]-6,7,8,9-tetrahydro-2-methyl-4H-pyrido[1,2-a]pyrimidin-4-one
CHEMICAL CLASS: For Active Ingredient: Benzoxazole
THERAPEUTIC CLASS: Antipsychotic
HOW SUPPLIED: Round tablets: dark yellow (0.25 mg), red-brown (0.5 mg), white to off-white (1 mg), orange (2 mg), yellow (3 mg) or green (4 mg)
RELEVANT USE of the SUBSTANCE Pharmaceutical for Human Use
USES ADVISED AGAINST: Other than Relevant Use

COMPANY/UNDERTAKING IDENTIFICATION:

U.S. SUPPLIER/MANUFACTURER'S NAME: **TEVA**
ADDRESS: 1090 Horsham Road
 North Wales, PA 19454
 215-591-3000 [08:00 AM --> 05:00 PM]
BUSINESS PHONE:
EUROPEAN SUPPLIER/MANUFACTURER'S NAME: **TEVA/TAPI**
ADDRESS: Sicor sri-Via Terrazzano
 77-20017 Cho (MI), Italy
 +39 02 93197 306 [08:00 AM --> 05:00 PM]
BUSINESS PHONE:
EMERGENCY PHONE: United States/Canada/Puerto Rico: 1-800/424-9300 (Chemtrec) [24-hrs]
 International: 01-703-527-3887 (Chemtrec) [24-hours]
EMAIL: TevaSDSRequest@tevapharm.com
DATE OF PREPARATION: March 10, 2014
DATE OF REVISION: New

ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format. This material has been classified in accordance with the hazard criteria of the CPR and the SDS contains all the information required by the CPR. The material is also classified per all applicable EU Directives through EC 1907: 2006, the European Union CLP EC 1272/2008 and the Global Harmonization Standard.

2. HAZARD IDENTIFICATION

GLOBAL HARMONIZATION AND EU CLP REGULATION (EC) 1272/2008 LABELING AND CLASSIFICATION: According to Article 1, item 5 (a) of CLP Regulation (EC) 1272/2008, medicinal products in the finished state for human use, as defined in 2001/83/EC, are excepted from classification and other criteria of 1272/2008.

EU LABELING/CLASSIFICATION: According to Article 1 of European Union Council Directive 92/32/EEC, medical products in the finished state for human use (as defined by European Union Council Directives 67/548/EEC and 87/21/EEC) are not subject to the regulations and administrative provisions of European Union Council Directive 92/32/EEC.

EMERGENCY OVERVIEW: Product Description: This product is supplied as odorless, round, dark yellow (0.25 mg), red-brown (0.5 mg), white to off-white (1 mg), orange (2 mg), yellow (3 mg) or green (4 mg) tablets. **Health Hazards:** In the workplace, exposure via inhalation and skin contact may cause irritation. Dusts from tablets can cause mechanical irritation to the eyes. Accidental ingestion may be harmful. In therapeutic use, the most common adverse effects reported include somnolence, increased appetite, fatigue, insomnia, sedation, parkinsonism, unpleasant sensations of inner restlessness, vomiting, cough, constipation, nasopharyngitis, drooling, runny nose, dry mouth, abdominal pain upper, dizziness, nausea, anxiety, headache, nasal congestion, inflammation of nasal mucous membranes, tremor, and rash. Therapeutic use may cause adverse effects on the metabolic, central nervous and cardiovascular systems, and can cause blood disorders, which can be severe or fatal. In susceptible persons, therapeutic use may cause a severe reaction (Neuroleptic Malignant Syndrome [NMS]) accompanied with fever and body rigidity, renal failure and other serious symptoms, which can also be fatal. In certain individuals, long-term use may cause a condition that causes involuntary movements and can be permanent. Severe anaphylactic reactions have been reported. Some human evidence indicates possible harm to fetus during pregnancy. Limited evidence of adverse effect on fertility, based on animal information. Breast-feeding during therapeutic use may harm to infants. These effects may be possible as a result of workplace exposure. See Section 11 (Toxicological Information) for information on other potential health hazards known from therapeutic use. **Flammability Hazards:** This product requires substantial pre-heating before ignition occurs. When involved in a fire, this product may decompose and produce irritating vapors and toxic compounds (including aluminum, carbon, iron, magnesium, titanium, silicon, sodium and nitrogen oxides and hydrogen fluoride). **Reactivity Hazards:** This product is not reactive. **Environmental Hazards:** The active ingredient is toxic to aquatic organisms and can cause long term damage in an aquatic environment. Release to the environment may have adverse effect. **Emergency Recommendations:** Emergency responders must wear personal protective equipment suitable for the situation to which they are responding.

3. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	EINECS #	% w/w	LABEL ELEMENTS EU Classification (67/548/EEC) GHS & EU Classification (1272/2008 EC) Risk Phrases/Hazard Statements
ACTIVE INGREDIENT				
Risperidone 3-[2-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]ethyl]-6,7,8,9-tetrahydro-2-methyl-4H-pyrido[1,2-a]pyrimidin-4-one	106266-06-2	Not Listed	Proprietary	SELF CLASSIFICATION <u>EU 67/548</u> Classification: Reproductive Toxicity Cat. 3, Toxic, Harmful, Dangerous for the Environment Risk Phrase Codes: R62, R63, R25, R33, R64, R51/53 Hazard Symbols: T, Xn, N <u>GHS and EU 1272/2008</u> Classification: Reproductive Toxicity Cat. 2, Acute Oral Toxicity Cat. 3, STOT (Ingestion-Nervous System) RE Cat. 2, Adverse Effects on or Via Lactation, Aquatic Chronic Toxicity Cat. 2 Hazard Codes: H361fd, H301, H373, H362, H411 Hazard Symbol/Pictogram: GHS06, GHS08, GHS09
EXCIPIENTS				
Aluminum Oxide (3 and 4 mg only)	1344-28-1	215-691-6	Proprietary	EU 67/548: Classification: Not applicable. GHS & EU 1272/2008: Classification: Not applicable.
Colloidal Silicon Dioxide	112945-52-5	Not Listed	Proprietary	SELF-CLASSIFICATION <u>EU 67/548</u> Classification: Not Applicable Risk Phrase Codes: Not Applicable Hazard Symbols: Not Applicable <u>GHS and EU 1272/2008</u> Classification: Acute Oral Toxicity Cat. 5 Hazard Codes: H303 Hazard Symbol/Pictogram: Not Applicable
D&C Yellow No. 10 (3 and 4 mg only)	8004-92-0	Not Listed	Proprietary	SELF CLASSIFICATION <u>EU (67/548/EEC):</u> Classification: Harmful Risk Phrases: R22 Symbol: Xn <u>EU/GHS 1272/2008:</u> Classification: Acute Oral Toxicity Cat. 4 Hazard Statement Codes: H302 Hazard Symbols/Pictograms: GHS07
FD&C Blue No. 1 Aluminum Lake	53026-57-6	Not Listed	Proprietary	EU 67/548: Classification: Not applicable. GHS & EU 1272/2008: Classification: Not applicable.
FD&C Blue No. 2 Aluminum Lake	16251-28-3	240-589-3	Proprietary	EU 67/548: Classification: Not applicable. GHS & EU 1272/2008: Classification: Not applicable.
Hypromellose	9004-65-3	Not Listed	Proprietary	EU 67/548: Classification: Not applicable. GHS & EU 1272/2008: Classification: Not applicable.
Iron Oxide Red (0.25 and 0.5 mg only)	1332-37-2	215-570-8	Proprietary	EU 67/548: Classification: Not applicable. GHS & EU 1272/2008: Classification: Not applicable.
Iron Oxide Yellow (0.25, 0.05 and 4 mg only)	20344-49-4	Not Listed	Proprietary	EU 67/548: Classification: Not applicable. GHS & EU 1272/2008: Classification: Not applicable.
Lactose Monohydrate	64044-51-5	Anhydrous: 200-559-2	Proprietary	EU 67/548: Classification: Not applicable. GHS & EU 1272/2008: Classification: Not applicable.
Magnesium Stearate	557-04-0	209-150-3	Proprietary	EU 67/548: Classification: Not applicable. GHS & EU 1272/2008: Classification: Not applicable.
Microcrystalline Cellulose	9004-34-6	232-674-9	Proprietary	EU 67/548: Classification: Not applicable. GHS & EU 1272/2008: Classification: Not applicable.
Polyethylene Glycol	25322-68-3	NLP # 500-038-2	Proprietary	EU 67/548: Classification: Not applicable. GHS & EU 1272/2008: Classification: Not applicable.
Pregelatinized Starch	9005-25-8	232-679-6	Proprietary	EU 67/548: Classification: Not applicable. GHS & EU 1272/2008: Classification: Not applicable.
Sodium Lauryl Sulfate	151-21-3	205-788-1	Proprietary	SELF CLASSIFICATION <u>EU 67/548</u> Classification: Harmful, Irritant Risk Phrases: R22, R36 Hazard Symbols: Xn <u>GHS & EU 1272/2008</u> Classification: Acute Oral Toxicity Cat. 4, Eye Irritation Cat. 2A Hazard Codes: H302, H319 Hazard Symbol/Pictogram: GHS07
Sodium Starch Glycolate	9063-38-1	Not Listed	Proprietary	EU 67/548: Classification: Not applicable. GHS & EU 1272/2008: Classification: Not applicable.
Titanium Dioxide	13463-67-7	236-675-7	Proprietary	EU 67/548: Classification: Not applicable. GHS & EU 1272/2008: Classification: Not applicable.

See Section 16 for full classification information.

PART II What should I do if a hazardous situation occurs?

4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES: Contaminated individuals must be taken for medical attention if any adverse effects occur. Remove contaminated clothing and shoes. Take a copy of this SDS to health professional with victim. Wash clothing and thoroughly clean shoes before reuse.

Skin Exposure: If skin contact with this product occurs, flush affected area with water. Minimum flushing is for 20 minutes. The contaminated individual must seek medical attention if any adverse effects occur after flushing.

Eye Exposure: If dusts from product enter the eyes, open contaminated individual's eyes while under gently running water. Use sufficient force to open eyelids. Have contaminated individual "roll" eyes. Minimum flushing is for 20 minutes. Contaminated individual must seek medical attention if adverse effect occurs or continues after flushing.

Inhalation: If dusts are inhaled, remove victim to fresh air. The contaminated individual must seek medical attention if any adverse effects occur.

Ingestion: If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, seek immediate medical attention. If alert, victim should drink up to three glasses of water. Do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow. If victim is convulsing, maintain an open airway and obtain emergency medical attention.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: In therapeutic use, hepatic or renal dysfunction, low white blood cell count and other blood disorders, hyperglycemia, hyperprolactinemia, diabetes mellitus, cerebrovascular disease, cardiovascular disease or conditions that can cause hypotension (e.g., dehydration, hypovolemia, and treatment with antihypertensive medications), dyslipidemia, tardive dyskinesia, suicidal tendencies, or thermal regulation disorders may be aggravated. Workplace exposure may also aggravate these conditions. Persons who may have hypersensitivity reactions to aspirin or other NSAIDs or other disorders described in Section 11 (Toxicological Information) may experience aggravation upon exposure.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT IF NEEDED: Treat symptoms and eliminate exposure. Persons developing hypersensitivity reactions should receive medical attention. The following treatment is recommended for individual symptoms.

In case of acute overdose, establish and maintain an airway and ensure adequate oxygenation and ventilation. Gastric lavage (after intubation if patient is unconscious) and administration of activated charcoal together with a laxative should be considered.

The possibility of obtundation, seizures, or dystonic reaction of the head and neck following overdose may create a risk of aspiration with induced emesis.

Cardiovascular monitoring should commence immediately, including continuous electrocardiographic monitoring for possible arrhythmias. If anti-arrhythmic therapy is administered, disopyramide, procainamide, and quinidine carry a theoretical hazard of additive QT-prolonging effects when administered in patients with an acute overdose of Paliperidone. Similarly the alpha-blocking properties of bretylium might be additive to those of Paliperidone, resulting in problematic hypotension.

Hypotension and circulatory collapse should be treated with appropriate measures, such as intravenous fluids and/or sympathomimetic agents (epinephrine and dopamine should not be used, since beta stimulation may worsen hypotension in the setting of Paliperidone-induced alpha blockade). In cases of severe extrapyramidal symptoms, anticholinergic medication should be administered.

The management of Neuroleptic Malignant Syndrome (NMS) should include 1) immediate discontinuation of antipsychotic drugs and other drugs not essential to concurrent therapy, 2) intensive symptomatic treatment and medical monitoring, and 3) treatment of any concomitant serious medical problems for which specific treatments are available. There is no general agreement about specific pharmacological treatment regimens for uncomplicated NMS. Extrapyramidal symptoms may be controlled with dose reductions or administration of anti-parkinson drugs such as benztropine mesylate USP or trihexyphenidyl hydrochloride, USP. It should be noted that persistent EPS have been reported; the drug may have to be discontinued in such cases.

5. FIRE-FIGHTING MEASURES

FLASH POINT: Not available.

AUTOIGNITION TEMPERATURE: Not available.

FLAMMABLE LIMITS (in air by volume, %): Not applicable.

FIRE EXTINGUISHING MEDIA: Unless incompatibilities exist for surrounding materials, carbon dioxide, water spray, 'ABC' type chemical extinguishers, foam, dry chemical and halon extinguishers can be used to fight fires involving this product.

UNSUITABLE FIRE EXTINGUISHING MEDIA: None known.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE: This product must be substantially pre-heated before ignition can occur. When involved in a fire, this material may decompose and produce irritating vapors and toxic compounds (including aluminum, carbon, iron, magnesium, titanium, silicon, sodium and nitrogen oxides and hydrogen fluoride).

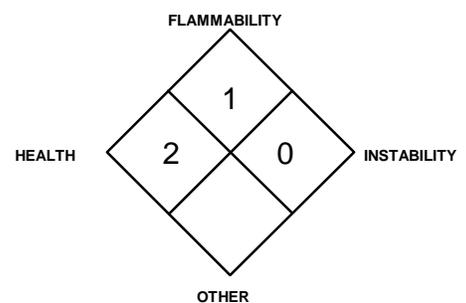
Explosion Sensitivity to Mechanical Impact: Not applicable.

Explosion Sensitivity to Static Discharge: Not sensitive.

SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS: Structural firefighters

must wear Self-Contained Breathing Apparatus and full protective equipment. All personal protective gear and contaminated fire-response equipment should be decontaminated with soapy water and thoroughly rinsed before being returned to service. Move fire-exposed containers if it can be done without risk to firefighters. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

NFPA RATING



Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate
3 = Serious 4 = Severe

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Spill kits, clearly labeled, should be kept in or near preparation and administrative areas. It is suggested that kits include a respirator, chemical splash goggles, two pairs of gloves, two sheets (12" x 12") of absorbent material, 250-mL and 1-liter spill control pillows, a small scoop to collect glass fragments (if applicable) and two large waste disposal bags. Absorbents should be able to be incinerated. Avoid generating airborne dusts of this product during spill response procedures as described below.

PROTECTIVE EQUIPMENT:

Small Spills/Spills in Hoods: Personnel wearing nitrile or other appropriate gloves, labcoat or other protective clothing and eye protection should immediately clean incidental spills (e.g. a single container).

Large Spills: For large spills (e.g., a pallet of containers), proper protective equipment, including double nitrile or appropriate gloves, and protective clothing (i.e., disposable Tyvek coveralls). When there is any danger of airborne dusts being generated, use a full-face respirator equipped with a High Efficiency Particulate (HEPA) filter. Self-Contained Breathing Apparatus (SCBA) can be used instead of an air-purifying respirator.

METHODS FOR CLEAN-UP AND CONTAINMENT:

Cleanup of Small Spills: Pick-up or wipe-up spilled tablets with damp absorbent sheets to prevent generation of dusts. Decontaminate the spill area (three times) using a bleach and detergent solution and then rinse with clean water.

Large Spills: Restrict access to the spill areas. Gently wet down area and carefully sweep up spilled product, avoiding the generation of airborne dusts. The dispersion of particles into surrounding air and the possibility of inhalation is a serious matter and should be treated as such. Do not apply chemical in-activators as they may produce hazardous by-products. Thoroughly clean all contaminated surfaces three times using a bleach and detergent solution and then rinse with clean water.

All Spills: Use procedures described above and then place all spill residues in an appropriate, labeled container and seal. Move to a secure area. Dispose of in accordance with Federal, State, and local hazardous waste disposal regulations (see Section 13, Disposal Considerations). For spills on water, contain, minimize dispersion and collect. Dispose of recovered product and report spill per regulatory requirements.

ENVIRONMENTAL PRECAUTIONS: Prevent product from entering sewer or confined spaces, waterways, soil or public waters. Do not flush to sewer. For spills on water, contain, minimize dispersion and collect.

REFERENCE TO OTHER SECTIONS: Review Sections 2, 8, 11 and 12 before proceeding with cleanup. See Section 13, Disposal Considerations for more information.

PART III *How can I prevent hazardous situations from occurring?*

7. HANDLING and STORAGE

PRECAUTIONS FOR SAFE HANDLING: All employees who handle this product should be thoroughly trained to handle it safely. As with all chemicals, avoid getting this product ON YOU or IN YOU. Do not eat or drink while handling this product. After handling this product, wash face and hands thoroughly prior to eating, drinking, smoking or applying cosmetics. Ensure this product is used with adequate ventilation. Appropriate personal protective equipment must be worn (see Section 8, Exposure Controls - Personal Protection). Open containers slowly on a stable surface in areas that have been designated for use of this product. Minimize all exposures to this product. Avoid generation of dusts. Areas in which this product is used should be wiped down, so that this dusts from product do not accumulate.

CONDITIONS FOR SAFE STORAGE: Containers of this product must be properly labeled. Store containers in a cool, dry location, away from direct sunlight and sources of intense heat. Recommended Storage Temperature: 20-25°C (68-77°F). Store away from incompatible materials (see Section 10, Stability and Reactivity). Product should be stored in secondary containers. Keep containers tightly closed when not in use. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Have appropriate extinguishing equipment in the storage area (e.g., sprinkler system, portable fire extinguishers). Empty containers may contain residual product; therefore, empty containers should be handled with care and disposed of properly.

SPECIFIC END USE(S): This product is a human pharmaceutical.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: When cleaning non-disposable equipment, wear nitrile or other appropriate gloves (double gloving is recommended), goggles, and lab coat. Prevent dispersion of particulates by wetting or dampening surfaces prior to clean up of equipment. If applicable, wash equipment using a bleach and detergent solution and then rinse with clean water.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

EXPOSURE LIMITS/CONTROL PARAMETERS:

Ventilation and Engineering Controls: General: Use with adequate ventilation. Follow standard operating procedures and requirements for handling this product. Ensure eyewash stations and deluge showers are available and accessible in areas where this product is used. Wear appropriate personal protect equipment consistent with the recommendations of this SDS. Prevent accumulation of product on work surfaces by routinely cleaning areas appropriately.

Workplace Exposure Limits/Control Parameters:

CHEMICAL NAME	CAS #	EXPOSURE LIMITS IN AIR							
		ACGIH-TLVs		OSHA-PELs		NIOSH-RELS		NIOSH IDLH ppm	OTHER mg/m ³
		TWA ppm	STEL ppm	TWA ppm	STEL ppm	TWA ppm	STEL ppm		
Risperidone	106226-06-2	NE	NE	NE	NE	NE	NE	NE	Teva OEL TWA =1.4 µg/m³ (established 28Nov2012)

NE = Not Established

See Section 16 for Definitions of Other Terms Used

8. EXPOSURE CONTROLS - PERSONAL PROTECTION (Continued)

EXPOSURE LIMITS/CONTROL PARAMETERS (continued):

Workplace Exposure Limits/Control Parameters (continued):

CHEMICAL NAME	CAS #	EXPOSURE LIMITS IN AIR							
		ACGIH-TLVs		OSHA-PELs		NIOSH-RELs		NIOSH	OTHER
		TWA mg/m ³	STEL mg/m ³	TWA mg/m ³	STEL mg/m ³	TWA mg/m ³	STEL mg/m ³	IDLH mg/m ³	
Aluminum Oxide	1344-28-1	NE	NE	15 (total dust), 5 (resp. fract.)	NE	NE	NE	NE	DFG MAKs: TWA = 4 (inhalable fraction), 1.5 (respirable fraction) DFG MAK Pregnancy Risk Classification: D Carcinogen: MAK-2 (fibrous dust)
Colloidal Silicon Dioxide	112926-00-8	NE	NE	20 mppcf or	80 mg/m ³ % SO ₂	6 See NIOSH Pocket Guide App. C	NE	3000	Carcinogen: IARC-3, TLV-A3
D&C Yellow No. 10	8004-92-0	NE	NE	NE	NE	NE	NE	NE	NE
FD&C Blue No. 1 Aluminum Lake	53026-57-6	NE	NE	NE	NE	NE	NE	NE	NE
FD&C Blue No. 2 Aluminum Lake	16251-28-3	NE	NE	NE	NE	NE	NE	NE	NE
Hypromellose Microcrystalline Cellulose Exposure limits are for cellulose	9004-65-3 9004-34-6	10	NE	15 (total dust), 5 (respirable fraction)	NE	10 (total dust), 5 (resp. fraction)	NE	NE	NE
Iron Oxide Red Iron Oxide Yellow Exposure limits given are for CAS# 1309-37-1 (Fe ₂ O ₃)	1332-37-2 20344-49-4	5 (resp. fract.)	NE	10 (fume)	NE	5 (dusts & fume, as Fe)	NE	2500 (dust & fume, as Fe)	Carcinogen: IARC-3, MAK-3B, TLV-A4
Lactose Monohydrate	64044-51-5	NE	NE	NE	NE	NE	NE	NE	NE
Magnesium Stearate Exposure limits are for Stearates	557-04-0	10	NE	NE	NE	NE	NE	NE	Carcinogen: TLV-A4
Polyethylene Glycol	25322-68-3	NE	NE	NE	NE	NE	NE	NE	DFG MAKs: TWA = 1000 (inhalable fraction) PEAK = 8•MAK 15 min. average value, 1-hr interval, 4 per shift DFG MAK Pregnancy Risk Classification: C AIHA WEEL: TWA = 10 (aerosol only)
Pregelatinized Starch	9005-25-8	10	NE	15 (total dust), 5 (resp. fract.)	NE	10 (total dust), 5 (resp. fract.)	NE	NE	Carcinogen: TLV-A4
Sodium Lauryl Sulfate	151-21-3	NE	NE	NE	NE	NE	NE	NE	NE
Sodium Starch Glycolate	9063-38-1	NE	NE	NE	NE	NE	NE	NE	NE
Titanium Dioxide	13463-67-7	10	NE	15 (total dust) 10 (vacated 1989 PEL)	NE	See NIOSH Pocket Guide Appendix A		Ca, 5000	Carcinogen: IARC-2B, MAK-3A, NIOSH-Ca, TLV-A4; NIC: TLV-A3

NE = Not Established

See Section 16 for Definitions of Other Terms Used

International Occupational Exposure Limits: Exposure limits available for some excipient components are given below.

ALUMINUM OXIDE:

Australia: TWA = 10 mg/m³, JAN 1993
Austria: TRK = 0.25 fibers/cc, JAN 2006
Belgium: TWA = 10 mg(Al)/m³, MAR 2002
Denmark: TWA = 10 mg/m³, OCT 2002
France: VME = 10 mg/m³, FEB2006
Germany: MAK = 1.5 mg/m³ (respirable, fume), 2005
Hungary: TWA = 6 mg/m³ (resp), SEP 2000
Japan: OEL = 0.5 mg/m³ (respirable), 2 mg/m³ (total), APR 2007
Korea: TWA = 10 mg/m³, 2006
Mexico: TWA = 10 mg(Al₂O₃)/m³ (inhalable), 2004
The Netherlands: MAC-TGG = 10 mg/m³, 2003
New Zealand: TWA = 10 mg/m³ (inspirable dust), JAN 2002
Norway: TWA = 2 mg(Al)/m³, JAN 1999
Poland: MAC(TWA) = 2 mg/m³, MAC(STEL) = 16 mg/m³, JAN 1999
Russia: TWA = 6 mg/m³, JUN 2003
Sweden: TWA = 5 mg/m³ (total dust); TWA = 2 mg/m³ (resp. dust), JUN2005
Switzerland: MAK-W = 3 mg/m³, DEC 2006
Switzerland: MAK-W = 3 mg/m³; KZG-W = 24 mg/m³, fume, DEC 2006
United Kingdom: TWA = 10 mg/m³ (inhalable), 2005
United Kingdom: TWA = 4 mg/m³ (respirable), 2005
In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV

COLLOIDAL SILICON DIOXIDE:

Australia: TWA = 2 mg/m³ (respirable dust), JUL 2008

HYPROMELLOSE:

Russia: STEL = 10 mg/m³, JUN 2003

IRON OXIDES:

ARAB Republic of Egypt: TWA = 3 ppm (5 mg/m³) (fume), JAN 1993
Australia: TWA = 0.1 mg(Fe)/m³, JUL 2008
Australia: TWA = 5 mg(Fe)/m³ (fume), JUL 2008
Belgium: TWA = 2 ppm (5 mg(Fe)/m³) (fume), MAR 2002
Denmark: TWA = 3.5 mg(Fe)/m³, OCT 2002
Finland: TWA = 5 mg(Fe)/m³, fume, SEP 2009
France: VME = 5 mg(Fe)/m³ (fume), FEB 2006
Germany: MAK = 1.5 mg(Fe)/m³ (respirable), 2005
Hungary: TWA = 6 mg/m³ (resp), SEP 2000
Japan: OEL = 1 mg/m³ (respirable), 4 mg/m³ (total), APR 2007
Korea: TWA = 10 mg/m³, 2006
Korea: TWA = 5 mg/m³, 2006
Mexico: TWA = 10 mg/m³; STEL = 20 mg/m³, 2004
The Netherlands: MAC-TGG = 5 mg(Fe)/m³, 2003
The Netherlands: MAC-TGG = 10 mg/m³, 2003
New Zealand: TWA = 5 mg(Fe)/m³ (dust and fume), JAN 2002
New Zealand: TWA = 10 mg/m³ (inspirable dust), JAN 2002
Norway: TWA = 3 mg/m³, JAN 1999
The Philippines: TWA = 10 mg/m³ (fume), JAN 1993
Poland: MAC(TWA) fume = 5 mg/m³, MAC(STEL) = 10 mg/m³, JAN 1999
Russia: TWA = 6 mg/m³, JUN 2003
Sweden: TWA = 3.5 mg(Fe)/m³ (resp. dust), JUN 2005
Switzerland: MAK-W = 3 mg/m³, DEC 2006
Thailand: TWA = 10 mg/m³ (fume), JAN1993
Turkey: TWA = 10 mg/m³ (fume), JAN 1993
United Kingdom: TWA = 4 mg/m³ (respirable), 2005

8. EXPOSURE CONTROLS - PERSONAL PROTECTION (Continued)

EXPOSURE LIMITS/CONTROL PARAMETERS (continued):

International Occupational Exposure Limits (continued):

IRON OXIDES (continued):

United Kingdom: TWA = 10 mg/m³ (inhalable), 2005
United Kingdom: TWA = 5 mg(Fe)/m³; STEL = 10 mg(Fe)/m³, 2005
In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV

MAGNESIUM STEARATE:

New Zealand: TWA = 10 mg/m³ (inspirable dust), JAN 2002

MICROCRYSTALLINE CELLULOSE:

Belgium: TWA = 10 mg/m³, MAR 2002
France: VME = 10 mg/m³, FEB 2006
Korea: TWA = 10 mg/m³, 2006
Mexico: TWA = 10 mg/m³; STEL = 20 mg/m³, 2004
The Netherlands: MAC-TGG = 2 mg/m³, 2003
New Zealand: TWA = 10 mg/m³ (inspirable dust), JAN 2002
Russia: STEL = 10 mg/m³, JUN 2003
Switzerland: MAK-W = W 6 mg/m³, DEC 2006
United Kingdom: TWA = 10 mg/m³ (inhalable), 2005
United Kingdom: TWA = 4 mg/m³; STEL = 20 mg/m³ (respirable), 2005
In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam, check ACGIH TLV

POLYETHYLENE GLYCOL:

The Netherlands: MAC-TGG = 1000 mg/m³, 2003
Russia: STEL = 10 mg/m³, JUN 2003
Denmark: TWA = 1000 mg/m³, OCT 2002
Germany: MAK = 1000 mg/m³ (inhalable), 2005

PREGELATINIZED STARCH:

Belgium: TWA = 10 mg/m³, MAR 2002
Korea: TWA = 10 mg/m³, 2006
New Zealand: TWA = 10 mg/m³ (inspirable dust), JAN 2002

PREGELATINIZED STARCH (continued):

Russia: STEL = 10 mg/m³, JUN 2003
Switzerland: MAK-W = 3 mg/m³, DEC 2006
United Kingdom: TWA = 10 mg/m³ (inhalable dust), OCT 2007
United Kingdom: TWA = 4 mg/m³ (respirable dust), OCT 2007
In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV
TITANIUM DIOXIDE:
ARAB Republic of Egypt: TWA = 15 mg/m³, JAN 1993
Belgium: TWA = 10 mg/m³, MAR 2002
Denmark: TWA = 6 mg(Ti)/m³, OCT 2002
France: VME = 10 mg/m³, FEB 2006
Germany: MAK = 1.5 mg/m³ (respirable), 2005
Japan: OEL = 1 mg/m³ (respirable), 4 mg/m³ (total), APR 2007
Korea: TWA = 10 mg/m³, 2006
Mexico: TWA = 10 mg(Ti)/m³; STEL = 20 mg(Ti)/m³, 2004
The Netherlands: MAC-TGG = 10 mg/m³, 2003
New Zealand: TWA = 10 mg/m³ (inspirable dust), JAN 2002
Norway: TWA = 5 mg/m³, JAN 1999
Poland: MAC(TWA) = 10 mg(Ti)/m³, MAC(STEL) = 30 mg(Ti)/m³, JAN 1999
Russia: TWA = 10 mg/m³, JUN 2003
Sweden: TWA = 5 mg/m³ (total dust), JUN 2005
Switzerland: MAK-W = 3 mg/m³, DEC 2006
Turkey: TWA = 15 mg/m³, JAN 1993
United Kingdom: TWA = 10 mg/m³ (inhalable), 2005
United Kingdom: TWA = TWA 4 mg/m³ (respirable), 2005
In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV

PROTECTIVE EQUIPMENT: *The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132, including U.S. Federal OSHA Respiratory Protection (29 CFR 1910.134), OSHA Eye Protection 29 CFR 1910.133, OSHA Hand Protection 29 CFR 1910.138, OSHA Foot Protection 29 CFR 1910.136 and OSHA Body Protection 29 CFR 1910.132), equivalent standards of Canada (including CSA Respiratory Standard Z94.4-02, Z94.3-M1982, Industrial Eye and Face Protectors and CSA Standard Z195-02, Protective Footwear), or standards of EU member states (including EN 529:2005 for respiratory PPE, CEN/TR 15419:2006 for hand protection, and CR 13464:1999 for face/eye protection). Please reference applicable regulations and standards for relevant details.*

Respiratory Protection: Maintain airborne contaminant concentrations below exposure limits listed above, if applicable. For materials without listed exposure limits, minimize respiratory exposure. If necessary, use only respiratory protection authorized under appropriate regulations. Oxygen levels below 19.5% are considered IDLH by U.S. OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under U.S. OSHA's Respiratory Protection Standard (1910.134-1998).

Eye Protection: Wear splash goggles or safety glasses as appropriate for the task. If necessary, refer to appropriate regulations.

Hand Protection: Wash hands and wrists before putting on and after removing gloves. During manufacture or other similar industrial operations, wear the appropriate hand protection for the process. When used in medical administration of the product, double glove with nitrile or other appropriate gloves to avoid contact and/or absorption of the product. Use double gloves for spill response, as stated in Section 6 (Accidental Release Measures) of this SDS. Because all gloves are to some extent permeable and their permeability increases with time, they should be changed regularly (hourly is preferable) or immediately if torn or punctured. If necessary refer to appropriate regulations.

Skin Protection: Use appropriate protective clothing for the task (e.g., lab coat, etc.). If necessary, refer to the U.S. OSHA Technical Manual (Section VII: Personal Protective Equipment) or other appropriate regulations.

9. PHYSICAL and CHEMICAL PROPERTIES

The following information is for the product as a whole.

PHYSICAL FORM: Oval tablets.

ODOR: Odorless.

MOLECULAR WEIGHT: Mixture.

HOW TO DETECT THIS SUBSTANCE (identification/warning properties): The appearance may be a distinguishing characteristic of this product in event of accidental release.

COLOR: As described in Section 2.

ODOR THRESHOLD: Not available.

MOLECULAR FORMULA: Mixture.

The appearance may be a distinguishing characteristic of this

The following information is for the Risperidone active ingredient.

FORM: Crystalline solid.

MOLECULAR WEIGHT: 410.49

ODOR: Odorless.

BOILING POINT @ 760 mmHg: 572.4°C (1062.3°F) [predict.]

VAPOR PRESSURE (air = 1): 0 mmHg [predict.]

EVAPORATION RATE (nBuAc = 1): Not applicable.

FLASH POINT: 300°C (572°F) [predict.]

AUTOIGNITION TEMPERATURE: Not available.

OTHER SOLUBILITIES: Freely soluble in methylene chloride, and soluble in methanol and 0.1 N hydrogen chloride.

COEFFICIENT WATER/OIL DISTRIBUTION: Log P: 2.68 [predict.]; Log Kow: 3.49 (est)

COLOR: White to light beige-colored.

MOLECULAR FORMULA: C₂₃H₂₇FN₄O₂

ODOR THRESHOLD: Odorless.

MELTING POINT: 170°C (338°F)

SPECIFIC GRAVITY (water = 1): 1.383 g/cm³ [predict.]

pH: Not available.

DECOMPOSITION TEMPERATURE: Not available.

SOLUBILITY IN WATER: Practically insoluble.

10. STABILITY and REACTIVITY

CHEMICAL STABILITY: Stable under normal conditions.

DECOMPOSITION PRODUCTS: **Combustion:** Products of thermal decomposition may include aluminum, carbon, iron, magnesium, titanium, silicon, sodium and nitrogen oxides and hydrogen fluoride. **Hydrolysis:** None known.

10. STABILITY and REACTIVITY (Continued)

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Incompatible with strong oxidizing agents, and strong acids.

POSSIBILITY OF HAZARDOUS REACTION/POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Exposure to or contact with extreme temperatures, incompatible chemicals.

PART IV *Is there any other useful information about this material?*

11. TOXICOLOGICAL INFORMATION

SYMPTOMS OF EXPOSURE BY ROUTE OF EXPOSURE: The main route of occupational exposure to this product is via inhalation of dusts and skin contact. The anticipated symptoms of exposure, by route of exposure are described further in this section.

Inhalation: Inhalation of dusts generated by damaged capsules of this product may slightly irritate the nose, throat, and lungs. No other health effects from inhalation known.

Contact with Skin or Eyes: It is anticipated that this product may irritate contaminated skin or eyes. Symptoms of skin contact may include itching and redness. Symptoms of eye contact can include redness, pain, and watering (mechanical irritation).

Skin Absorption: No information is available on possible skin absorption.

Ingestion: Accidental ingestion of this product (i.e., through poor hygiene practices) may be harmful. Other effects may occur as described under 'Other Potential Health Effects'.

Injection: Not a potential route of exposure for tablets.

OTHER POTENTIAL HEALTH EFFECTS: In therapeutic use, the most common adverse effects reported include somnolence, increased appetite, fatigue, insomnia, sedation, parkinsonism, unpleasant sensations of inner restlessness, vomiting, cough, constipation, nasopharyngitis, drooling, runny nose, dry mouth, abdominal pain upper, dizziness, nausea, anxiety, headache, nasal congestion, inflammation of nasal mucous membranes, tremor, and rash. Therapeutic use may cause adverse effects on the metabolic, central nervous and cardiovascular systems, and can cause blood disorders, which can be severe or fatal. In susceptible persons, therapeutic use may cause a severe reaction (Neuroleptic Malignant Syndrome [NMS]) accompanied with fever and body rigidity, renal failure and other serious symptoms, which can also be fatal. In certain individuals, long-term use may cause a condition that causes involuntary movements and can be permanent. Severe anaphylactic reactions have been reported. Some human evidence indicates possible harm to fetus during pregnancy. Limited evidence of adverse effect on fertility, based on animal information. Breast-feeding during therapeutic use may harm to infants. These effects may be possible as a result of workplace exposure. The actual risk in the workplace is not known. Body systems adversely affected during therapeutic use are provided below. More details are also given in the Teva Active Ingredient SDS for this product.

- Blood System
- Body as a Whole
- Cardiovascular System
- Central Nervous System
- Eyes
- Gastrointestinal System
- Hypersensitivity Reactions
- Metabolic System
- Musculoskeletal System
- Reproductive System
- Respiratory System
- Skin
- Urogenital System

HEALTH EFFECTS OR RISKS FROM EXPOSURE:

Acute: Dusts from product may cause irritation if inhaled and mechanical irritation to the eyes. Accidental ingestion may be harmful.

Chronic: Potential harm to fetus and adverse effects on fertility, based on animal data. Chronic exposure to this material may cause adverse effects as described under 'Other Potential Health Effects'. No other chronic effects have been reported from workplace exposure.

TARGET ORGANS: It is anticipated that for Occupational Exposure the target organs are: **Acute:** Skin, eyes, respiratory system. **Chronic:** Potential fetal harm, skin. In therapeutic use this product may have an impact on the body systems listed under 'Other Potential Health Effects'.

TOXICITY DATA: Currently, the following toxicity data are available for the active ingredient. Data are available for excipients, but are not provided in this SDS. Contact Teva for information.

RISPERIDONE:

TDLo (Oral-Child) 268 µg/kg: Sense Organs and Special Senses (Eye): effect, not otherwise specified; Behavioral: tremor, changes in motor activity (specific assay)

TDLo (Oral-Child) 2.5 mg/kg/25 days-intermittent: Behavioral: rigidity (including catalepsy); Cardiac: change in rate; Nutritional and Gross Metabolic: body temperature increase

TDLo (Oral-Child) 0.3 mg/kg/30 days-intermittent: Liver: other changes; Blood: changes in serum composition (e.g. TP, bilirubin, cholesterol); Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: multiple enzyme effects

TDLo (Oral-Woman) 2200 µg/kg: Cardiac: arrhythmias (including changes in conduction); Vascular: BP elevation not characterized in autonomic section; Nutritional and Gross Metabolic: changes in calcium

TDLo (Oral-Woman) 400 µg/kg: Behavioral: muscle contraction or spasticity; Cardiac: pulse rate increase, without fall in BP

RISPERIDONE (continued):

TDLo (Oral-Woman) 2 mg/kg: Cardiac: arrhythmias (including changes in conduction), pulse rate increase, without fall in BP; Vascular: BP elevation not characterized in autonomic section

TDLo (Oral-Woman) 880 µg/kg: Behavioral: somnolence (general depressed activity); Cardiac: arrhythmias (including changes in conduction)

TDLo (Oral-Woman) 1840 µg/kg: Behavioral: hallucinations, distorted perceptions, headache; Vascular: BP lowering not characterized in autonomic section

TDLo (Oral-Woman) 648 mg/kg/77 weeks-intermittent: Behavioral: changes in motor activity (specific assay), ataxia, muscle contraction or spasticity

TDLo (Oral-Woman) 0.41 mg/kg: Sense Organs and Special Senses (Eye): miosis (pupillary constriction); Behavioral: muscle weakness, anti-anxiety

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HEALTH HAZARD	(BLUE)	2*
---------------	--------	----

FLAMMABILITY HAZARD	(RED)	1
---------------------	-------	---

PHYSICAL HAZARD	(YELLOW)	0
-----------------	----------	---

PROTECTIVE EQUIPMENT

EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		SEE SECTION 8

For Routine Industrial Use and Handling Applications

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate
3 = Serious 4 = Severe * = Chronic hazard

11. TOXICOLOGICAL INFORMATION (Continued)

TOXICITY DATA (continued):

RISPERIDONE (continued):

TDLo (Oral-Woman) 43.8 mg/kg/1 year-intermittent: Behavioral: coma; Vascular: BP lowering not characterized in autonomic section; Lungs, Thorax, or Respiration: respiratory depression

TDLo (Oral-Woman) 3.34 mg/kg/91 days-intermittent: Behavioral: muscle contraction or spasticity

TDLo (Oral-Woman) 4.92 mg/kg/6 weeks-intermittent: Behavioral: antipsychotic; Gastrointestinal: other changes; Blood: changes in serum composition (e.g. TP, bilirubin, cholesterol)

TDLo (Oral-Woman) 3.36 mg/kg/4 weeks-intermittent: Behavioral: antipsychotic. changes in psychophysiological tests

TDLo (Oral-Woman) 0.4 mg/kg/10 days-intermittent: Behavioral: tremor; Nutritional and Gross Metabolic: body temperature increase; Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: other Enzymes

TDLo (Oral-Woman) 3.2 mg/kg/6 weeks-intermittent: Reproductive: Maternal Effects: other effects

TDLo (Oral-Woman) 1.36 mg/kg/17 days-continuous: Behavioral: headache; Gastrointestinal: hypermotility, diarrhea; Endocrine: changes in gonadotropins

TDLo (Oral-Man) 3857 µg/kg: Behavioral: convulsions or effect on seizure threshold; Cardiac: EKG changes not diagnostic of specified effects, pulse rate

TDLo (Oral-Man) 429 µg/kg: Sense Organs and Special Senses (Eye): miosis (pupillary constriction); Cardiac: EKG changes not diagnostic of specified effects, pulse rate increase, without fall in BP

TDLo (Oral-Man) 3428 µg/kg: Behavioral: hallucinations, distorted perceptions; Cardiac: EKG changes not diagnostic of specified effects; Nutritional and Gross Metabolic: changes in sodium

TDLo (Oral-Man) 429 µg/kg/15 days-intermittent: Brain and Coverings: changes in surface EEG; Behavioral: anorexia (human), alteration of operant conditioning

TDLo (Oral-Man) 114 µg/kg/2 days-intermittent: Behavioral: wakefulness, euphoria, excitement

TDLo (Oral-Man) 0.06 mg/kg: Behavioral: changes in psychophysiological tests

TDLo (Oral-Man) 0.043 mg/kg: Behavioral: somnolence (general depressed activity), changes in psychophysiological tests

TDLo (Oral-Man) 7.14 µg/kg: Brain and Coverings: changes in surface EEG

TDLo (Oral-Man) 1600 µg/kg/4 weeks-intermittent: Kidney/Ureter/Bladder: incontinence

TDLo (Oral-Man) 1.71 mg/kg/30 days-intermittent: Blood: changes in serum composition (e.g. TP, bilirubin, cholesterol); Musculoskeletal: other changes; Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: phosphokinase

TDLo (Oral-Man) 0.16 mg/kg/6 days-intermittent: Behavioral: changes in psychophysiological tests

TDLo (Oral-Man) 10.32 mg/kg/120 days-intermittent: Cardiac: other changes, changes in heart weight; Related to Chronic Data: death

TDLo (Oral-Man) 41.61 mg/kg/2 years-intermittent: Behavioral: muscle contraction or spasticity

TDLo (Oral-Man) 6.783 mg/kg/17 weeks-intermittent: Behavioral: muscle contraction or spasticity

TDLo (Oral-Man) 1.72 mg/kg/60 days-intermittent: Behavioral: muscle contraction or spasticity

TDLo (Oral-Man) 1.47 mg/kg/3 weeks-intermittent: Reproductive: Paternal Effects: impotence

TDLo (Oral-Man) 5.46 mg/kg/0.5 year-intermittent: Blood: leukopenia, changes in other cell count (unspecified)

TDLo (Oral-Man) 3.51 mg/kg/6 weeks-intermittent: Behavioral: antipsychotic; Gastrointestinal: other changes; Blood: changes in serum composition (e.g. TP, bilirubin, cholesterol)

TDLo (Oral-Man) 2.38 mg/kg/4 weeks-intermittent: Behavioral: antipsychotic, changes in psychophysiological tests

TDLo (Oral-Man) 2.27 mg/kg/6 weeks-intermittent: Reproductive: Paternal Effects: impotence, other effects on male

TDLo (Oral-Man) 1.4 mg/kg/3 weeks-intermittent: Endocrine: changes in gonadotropins, other changes

TDLo (Oral-Man) 3.53 mg/kg/8 weeks-intermittent: Endocrine: changes in gonadotropins, other changes

TDLo (Oral-Human) 0.25 mg/kg: Behavioral: changes in psychophysiological tests

TDLo (Oral-Human) 0.016 mg/kg: Brain and Coverings: changes in surface EEG; Behavioral: changes in REM sleep (human)

TDLo (Oral-Human) 1.6 mg/kg/2 weeks-intermittent: Behavioral: anti-anxiety

TDLo (Oral-Human) 0.68 mg/kg/14 days-intermittent: Nutritional and Gross Metabolic: other changes

TDLo (Oral-Human) 780 µg/kg/2 weeks-intermittent: Autonomic Nervous System: sympathomimetic; Blood: changes in serum composition (e.g. TP, bilirubin, cholesterol); Biochemical: Metabolism (Intermediary): other

TDLo (Oral-Human) 1.71 mg/kg/30 days-intermittent: Behavioral: antipsychotic

TDLo (Oral-Human) 10.29 mg/kg/24 weeks-intermittent: Behavioral: rigidity (including catalepsy), antipsychotic; Endocrine: other changes

TDLo (Oral-Human) 2.4 mg/kg/28 days-intermittent: Behavioral: somnolence (general depressed activity); antipsychotic

TDLo (Oral-Human) 2.64 mg/kg/8 weeks-intermittent: Behavioral: somnolence (general depressed activity), tremor, antipsychotic

TDLo (Oral-Human) 47.6 mg/kg/79 weeks-intermittent: Gastrointestinal: other changes; Endocrine: other changes

TDLo (Oral-Human) 396 mg/kg/12 weeks-intermittent: Behavioral: tremor, rigidity (including catalepsy); Endocrine: other changes

TDLo (Oral-Human) 0.4 mg/kg/14 days-intermittent: Behavioral: rigidity (including catalepsy), antipsychotic

TDLo (Oral-Human) 7.2 mg/kg/12 weeks-intermittent: Behavioral: antipsychotic; Endocrine: other changes; Blood: changes in serum composition (e.g. TP, bilirubin, cholesterol)

TDLo (Oral-Human) 8.6 mg/kg/48 weeks-intermittent: Behavioral: somnolence (general depressed activity), changes in psychophysiological tests; Endocrine: effect on menstrual cycle

RISPERIDONE (continued):

TDLo (Oral-Human) 0.58 mg/kg/4 weeks-intermittent: Behavioral: somnolence (general depressed activity), headache, changes in psychophysiological tests

TDLo (Oral-Human) 5.04 mg/kg/12 weeks-intermittent: Behavioral: somnolence (general depressed activity), tremor; Endocrine: effect on menstrual cycle

TDLo (Intramuscular-Human) 0.72 mg/kg/4 weeks-intermittent: Behavioral: sleep, antipsychotic, headache

TDLo (Intramuscular-Human) 0.72 mg/kg/4 weeks-intermittent: Behavioral: antipsychotic, headache; Endocrine: diabetes mellitus

TDLo (Intramuscular-Human) 0.72 mg/kg/4 weeks-intermittent: Behavioral: altered sleep time (including change in righting reflex), antipsychotic

TDLo (Unreported-Man) 19 mg/kg/60 weeks-intermittent: Behavioral: euphoria, irritability, aggression

TDLo (Unreported-Man) 5.16 mg/kg/60 days-intermittent: Behavioral: tremor, rigidity (including catalepsy)

TDLo (Unreported-Child) 2.1 mg/kg/12 weeks-intermittent: Behavioral: antipsychotic

TDLo (Unreported-Human) 0.8 mg/kg/2 weeks-intermittent: Endocrine: changes in gonadotropins

TDLo (Unreported-Human) 10.3 mg/kg/24 weeks-intermittent: Behavioral: antipsychotic

TDLo (Unreported-Human) 1.68 mg/kg/8 weeks-intermittent: Behavioral: alteration of operant conditioning

TDLo (Unreported-Human) 3.3 mg/kg/8 weeks-intermittent: Behavioral: changes in psychophysiological tests

LD₅₀ (Oral-Rat) 56,600 µg/kg

LD₅₀ (Oral-Mouse) 63,100 µg/kg

LD₅₀ (Oral-Dog) 18,300 µg/kg: Behavioral: muscle weakness; Lungs, Thorax, or Respiration: respiratory stimulation; Gastrointestinal: hypermotility, diarrhea

LD₅₀ (Subcutaneous-Rat) 98 mg/kg: Sense Organs and Special Senses (Eye): ptosis; Behavioral: somnolence (general depressed activity); Lungs, Thorax, or Respiration: dyspnea

LD₅₀ (Intravenous-Rat) 34,300 µg/kg: Behavioral: tremor, convulsions or effect on seizure threshold; Nutritional and Gross Metabolic: body temperature decrease

LD₅₀ (Intravenous-Mouse) 26,900 µg/kg

LD₅₀ (Intravenous-Dog) 14,100 µg/kg

TDLo (Oral-Rat) 1 mg/kg: Behavioral: antipsychotic, alteration of operant conditioning

TDLo (Oral-Rat) 0.1 mg/kg: Behavioral: alteration of operant conditioning

TDLo (Oral-Rat) 3.6 mg/kg: Behavioral: alteration of classical conditioning

TDLo (Oral-Rat) 10 mg/kg: Behavioral: changes in motor activity (specific assay), rigidity (including catalepsy)

TDLo (Oral-Rat) 0.3 mg/kg: Behavioral: changes in motor activity (specific assay)

TDLo (Oral-Rat) 228 mg/kg/13 weeks-intermittent: Blood: pigmented or nucleated red blood cells, changes in erythrocyte (RBC) count; Nutritional and Gross Metabolic: weight loss or decreased weight gain

TDLo (Oral-Rat) 2738 mg/kg/1 year-continuous: Kidney/Ureter/Bladder: other changes; Endocrine: other changes; Nutritional and Gross Metabolic: weight loss or decreased weight gain

TDLo (Oral-Rat) 45 mg/kg/30 days-intermittent: Behavioral: changes in motor activity (specific assay); Biochemical: Metabolism (Intermediary): other proteins

TDLo (Oral-Rat) 225 mg/kg/90 days-intermittent: Behavioral: alteration of classical conditioning; Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: true cholinesterase

TDLo (Oral-Rat) 21 mg/kg/21 days-intermittent: Biochemical: Metabolism (Intermediary): other proteins

TDLo (Oral-Rat) 26 mg/kg: female 6-18 day(s) after conception: Reproductive: Effects on Newborn: other neonatal measures or effects, growth statistics (e.g.%, reduced weight gain)

TDLo (Oral-Mouse) 0.3 mg/kg: Behavioral: changes in psychophysiological tests

TDLo (Oral-Mouse) 0.02 mg/kg: Behavioral: changes in motor activity (specific assay), antipsychotic

TDLo (Oral-Mouse) 0.25 mg/kg: Behavioral: changes in motor activity (specific assay), rigidity (including catalepsy), antipsychotic

TDLo (Oral-Mouse) 110 mg/kg: female 8-18 day(s) after conception: Reproductive: Maternal Effects: other effects; Effects on Embryo or Fetus: fetotoxicity (except death, e.g., stunted fetus); Specific Developmental Abnormalities: musculoskeletal system

TDLo (Oral-Monkey) 0.1 mg/kg: Behavioral: somnolence (general depressed activity)

TDLo (Intraperitoneal-Rat) 3 mg/kg: Gastrointestinal: hypermotility, diarrhea

TDLo (Intraperitoneal-Rat) 1 mg/kg: Behavioral: Neurotransmitters or modulators (putative): dopamine at other sites

TDLo (Intraperitoneal-Rat) 1 mg/kg: Endocrine: other changes; Blood: changes in serum composition (e.g. TP, bilirubin, cholesterol)

TDLo (Intraperitoneal-Rat) 0.3 mg/kg: Behavioral: alteration of classical conditioning

TDLo (Intraperitoneal-Rat) 1 mg/kg: Behavioral: changes in motor activity (specific assay), alteration of operant conditioning

TDLo (Intraperitoneal-Rat) 3 mg/kg: Behavioral: changes in motor activity (specific assay), rigidity (including catalepsy), alteration of operant conditioning

TDLo (Intraperitoneal-Rat) 0.5 mg/kg: Nutritional and Gross Metabolic: body temperature decrease; Biochemical: Neurotransmitters or modulators (putative): dopamine at other sites

TDLo (Intraperitoneal-Rat) 0.1 mg/kg: Brain and Coverings: recordings from specific areas of CNS

TDLo (Intraperitoneal-Rat) 0.1 mg/kg: Vascular: BP lowering not characterized in autonomic section

TDLo (Intraperitoneal-Rat) 0.1 mg/kg: Behavioral: alteration of operant conditioning

TDLo (Intraperitoneal-Rat) 0.01 mg/kg: Endocrine: other changes

TDLo (Intraperitoneal-Rat) 1.1 mg/kg: Behavioral: rigidity (including catalepsy)

TDLo (Intraperitoneal-Rat) 1.48 mg/kg/2 days-intermittent: Behavioral: alteration of operant conditioning

TDLo (Intraperitoneal-Rat) 1.4 mg/kg/14 days-intermittent: Behavioral: food intake (animal)

TDLo (Intraperitoneal-Rat) 2.1 mg/kg/21 days-intermittent: Related to Chronic Data: changes in uterine weight

11. TOXICOLOGICAL INFORMATION (Continued)

TOXICITY DATA (continued):

RISPERIDONE (continued):

TDLo (Intraperitoneal-Rat) 3.5 mg/kg/7 days-intermittent: Endocrine: effect on menstrual cycle

TDLo (Intraperitoneal-Rat) 2.1 mg/kg/3 weeks-intermittent: Behavioral: changes in motor activity (specific assay), changes in psychophysiological tests

TDLo (Intraperitoneal-Rat) 2 mg/kg/4 days-intermittent: Nutritional and Gross Metabolic other changes

TDLo (Intraperitoneal-Rat) 10.5 mg/kg/21 days-intermittent: Reproductive: Maternal Effects: menstrual cycle changes or disorders; Nutritional and Gross Metabolic: other changes; Biochemical: Metabolism (Intermediary): lipids including transport

TDLo (Intraperitoneal-Mouse) 0.5 mg/kg: Behavioral: changes in psychophysiological tests

TDLo (Intraperitoneal-Mouse) 0.1 mg/kg: Peripheral Nerve and Sensation: recording from peripheral motor nerve; Behavioral: alteration of operant conditioning

TDLo (Intraperitoneal-Mouse) 0.01 mg/kg: Behavioral: anti-anxiety

TDLo (Intraperitoneal-Mouse) 0.04 mg/kg: Behavioral: changes in motor activity (specific assay)

TDLo (Intraperitoneal-Mouse) 1 mg/kg: Behavioral: antipsychotic

TDLo (Subcutaneous-Rat) 0.6 mg/kg: Brain and Coverings: other degenerative changes; Biochemical: Neurotransmitters or modulators (putative): catecholamine levels in CNS

TDLo (Subcutaneous-Rat) 2 mg/kg: Behavioral: rigidity (including catalepsy), alteration of classical conditioning

TDLo (Subcutaneous-Rat) 1 mg/kg: Behavioral: Metabolism (Intermediary): other

TDLo (Subcutaneous-Rat) 0.1 mg/kg: Behavioral: antipsychotic

TDLo (Subcutaneous-Rat) 0.05 mg/kg: Behavioral: alteration of classical conditioning, changes in psychophysiological tests

TDLo (Subcutaneous-Rat) 1 mg/kg: Biochemical: Neurotransmitters or modulators (putative): catecholamine levels in CNS, Neurotransmitters or modulators (putative): dopamine at other sites

TDLo (Subcutaneous-Rat) 0.32 mg/kg: Behavioral: changes in psychophysiological tests

TDLo (Subcutaneous-Rat) 0.14 mg/kg: Biochemical: Neurotransmitters or modulators (putative): dopamine at other sites

TDLo (Subcutaneous-Rat) 0.05 mg/kg: Nutritional and Gross Metabolic: body temperature decrease

TDLo (Subcutaneous-Rat) 0.1 mg/kg: Behavioral: alteration of operant conditioning

TDLo (Subcutaneous-Rat) 1 mg/kg: Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: true cholinesterase; Biochemical: Neurotransmitters or modulators (putative): dopamine at other sites

TDLo (Subcutaneous-Rat) 140 mg/kg/28 days-continuous: Brain and Coverings: recordings from specific areas of CNS

TDLo (Subcutaneous-Rat) 35 mg/kg/7 days-intermittent: Brain and Coverings: other degenerative changes; Biochemical: Neurotransmitters or modulators (putative): dopamine in striatum, Neurotransmitters or modulators (putative): dopamine at other sites

RISPERIDONE (continued):

TDLo (Subcutaneous-Rat) 0.31 mg/kg: Behavioral: alteration of classical conditioning

TDLo (Subcutaneous-Rat) 0.01 mg/kg: Endocrine: other changes

TDLo (Subcutaneous-Rat) 0.63 mg/kg: Brain and Coverings: other degenerative changes; Behavioral: rigidity (including catalepsy), alteration of classical conditioning

TDLo (Subcutaneous-Rat) 0.04 mg/kg: Behavioral: changes in motor activity (specific assay); Endocrine: other changes

TDLo (Subcutaneous-Rat) 0.16 mg/kg: Behavioral: changes in motor activity (specific assay), alteration of operant conditioning; Endocrine: other changes

TDLo (Subcutaneous-Rat) 1.06 mg/kg: Behavioral: changes in motor activity (specific assay)

TDLo (Subcutaneous-Rat) 0.13 mg/kg: Behavioral: antipsychotic, alteration of classical conditioning

TDLo (Subcutaneous-Rat) 0.21 mg/kg/21 days-intermittent: Behavioral: food intake (animal); Nutritional and Gross Metabolic: other changes

TDLo (Subcutaneous-Rat) 2.1 mg/kg/21 days-intermittent: Behavioral: food intake (animal)

TDLo (Subcutaneous-Rat) 21 mg/kg/21 days-intermittent: Endocrine: changes in gonadotropins; Nutritional and Gross Metabolic: weight loss or decreased weight gain

TDLo (Subcutaneous-Rat) 2.1 mg/kg/21 days-intermittent: Nutritional and Gross Metabolic: body temperature decrease; Biochemical: Metabolism (Intermediary): lipids including transport, Metabolism (Intermediary): other proteins

TDLo (Subcutaneous-Rat) 56 mg/kg/8 weeks-intermittent: Behavioral: anti-anxiety, alteration of classical conditioning

TDLo (Subcutaneous-Rat) 0.12 mg/kg/3 days-intermittent: Behavioral: alteration of operant conditioning

TDLo (Subcutaneous-Mouse) 0.18 mg/kg: Biochemical: Neurotransmitters or modulators (putative): dopamine in striatum

TDLo (Subcutaneous-Mouse) 0.16 mg/kg: Sense Organs and Special Senses (Olfaction): effect, not otherwise specified

TDLo (Subcutaneous-Mouse) 0.16 mg/kg: Behavioral: changes in motor activity (specific assay), ataxia

TDLo (Subcutaneous-Mouse) 1 mg/kg: Behavioral: alteration of classical conditioning

TDLo (Subcutaneous-Mouse) 1.92 mg/kg/3 days-intermittent: Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation

TDLo (Subcutaneous-Pig) 0.01 mg/kg: Behavioral: changes in motor activity (specific assay), antipsychotic

TDLo (Intravenous-Rat) 0.1 mg/kg: Kidney/Ureter/Bladder: structural or functional changes in ureter

TDLo (Intracerebral-Rat) 16,422 mg/kg/60 minutes: Brain and Coverings: other degenerative changes; Biochemical: Neurotransmitters or modulators (putative): catecholamine levels in CNS

TDLo (Intramuscular-Rabbit) 7 mg/kg/92 days-intermittent: Cardiac: other changes

CARCINOGENIC POTENTIAL OF COMPONENTS: The following information is for the active ingredient.

Tissue culture experiments indicate that approximately one-third of human breast cancers are prolactin dependent *in vitro*, a factor of potential importance if the prescription of these drugs is contemplated in a patient with previously detected breast cancer. An increase in pituitary gland, mammary gland, and pancreatic islet cell neoplasia (mammary adenocarcinomas, pituitary and pancreatic adenomas) was observed in the Risperidone carcinogenicity studies conducted in mice and rats. Neither clinical studies nor epidemiologic studies conducted to date have shown an association between chronic administration of this class of drugs and tumorigenesis in humans; the available evidence is considered too limited to be conclusive at this time.

Carcinogenicity studies were conducted in Swiss albino mice and Wistar rats. Risperidone was administered in the diet at doses of 0.63 mg/kg, 2.5 mg/kg, and 10 mg/kg for 18 months to mice and for 25 months to rats. These doses are equivalent to 2.4, 9.4, and 37.5 times the maximum recommended human dose (MRHD) for schizophrenia (16 mg/day) on a mg/kg basis or 0.2, 0.75, and 3 times the MRHD (mice) or 0.4, 1.5, and 6 times the MRHD (rats) on a mg/m² basis. A maximum tolerated dose was not achieved in male mice. There were statistically significant increases in pituitary gland adenomas, endocrine pancreas adenomas, and mammary gland adenocarcinomas. The following table summarizes the multiples of the human dose on a mg/m² (mg/kg) basis at which these tumors occurred.

Tumor Type	Species	Sex	Multiples of Maximum Human Dose in mg/m ² (mg/kg)	
			Lowest Effect Level	Highest No-Effect Level
Pituitary Adenomas	Mouse	Female	0.75 (9.4)	0.2 (2.4)
Endocrine Pancreas Adenomas	Rat	Male	1.5 (9.4)	0.4 (2.4)
Mammary Gland Adenocarcinomas	Mouse	Female	0.2 (2.4)	none
	Rat	Female	0.4 (2.4)	none
	Rat	Male	6.0 (37.5)	1.5 (9.4)
Mammary Gland Neoplasm, Total	Rat	Male	1.5 (9.4)	0.4 (2.4)

This material is not listed by any agency tracking the carcinogenic potential of chemical compounds.

The excipient components are listed by agencies tracking the carcinogenic potential of chemical compounds, as follows:

IRON OXIDES (based on CAS# 1309-37-1): ACGIH TLV-A4 (Not Classifiable as a Human Carcinogen); IARC-3 (Unclassifiable as to Carcinogenicity in Humans); MAK-3B [respirable fraction] (Substances for Which *in vitro* tests or animal studies have yielded evidence of carcinogenic effects that is not sufficient for classification of the substance in one of the other categories.)

MAGNESIUM STEARATE, PREGELATINIZED STARCH: ACGIH TLV-A4 (Not Classifiable as a Human Carcinogen)

TITANIUM DIOXIDE: ACGIH TLV-A4 (Not Classifiable as a Human Carcinogen); IARC-2B (Possibly Carcinogenic to Humans); MAK-3A (Substances Which Cause Concern that They Could Be Carcinogenic for Man But Cannot Be Assessed Conclusively Because of Lack of Data. Substances for which the criteria for classification in Category 4 or 5 are fulfilled, but for which the database is insufficient for the establishment of a MAK value.); NIOSH-Ca (Potential Occupational Carcinogen with No Further Categorization); Notice of Intended Change: ACGIH TLV-A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)

The other components are not found on the following lists: U.S. EPA, U.S. NTP, U.S. OSHA, U.S. NIOSH, GERMAN MAK, IARC, or ACGIH and therefore are neither considered to be nor suspected to be cancer-causing agents by these agencies.

11. TOXICOLOGICAL INFORMATION (Continued)

IRRITANCY OF PRODUCT: Inhalation of dusts from this product may be irritating to the respiratory system. Dusts will also be irritating to the eyes.

SENSITIZATION TO THE PRODUCT: In therapeutic use, serious hypersensitivity reactions, including anaphylactic reactions and angioedema, have been reported.

REPRODUCTIVE TOXICITY INFORMATION: There are no adequate and well-controlled studies of Risperidone in pregnant women; however, Risperidone may cause fetal harm when administered to a pregnant woman. In the workplace, the risk to the fetus should be communicated and the appropriate action should be taken to prevent exposure in accordance with company policy and regulatory requirements. This product is rated by the FDA for therapeutic risk as Pregnancy Risk Category C (refer to Definition of Terms for full category definitions).

Mutagenicity: No evidence of mutagenic potential for Risperidone was found in the Ames reverse mutation test, mouse lymphoma assay, in vitro rat hepatocyte DNA-repair assay, *in vivo* micronucleus test in mice, the sex-linked recessive lethal test in *Drosophila*, or the chromosomal aberration test in human lymphocytes or Chinese hamster cells.

Embryotoxicity/Teratogenicity:

Human Data: Placental transfer of Risperidone occurs in rat pups. There are no adequate and well-controlled studies in pregnant women. However, there was one report of a case of agenesis of the corpus callosum in an infant exposed to Risperidone in utero. The causal relationship to Risperidone therapy is unknown.

Animal Data: The teratogenic potential of Risperidone was studied in three Segment II studies in Sprague-Dawley and Wistar rats (0.63 to 10 mg/kg or 0.4 to 6 times the maximum recommended human dose [MRHD] on a mg/m² basis) and in one Segment II study in New Zealand rabbits (0.31 to 5 mg/kg or 0.4 to 6 times the MRHD on a mg/m² basis). The incidence of malformations was not increased compared to control in offspring of rats or rabbits given 0.4 to 6 times the MRHD on a mg/m² basis. In three reproductive studies in rats (two Segment III and a multigenerational study), there was an increase in pup deaths during the first 4 days of lactation at doses of 0.16 to 5 mg/kg or 0.1 to 3 times the MRHD on a mg/m² basis. It is not known whether these deaths were due to a direct effect on the fetuses or pups or to effects on the dams.

There was no no-effect dose for increased rat pup mortality. In one Segment III study, there was an increase in stillborn rat pups at a dose of 2.5 mg/kg or 1.5 times the MRHD on a mg/m² basis. In a cross-fostering study in Wistar rats, toxic effects on the fetus or pups, as evidenced by a decrease in the number of live pups and an increase in the number of dead pups at birth (Day 0), and a decrease in birth weight in pups of drug-treated dams were observed. In addition, there was an increase in deaths by Day 1 among pups of drug-treated dams, regardless of whether or not the pups were cross-fostered. Risperidone also appeared to impair maternal behavior in that pup body weight gain and survival (from Day 1 to 4 of lactation) were reduced in pups born to control but reared by drug-treated dams. These effects were all noted at the one dose of Risperidone tested, i.e., 5 mg/kg or 3 times the MRHD on a mg/m² basis.

Reproductive Toxicity: Risperidone (0.16 to 5 mg/kg) was shown to impair mating, but not fertility, in Wistar rats in three reproductive studies (two Segment I and a multigenerational study) at doses 0.1 to 3 times the maximum recommended human dose (MRHD) on a mg/m² basis. The effect appeared to be in females, since impaired mating behavior was not noted in the Segment I study in which males only were treated. In a sub-chronic study in Beagle dogs in which Risperidone was administered at doses of 0.31 to 5 mg/kg, sperm motility and concentration were decreased at doses 0.6 to 10 times the MRHD on a mg/m² basis. Dose-related decreases were also noted in serum testosterone at the same doses. Serum testosterone and sperm parameters partially recovered, but remained decreased after treatment was discontinued. No no-effect doses were noted in either rat or dog. In animal studies, Risperidone and 9-hydroxyrisperidone are excreted in milk. Risperidone and 9-hydroxyrisperidone are also excreted in human breast milk. Because of the potential for serious adverse reactions in nursing infants, nursing mothers should be advised of these effects and the appropriate action should be taken to prevent exposure.

Non-Teratogenic Effects: Neonates exposed to antipsychotic drugs during the third trimester of pregnancy are at risk for extrapyramidal and/or withdrawal symptoms following delivery. There have been reports of agitation, hypertonia, hypotonia, tremor, somnolence, respiratory distress, and feeding disorder in these neonates. These complications have varied in severity; while in some cases symptoms have been self-limited, in other cases neonates have required intensive care unit support and prolonged hospitalization.

BIOLOGICAL EXPOSURE INDICES: Currently, there are no Biological Exposure Indices (BEIs) determined for the components of this product.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

Estimated values for the active ingredient are available from the U.S. Environmental Protection Agency's EPISuite™; however, this information is not provided in this SDS. Contact Teva for more information.

MOBILITY: Currently, there is no specific information available on the potential mobility of this product.

PERSISTENCE AND BIODEGRADABILITY: Currently, there is no specific information on persistence and biodegradability for this product. Some biodegradation is expected.

BIO-ACCUMULATION POTENTIAL: Currently, no specific information is available on the bioconcentration potential of this product.

ECOTOXICITY: This material may be harmful to contaminated plant and animal life, especially in large quantities. All releases to terrestrial, atmospheric and aquatic environments should be avoided. The following aquatic toxicity data are available for the active ingredient.

RISPERIDONE:

EC₅₀ (*Daphnia* water flea) 48 hours = 16 mg/L

LC₅₀ (fish) 96 hours = 5.8 mg/L

RESULTS OF PBT AND vPvB ASSESSMENT: No Data Available. PBT and vPvB assessments are part of the chemical safety report required for some substances in European Union Regulation (EC) 1907/2006, Article 14.

OTHER ADVERSE EFFECTS: The components of this product are not listed as having ozone depletion potential.

12. ECOLOGICAL INFORMATION (Continued)

ENVIRONMENTAL EXPOSURE CONTROLS: Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT/DISPOSAL METHODS: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. All protective clothing, gloves, and disposable materials used in the preparation or handling of this drug should be disposed of in accordance with established hazardous waste disposal procedures. It is the responsibility of the generator to determine at the time of disposal whether the product meets the criteria of a hazardous waste per regulations of the area in which the waste is generated and/or disposed. Incineration is recommended for the product and disposable equipment. Shipment of wastes must be done with appropriately permitted and registered transporters. Reusable equipment should be cleaned with soap and water and thoroughly rinsed.

DISPOSAL CONTAINERS: Waste materials must be placed in and shipped in appropriate 5-gallon or 55-gallon poly or metal waste pails or drums. Permeable cardboard containers are not appropriate and should not be used. Ensure that any required marking or labeling of the containers be done to all applicable regulations.

PRECAUTIONS TO BE FOLLOWED DURING WASTE HANDLING: Wear proper protective equipment when handling waste materials.

U.S. EPA WASTE NUMBER: Not applicable.

EWC WASTE CODE: Wastes from natal care, diagnosis, treatment, or prevention of disease in humans: chemicals consisting of or containing dangerous substances, 18-01-06.

14. TRANSPORTATION INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION: This product is NOT classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: This product does not meet the criteria of classification of Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA): This product does not meet the criteria as Dangerous Goods, per rules of IATA.

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION: This product is NOT classified as Dangerous Goods by the International Maritime Organization.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): This product does not meet the criteria as Dangerous Goods of the United Nations Economic Commission for Europe.

TRANSPORT IN BULK ACCORDING TO THE IBC CODE: Not applicable.

ENVIRONMENTAL HAZARDS: This product does not meet the criteria of environmentally hazardous according to the criteria of the UN Model Regulations (as reflected in the IMDG Code, ADR, RID, and ADN) and is not specifically listed in Annex III under MARPOL 73/78.

15. REGULATORY INFORMATION

ADDITIONAL U.S. REGULATIONS:

U.S. SARA Reporting Requirements: The components of this product are not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA Threshold Planning Quantity (TPQ): There are no specific Threshold Planning Quantities for the components of this product. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

U.S. SARA Hazard Categories (Section 311/312, 40 CFR 370-21): ACUTE: Yes; CHRONIC: Yes; FIRE: No; REACTIVE: No; SUDDEN RELEASE: No

U.S. CERCLA Reportable Quantity (RQ): Not applicable.

U.S. TSCA Inventory Status: This product is regulated under Food and Drug Administration (FDA) standards; this product is not subject to requirements under TSCA.

Other U.S. Federal Regulations: Under the Hazard Communication Standard (HCS), Section (b)(5)(ii) drugs are subject to labeling requirements by the FDA under the Federal Food, Drug and Cosmetic Act and are exempt from labeling provisions of the HCS; this section of the HCS exempts only labeling requirements and not requirements for a Safety Data Sheet for drugs.

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): No component of this product is on the California Proposition 65 lists.

ADDITIONAL CANADIAN REGULATIONS:

Canadian DSL/NDSL Status: This product is regulated by the Therapeutic Products Programme (TPP) of Health Canada; it is exempt from the requirements of CEPA.

Canadian Environmental Protection Act (CEPA) Priority Substances Lists: Components are not on the CEPA substances lists.

Other Canadian Regulations: Requirements under the Canadian Health Canada, Laboratory Biosafety Guidelines may be applicable.

Canadian WHMIS Classification and Symbols: The WHMIS Requirements of the Hazardous Products Act does not apply in respect of the advertising, sale or importation of any cosmetic, device, drug or food within the meaning of the Food and Drugs Act.

ADDITIONAL EUROPEAN REGULATIONS:

Safety, Health, and Environmental Regulations/Legislation Specific for the Product: Formulated, finished medicinal products for human use are subject to Directive 2001/83/EC and subsequent amendments to the directive.

Chemical Safety Assessment: No Data Available. The chemical safety assessment is required for some substances according to European Union Regulation (EC) 1907/2006, Article 14.

16. OTHER INFORMATION

ANSI LABELING (Z129.1, Provided to Summarize Occupational Hazard Information): **WARNING!** NON-THERAPEUTIC INGESTION MAY BE HARMFUL. REPEATED INGESTION EXPOSURE MAY CAUSE DAMAGE SEVERE NERVOUS SYSTEM EFFECTS AND ADVERSE BLOOD DISORDERS, METABOLIC AND CARDIOVASCULAR EFFECTS. MAY CAUSE EYE, AND SKIN IRRITATION. MAY CAUSE HARM TO FETUS DURING PREGNANCY; LIMITED EVIDENCE OF ADVERSE FERTILITY EFFECTS, BASED ON ANIMAL DATA. MAY CAUSE HARM TO BREAST-FED INFANTS. INGESTION CAN CAUSE SEVERE ALLERGIC REACTIONS IN SUSCEPTIBLE INDIVIDUALS. COMBUSTIBLE IF EXPOSED TO HIGH TEMPERATURES. TOXIC TO AQUATIC ORGANISMS WITH LONG-LASTING RESULTS. Do not take internally without prescription. Avoid contact with skin, eyes, and clothing. Keep container closed. Use gloves, safety glasses, and appropriate respiratory and body protection. **FIRST-AID:** If exposed, seek immediate medical attention. If swallowed, do not induce vomiting. If alert, give victim up to three glasses of water. Never give anything by mouth to an unconscious person. In case of contact, immediately flush skin with copious amounts of warm water for 20 minutes. Remove contaminated clothing and shoes. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **IN CASE OF FIRE:** Use water fog, dry chemical or CO₂, or alcohol foam. **IN CASE OF SPILL:** Refer to Safety Data Sheet for complete spill response procedures. Spill response should be performed by persons properly trained to do so. Decontaminate area with bleach and detergent solution and triple rinse area. Place spill debris in a suitable container. Refer to SDS for additional information.

GLOBAL HARMONIZATION AND EU CLP REGULATION (EC) 1272/2008 LABELING AND CLASSIFICATION: According to Article 1, item 5 (a) of CLP Regulation (EC) 1272/2008, medicinal products in the finished state for human use, as defined in 2001/83/EC, are excepted from classification and other criteria of 1272/2008.

67/548/EEC EU LABELING/CLASSIFICATION: According to Article 1 of European Union Council Directive 92/32/EEC, medical products in the finished state for human use (as defined by European Union Council Directives 67/548/EEC and 87/21/EEC) are not subject to the regulations and administrative provisions of European Union Council Directive 92/32/EEC.

CLASSIFICATION FOR COMPONENTS:

Full Text Global Harmonization AND EU CLP Regulation (EC) 1272/2008:

Risperidone: This is a self-classification.

Classification: Reproductive Toxicity Category 2, Acute Oral Toxicity Category 3, Specific Target Organ Toxicity (Ingestion-Multiple Systems) Repeated Exposure Category 2, Adverse Effects on or Via Lactation, Aquatic Chronic Toxicity Category 2

Hazard Statement Codes: H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child. H301: Toxic if swallowed. H373: May cause damage to nervous system through prolonged or repeated exposure by ingestion. H362: May cause harm to breast-fed children. H411: Toxic to aquatic life with long-lasting effects.

Colloidal Silicon Dioxide: This is a self-classification.

Classification: Acute Oral Toxicity Category 5

Hazard Statement Codes: H303: May be harmful if swallowed.

D&C Yellow No. 10: This is a self-classification.

Classification: Acute Oral Toxicity Category 4

Hazard Statement Codes: H302: Harmful if swallowed.

Sodium Lauryl Sulfate: This is a self-classification.

Classification: Acute Oral Toxicity Category 4, Eye Irritation Category 2A

Hazard Statement Codes: H302: Harmful if swallowed. H319: Causes serious eye irritation.

All Other Components: No classification has been published or is applicable.

Full Text EU 67/548/EEC:

Risperidone: This is a self-classification.

Classification: Reproductive Toxicity Category 3, Toxic, Harmful, Dangerous for the Environment

Risk Phrases: R62: Possible risk of impaired fertility. R63: Possible risk of harm to the unborn child. R25: Toxic if swallowed. R33: Danger of cumulative effects. R64: May cause harm to breast-fed babies. R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

D&C Yellow No. 10: This is a self-classification.

Classification: Harmful

Risk Phrases: R22: Harmful if swallowed.

Sodium Lauryl Sulfate: This is a self-classification.

Classification: Harmful

Risk Phrases: R22: Harmful if swallowed. R36: Irritating to eyes.

All Other Components: No classification has been published or is applicable.

REVISION DETAILS: New

REFERENCES AND DATA SOURCES: Contact the supplier for information.

METHODS OF EVALUATING INFORMATION FOR THE PURPOSE OF CLASSIFICATION: Bridging principles were used to classify this product.

PREPARED BY: CHEMICAL SAFETY ASSOCIATES, Inc. • PO Box 1961, Hilo, HI 96721-1961 • (800) 441-3365

DATE OF PRINTING: March 11, 2014

REVISION HISTORY: New.

The Vendee (or any other third party) assumes full risk and responsibility for any injury or damage that may occur from the manufacture, use or other exposure to the material. No warranty is expressed or implied regarding the accuracy of the data set forth herein or the results that may be obtained from the use or reliance thereof. Teva, Inc. assumes no responsibility for any injury that may arise from the manufacture, use or other exposure to the material if reasonable safety procedures are not adhered to as stipulated in the data sheet attached hereto. Additionally, Teva, Inc. assumes no responsibility for injury to any person proximately caused by the inappropriate or unintended use of the material even if such reasonable safety procedures are followed.

DEFINITIONS OF TERMS

A For information on medical terms used in this SDS consult an on-line database such as Medline Plus: <http://www.nlm.nih.gov/medlineplus/druginformation.html>.

A large number of abbreviations and acronyms appear on a SDS. Some of these, which are commonly used, include the following:

CAS #: This is the Chemical Abstract Service Number that uniquely identifies each constituent.

EXPOSURE LIMITS IN AIR:

CEILING LEVEL: The concentration that shall not be exceeded during any part of the working exposure.

ACGIH - American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits.

Ceiling Level (C). Skin absorption effects must also be considered.

DFG MAK Germ Cell Mutagen Categories: 1: Germ cell mutagens which have been shown to increase the mutant frequency in the progeny of exposed humans. 2: Germ cell mutagens which have been shown to increase the mutant frequency in the progeny of exposed mammals. 3A: Substances which have been shown to induce genetic damage in germ cells of human or animals, or which produce mutagenic effects in somatic cells of mammals *in vivo* and have been shown to reach the germ cells in an active form. 3B: Substances which are suspected of being germ cell mutagens because of their genotoxic effects in mammalian somatic cell *in vivo*; in exceptional cases, substances for which there are no *in vivo* data, but which are clearly mutagenic *in vitro* and structurally related to known *in vivo* mutagens. 4: Not applicable (Category 4 carcinogenic substances are those with non-genotoxic mechanisms of action. By definition, germ cell mutagens are genotoxic. Therefore, a Category 4 for germ cell mutagens cannot apply. At some time in the future, it is conceivable that a Category 4 could be established for genotoxic substances with primary targets other than DNA [e.g. purely aneugenic substances] if research results make this seem sensible.) 5: Germ cell mutagens, the potency of which is considered to be so low that, provided the MAK value is observed, their contribution to genetic risk for humans is expected not to be significant.

DFG MAK Pregnancy Risk Group Classification: **Group A:** A risk of damage to the developing embryo or fetus has been unequivocally demonstrated. Exposure of pregnant women can lead to damage of the developing organism, even when MAK and BAT (Biological Tolerance Value for Working Materials) values are observed. **Group B:** Currently available information indicates a risk of damage to the developing embryo or fetus must be considered to be probable. Damage to the developing organism cannot be excluded when pregnant women are exposed, even when MAK and BAT values are observed. **Group C:** There is no reason to fear a risk of damage to the developing embryo or fetus when MAK and BAT values are observed. **Group D:** Classification in one of the groups A-C is not yet possible because, although the data available may indicate a trend, they are not sufficient for final evaluation.

IDLH-Immediately Dangerous to Life and Health: This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury.

LOQ: Limit of Quantitation.

MAK: Federal Republic of Germany Maximum Concentration Values in the workplace.

NE: Not Established. When no exposure guidelines are established, an entry of NE is made for reference.

NIC: Notice of Intended Change.

NIOSH CEILING: The exposure that shall not be exceeded during any part of the workday. If instantaneous monitoring is not feasible, the ceiling shall be assumed as a 15-minute TWA exposure (unless otherwise specified) that shall not be exceeded at any time during a workday.

NIOSH RELS: NIOSH's Recommended Exposure Limits.

PEL-Permissible Exposure Limit: OSHA's Permissible Exposure Limits. This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule ([Federal Register](#): 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL that was vacated by Court Order.

SKIN: Used when there is a danger of cutaneous absorption.

STEL-Short Term Exposure Limit: Short Term Exposure Limit, usually a 15-minute time-weighted average (TWA) exposure that should not be exceeded at any time during a workday, even if the 8-hr TWA is within the TLV-TWA, PEL-TWA or REL-TWA.

TLV-Threshold Limit Value: An airborne concentration of a substance that represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour.

TWA-Time Weighted Average: Time Weighted Average exposure concentration for a conventional 8-hr (TLV, PEL) or up to a 10-hr (REL) workday and a 40-hr workweek.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS:

This rating system was developed by the National Paint and Coating Association and has been adopted by industry to identify the degree of chemical hazards.

HEALTH HAZARD: 0 (Minimal Hazard): No significant health risk, irritation of skin or eyes not anticipated. *Skin Irritation:* Essentially non-irritating. PII or Draize = "0". *Eye Irritation:* Essentially non-irritating, or minimal effects which clear in < 24 hours [e.g. mechanical irritation]. Draize = "0". *Oral Toxicity LD₅₀ Rat:* < 5000 mg/kg. *Dermal Toxicity LD₅₀Rat or Rabbit:* < 2000 mg/kg. *Inhalation Toxicity 4-hrs LC₅₀ Rat:* < 20 mg/L. 1 (Slight Hazard: Minor reversible injury may occur; slightly or mildly irritating. *Skin Irritation:* Slightly or mildly irritating. *Eye Irritation:* Slightly or mildly irritating. *Oral Toxicity LD₅₀ Rat:* > 500-5000 mg/kg. *Dermal Toxicity LD₅₀Rat or Rabbit:* > 1000-2000 mg/kg. *Inhalation Toxicity LC₅₀ 4-hrs Rat:* > 2-20 mg/L; 2 (Moderate Hazard: Temporary or transitory injury may occur. *Skin Irritation:* Moderately irritating; primary irritant; sensitizer. PII or Draize > 0, < 5. *Eye Irritation:* Moderately to severely irritating and/or corrosive; reversible corneal opacity; corneal involvement or irritation clearing in 8-21 days. Draize > 0, ≤ 25. *Oral Toxicity LD₅₀ Rat:* > 50-500 mg/kg. *Dermal Toxicity LD₅₀Rat or Rabbit:* > 200-1000 mg/kg. *Inhalation Toxicity LC₅₀ 4-hrs Rat:* > 0.5-2 mg/L; 3 (Serious Hazard: Major injury likely unless prompt action is taken and medical treatment is given; high level of toxicity; corrosive. *Skin Irritation:* Severely irritating and/or corrosive; may destroy dermal tissue, cause skin burns, dermal necrosis. PII or Draize > 5-8 with destruction of tissue. *Eye Irritation:* Corrosive, irreversible destruction of ocular tissue; corneal involvement or irritation persisting for more than 21 days. Draize > 80 with effects irreversible in 21 days. *Oral Toxicity LD₅₀ Rat:* > 1-50 mg/kg. *Dermal Toxicity LD₅₀Rat or Rabbit:* > 20-200 mg/kg. *Inhalation Toxicity LC₅₀ 4-hrs Rat:* > 0.05-0.5 mg/L; 4 (Severe Hazard: Life-threatening; major or permanent damage may result from single or repeated exposure. *Skin Irritation:* Not appropriate. Do not rate as a "4", based on skin irritation alone. *Eye Irritation:* Not appropriate. Do not rate as a "4", based on eye irritation alone. *Oral Toxicity LD₅₀ Rat:* ≤ 1 mg/kg. *Dermal Toxicity LD₅₀Rat or Rabbit:* ≤ 20 mg/kg. *Inhalation Toxicity LC₅₀ 4-hrs Rat:* ≤ 0.05 mg/L.

FLAMMABILITY HAZARD: 0 (Minimal Hazard-Materials that will not burn in air when exposure to a temperature of 815.5°C [1500°F] for a period of 5 minutes.); 1 (Slight Hazard-Materials that must be pre-heated before ignition can occur. Material require considerable pre-heating, under all ambient temperature conditions before ignition and combustion can occur. Including: Materials that will burn in air when exposed to a temperature of 815.5°C (1500°F) for a period of 5 minutes or less; Liquids, solids and semisolids having a flash point at or above 93.3°C [200°F] (e.g. OSHA Class IIIB, or, Most ordinary combustible materials [e.g. wood, paper, etc.]

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued):

FLAMMABILITY HAZARD (continued): 2 (Moderate Hazard-Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not, under normal conditions, form hazardous atmospheres in air, but under high ambient temperatures or moderate heating may release vapor in sufficient quantities to produce hazardous atmospheres in air, including: Liquids having a flash-point at or above 37.8°C [100°F]; Solid materials in the form of course dusts that may burn rapidly but that generally do not form explosive atmospheres; Solid materials in a fibrous or shredded form that may burn rapidly and create flash fire hazards (e.g. cotton, sisal, hemp; Solids and semisolids that readily give off flammable vapors.); 3 (Serious Hazard- Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures, or, unaffected by ambient temperature, are readily ignited under almost all conditions, including: Liquids having a flash point below 22.8°C [73°F] and having a boiling point at or above 38°C [100°F] and below 37.8°C [100°F] [e.g. OSHA Class IB and IC]; Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air [e.g., dusts of combustible solids, mists or droplets of flammable liquids]; Materials that burn extremely rapidly, usually by reason of self-contained oxygen [e.g. dry nitrocellulose and many organic peroxides]; 4 (Severe Hazard-Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air, and which will burn readily, including: Flammable gases; Flammable cryogenic materials; Any liquid or gaseous material that is liquid while under pressure and has a flash point below 22.8°C [73°F] and a boiling point below 37.8°C [100°F] [e.g. OSHA Class IA; Material that ignite spontaneously when exposed to air at a temperature of 54.4°C [130°F] or below [e.g. pyrophoric].

PHYSICAL HAZARD: 0 (Water Reactivity): Materials that do not react with water. *Organic Peroxides:* Materials that are normally stable, even under fire conditions and will not react with water. *Explosives:* Substances that are Non-Explosive. *Unstable Compressed Gases:* No Rating. *Pyrophorics:* No Rating. *Oxidizers:* No "0" rating allowed. *Unstable Reactives:* Substances that will not polymerize, decompose, condense or self-react.; 1 (*Water Reactivity:* Materials that change or decompose upon exposure to moisture. *Organic Peroxides:* Materials that are normally stable, but can become unstable at high temperatures and pressures. These materials may react with water, but will not release energy. *Explosives:* Division 1.5 and 1.6 substances that are very insensitive explosives or that do not have a mass explosion hazard. *Compressed Gases:* Pressure below OSHA definition. *Pyrophorics:* No Rating. *Oxidizers:* Packaging Group III; *Solids:* any material that in either concentration tested, exhibits a mean burning time less than or equal to the mean burning time of a 3:7 potassium bromate/cellulose mixture and the criteria for Packing Group I and II are not met. *Liquids:* any material that exhibits a mean pressure rise time less than or equal to the pressure rise time of a 1:1 nitric acid (65%)/cellulose mixture and the criteria for Packing Group I and II are not met. *Unstable Reactives:* Substances that may decompose, condense or self-react, but only under conditions of high temperature and/or pressure and have little or no potential to cause significant heat generation or explosive hazard. Substances that readily undergo hazardous polymerization in the absence of inhibitors.; 2 (*Water Reactivity:* Materials that may react violently with water. *Organic Peroxides:* Materials that, in themselves, are normally unstable and will readily undergo violent chemical change, but will not detonate. These materials may also react violently with water. *Explosives:* Division 1.4 – Explosive substances where the explosive effect are largely confined to the package and no projection of fragments of appreciable size or range are expected. An external fire must not cause virtually instantaneous explosion of almost the entire contents of the package. *Compressed Gases:* Pressurized and meet OSHA definition but < 514.7 psi absolute at 21.1°C (70°F) [500 psig]. *Pyrophorics:* No Rating. *Oxidizers:* Packaging Group II; *Solids:* any material that, either in concentration tested, exhibits a mean burning time of less than or equal to the mean burning time of a 2:3 potassium bromate/cellulose mixture and the criteria for Packing Group I are not met. *Liquids:* any material that exhibits a mean pressure rise time less than or equal to the pressure rise time of a 1:1 aqueous sodium chlorate solution (40%)/cellulose mixture and the criteria for Packing Group I are not met. *Unstable Reactives:* Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure, but have a low potential for significant heat generation or explosion. Substances that readily form peroxides upon exposure to air or oxygen at room temperature); 3 (*Water Reactivity:* Materials that may form explosive reactions with water. *Organic Peroxides:* Materials that are capable of detonation or explosive reaction, but require a strong initiating source, or must be heated under confinement before initiation; or materials that react explosively with water. *Explosives:* Division 1.2 – Explosive substances that have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but do not have a mass explosion hazard. *Compressed Gases:* Pressure ≥ 514.7 psi absolute at 21.1°C (70°F) [500 psig]. *Pyrophorics:* No Rating. *Oxidizers:* Packaging Group I; *Solids:* any material that, in either concentration tested, exhibits a mean burning time less than the mean burning time of a 3:2 potassium bromate/cellulose mixture. *Liquids:* Any material that spontaneously ignites when mixed with cellulose in a 1:1 ratio, or which exhibits a mean pressure rise time less than the pressure rise time of a 1:1 perchloric acid (50%)/cellulose mixture. *Unstable Reactives:* Substances that may polymerize, decompose, condense or self-react at ambient temperature and/or pressure and have a moderate potential to cause significant heat generation or explosion.; 4 (*Water Reactivity:* Materials that react explosively with water without requiring heat or confinement. *Organic Peroxides:* Materials that are readily capable of detonation or explosive decomposition at normal temperature and pressures. *Explosives:* Division 1.1 and 1.2-explosive substances that have a mass explosion hazard or have a projection hazard. A mass explosion is one that affects almost the entire load instantaneously. *Compressed Gases:* No Rating. *Pyrophorics:* Add to the definition of Flammability "4". *Oxidizers:* No "4" rating. *Unstable Reactives:* Substances that may polymerize, decompose, condense or self-react at ambient temperature and/or pressure and have a high potential to cause significant heat generation or explosion.).

NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS:

HEALTH HAZARD: 0 Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials. Gases and vapors with an LC₅₀ for acute inhalation toxicity greater than 10,000 ppm. Dusts and mists with an LC₅₀ for acute inhalation toxicity greater than 200 mg/L. Materials with an LD₅₀ for acute dermal toxicity greater than 2000 mg/kg. Materials with an LD₅₀ for acute oral toxicity greater than 2000 mg/kg. Materials essentially non-irritating to the respiratory tract, eyes, and skin. 1 Materials that, under emergency conditions, can cause significant irritation. Gases and vapors with an LC₅₀ for acute inhalation toxicity greater than 5,000 ppm but less than or equal to 10,000 ppm. Dusts and mists with an LC₅₀ for acute inhalation toxicity greater than 10 mg/L but less than or equal to 200 mg/L. Materials with an LD₅₀ for acute dermal toxicity greater than 1000 mg/kg but less than or equal to 2000 mg/kg. Materials that slightly to moderately irritate the respiratory tract, eyes and skin. Materials with an LD₅₀ for acute oral toxicity greater than 500 mg/kg but less than or equal to 2000 mg/kg. 2 Materials that, under emergency conditions, can cause temporary incapacitation or residual injury. Gases with an LC₅₀ for acute inhalation toxicity greater than 3,000 ppm but less than or equal to 5,000 ppm.

DEFINITIONS OF TERMS (Continued)

NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS (continued):

HEALTH HAZARD (continued): 2 (continued): Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than one-fifth its LC₅₀ for acute inhalation toxicity, if its LC₅₀ is less than or equal to 5000 ppm and that does not meet the criteria for either degree of hazard 3 or degree of hazard 4. Dusts and mists with an LC₅₀ for acute inhalation toxicity greater than 2 mg/L but less than or equal to 10 mg/L. Materials with an LD₅₀ for acute dermal toxicity greater than 200 mg/kg but less than or equal to 1000 mg/kg. Compressed liquefied gases with boiling points between -30°C (-22°F) and -55°C (-66.5°F) that cause severe tissue damage, depending on duration of exposure. Materials that are respiratory irritants. Materials that cause severe, but reversible irritation to the eyes or are lachrymators. Materials that are primary skin irritants or sensitizers. Materials whose LD₅₀ for acute oral toxicity is greater than 50 mg/kg but less than or equal to 500 mg/kg. Dusts and mists with an LC₅₀ for acute inhalation toxicity greater than 10 mg/L but less than or equal to 200 mg/L. Materials with an LD₅₀ for acute dermal toxicity greater than 1000 mg/kg but less than or equal to 2000 mg/kg. Materials that slightly to moderately irritate the respiratory tract, eyes and skin. Materials with an LD₅₀ for acute oral toxicity greater than 500 mg/kg but less than or equal to 2000 mg/kg. **3** (materials that, under emergency conditions, can cause serious or permanent injury): Gases and vapors whose LC₅₀ for acute inhalation toxicity is greater than 1,000 ppm but less than or equal to 3,000 ppm. Dusts and mists whose LC₅₀ for acute inhalation toxicity is greater than 0.5 mg/L but less than or equal to 2 mg/L. Materials whose LD₅₀ for acute dermal toxicity is greater than 40 mg/kg but less than or equal to 200 mg/kg. Materials whose LD₅₀ for acute oral toxicity is greater than 5 mg/kg but less than or equal to 50 mg/kg. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than one-fifth its LC₅₀ for acute inhalation toxicity, if its LC₅₀ is less than or equal to 3000 ppm and that does not meet the criteria for degree of hazard 4. Compressed liquefied gases with boiling points between -30°C (-22°F) and -55°C (-66.5°F) that cause frostbite and irreversible tissue damage. Materials that are respiratory irritants. Cryogenic gases that cause frostbite and irreversible tissue damage. Materials that are corrosive to the respiratory tract. Materials that are corrosive to the eyes or cause irreversible corneal opacity. Materials that are corrosive to the skin. **4** (materials that, under emergency conditions, can be lethal): Gases and vapors whose LC₅₀ for acute inhalation toxicity is less than or equal to 1,000 ppm. Dusts and mists whose LC₅₀ for acute inhalation toxicity is less than or equal to 0.5 mg/L. Materials whose LD₅₀ for acute dermal toxicity is less than or equal to 40 mg/kg. Materials whose LD₅₀ for acute oral toxicity is less than or equal to 5 mg/kg. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than one-fifth its LC₅₀ for acute inhalation toxicity, if its LC₅₀ is less than or equal to 1000 ppm.

FLAMMABILITY HAZARD: 0 Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand: Materials that will not burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in accordance with Annex D. **1** Materials that must be preheated before ignition can occur. Materials in this degree require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur: Materials that will burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in accordance with Annex D. Liquids, solids and semisolids having a flash point at or above 93.4°C (200°F) (i.e. Class IIIB liquids). Liquids with a flash point greater than 35°C (95°F) that do not sustain combustion when tested using the *Method of Testing for Sustained Combustibility*, per 49 CFR 173, Appendix H or the UN *Recommendation on the Transport of Dangerous Goods, Model Regulations* (current edition) and the related *Manual of Tests and Criteria* (current edition). Liquids with a flash point greater than 35°C (95°F) in a water-miscible solution or dispersion with a water non-combustible liquid/solid content of more than 85 percent by weight. Liquids that have no fire point when tested by ASTM D 92 Standard Test Method for Flash and Fire Points by Cleveland Open Cup, up to a boiling point of the liquid or up to a temperature at which the sample being tested shows an obvious physical change. Combustible pellets with a representative diameter of greater than 2 mm (10 mesh). Solids containing greater than 0.5 percent by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. Most ordinary combustible materials. **2** Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not under normal conditions form hazardous atmospheres with air, but under high ambient temperatures or under moderate heating could release vapor in sufficient quantities to produce hazardous atmospheres with air: Liquids having a flash point at or above 37.8°C (100°F) and below 93.4°C (200°F) (i.e. Class II and Class IIIA liquids.) Solid materials in the form of powders or coarse dusts of representative diameter between 420 microns (40 mesh) and 2 mm (10 mesh) that burn rapidly but that generally do not form explosive mixtures in air. Solid materials in fibrous or shredded form that burn rapidly and create flash fire hazards, such as cotton, sisal and hemp. Solids and semisolids that readily give off flammable vapors. Solids containing greater than 0.5 percent by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **3** Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions: Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 37.8°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (73°F) and below 37.8°C (100°F) (i.e. Class IB and IC liquids). Materials that, on account of their physical form or environmental conditions, can form explosive mixtures with air and are readily dispersed in air. Flammable or combustible dusts with a representative diameter less than 420 microns (40 mesh). Materials that burn with extreme rapidity, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). Solids containing greater than 0.5 percent by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **4** Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and will burn readily: Flammable gases. Flammable cryogenic materials. Any liquid or gaseous materials that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. Class IA liquids). Materials that ignite when exposed to air. Solids containing greater than 0.5 percent by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent.

INSTABILITY HAZARD: 0 Materials that in themselves are normally stable, even under fire conditions: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) below 0.01 W/mL. Materials that do not exhibit an exotherm at temperatures less than or equal to 500°C (932°F) when tested by differential scanning calorimetry. **1** Materials that in themselves are normally stable, but that can become unstable at elevated temperatures and pressures: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 0.01 W/mL and below 10 W/mL. **2** Materials that readily undergo violent chemical change at elevated temperatures and pressures: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 10 W/mL and below 100W/mL.

NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS (continued):

INSTABILITY HAZARD: 3 Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction, but that require a strong initiating source or that must be heated under confinement before initiation: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 100 W/mL and below 1000 W/mL. Materials that are sensitive to thermal or mechanical shock at elevated temperatures and pressures. **4** Materials that in themselves are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures: Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) of 1000 W/mL or greater. Materials that are sensitive to localized thermal or mechanical shock at normal temperatures and pressures.

FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (NFPA). **Flash Point** - Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. **Autoignition Temperature**: The minimum temperature required to initiate combustion in air with no other source of ignition. **LEL** - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. **UEL** - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

TOXICOLOGICAL INFORMATION:

Human and Animal Toxicology: Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD₅₀** - Lethal Dose (solids and liquids) which kills 50% of the exposed animals; **LC₅₀** - Lethal Concentration (gases) which kills 50% of the exposed animals; **ppm** concentration expressed in parts of material per million parts of air or water; **mg/m³** concentration expressed in weight of substance per volume of air; **mg/kg** quantity of material, by weight, administered to a test subject, based on their body weight in kg. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **To**, **LDLo**, and **LDo**, or **TC**, **TCo**, **LCLo**, and **LCo**, the lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program, **RTECS** - the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. **Other Information:** **BEI** - ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.

REPRODUCTIVE TOXICITY INFORMATION:

A **mutagen** is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An **embryotoxin** is a chemical which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A **teratogen** is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A **reproductive toxin** is any substance which interferes in any way with the reproductive process.

United States FDA Pharmaceutical Pregnancy Categories: **Pregnancy Category A:** Adequate and well-controlled human studies have failed to demonstrate a risk to the fetus in the first trimester of pregnancy (and there is no evidence of risk in later trimesters). **Pregnancy Category B:** Animal reproduction studies have failed to demonstrate a risk to the fetus and there are no adequate and well-controlled studies in pregnant women OR Animal studies have shown an adverse effect, but adequate and well-controlled studies in pregnant women have failed to demonstrate a risk to the fetus in any trimester. **Pregnancy Category C:** Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. **Pregnancy Category D:** There is positive evidence of human fetal risk based on adverse reaction data from investigational or marketing experience or studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. **Pregnancy Category X:** Studies in animals or humans have demonstrated fetal abnormalities and/or there is positive evidence of human fetal risk based on adverse reaction data from investigational or marketing experience, and the risks involved in use of the drug in pregnant women clearly outweigh potential benefits. **Pregnancy Category N:** FDA has not classified this drug.

ECOLOGICAL INFORMATION:

EC is the effect concentration in water. **BCF** = Bioconcentration Factor, which is used to determine if a substance will concentrate in lifeforms which consume contaminated plant or animal matter. **TL_m** = median threshold limit; Coefficient of Oil/Water Distribution is represented by **log K_{ow}** or **log K_{oc}** and is used to assess a substance's behavior in the environment.

REGULATORY INFORMATION:

U.S. and CANADA:

ACGIH: American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits.

This section explains the impact of various laws and regulations on the material. **EPA** is the U.S. Environmental Protection Agency. **NIOSH** is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. Occupational Safety and Health Administration (**OSHA**). **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **DOT** and **TC** are the U.S. Department of Transportation and the Transport Canada, respectively. Superfund Amendments and Reauthorization Act (**SARA**); the Canadian Domestic/Non-Domestic Substances List (**DSL/NDL**); the U.S. Toxic Substance Control Act (**TSCA**); Marine Pollutant status according to the **DOT**; the Comprehensive Environmental Response, Compensation, and Liability Act (**CERCLA** or **Superfund**); and various state regulations. This section also includes information on the precautionary warnings which appear on the material's package label. **OSHA** - U.S. Occupational Safety and Health Administration.

EUROPEAN AND INTERNATIONAL:

The DFG: This is the Federal Republic of Germany's Occupation Health Agency, similar to the U.S. OSHA. **EU** is the European Community (formerly known as the **EEC**, European Economic Community). **EINECS:** This is the European Inventory of Now-Existing Chemical Substances. The **ARD** is the European Agreement Concerning the International Carriage of Dangerous Goods by Road and the **RID** are the International Regulations Concerning the Carriage of Dangerous Goods by Rail. **AICS** is the Australian Inventory of Chemical Substances.