



SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS Standards, European Union CLP EC 1272/2008 and the Global Harmonization Standard

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

PRODUCT IDENTIFIER/TRADE/MATERIAL NAME: ACTONEL[®] (Risedronate Sodium) TABLET, FILM COATED
Containing 5, 30, 35, 75 or 150 mg Risedronate Sodium

DESCRIPTION: Risedronate Sodium Tablets

PRODUCT USE: Human Pharmaceutical

USES ADVISED AGAINST: Non-Pharmaceutical Use

CHEMICAL NAME: For Active Ingredient: [1-hydroxy-2-(3-pyridinyl)ethylidene]bis[phosphonic acid] monosodium salt

CHEMICAL FAMILY: For Active Ingredient: Bisphosphonate

HOW SUPPLIED: 5, 30, 35, 75 or 150 mg Risedronate Sodium

OTHER DESIGNATIONS: 5 mg Yellow Oval Tablet: NDC:0430-0471-15; 30 mg Oval White Tablet: NDC:0430-0470-15;
35 mg Orange Oval Tablet: NDC:0430-0472-03; NDC:0430-0472-07;
75 mg Pink Oval Tablets: NDC:0430-0477-02;
150 mg Blue Oval Tablets: NDC:0430-0478-01; NDC:0430-0478-02; NDC:0430-0478-95

FORMULA: For Active Ingredient: Risedronate Sodium: C₇H₁₀NO₇P₂Na•2.5 H₂O

SUPPLIER OF THE SAFETY DATA SHEET

RESPONSIBLE PARTY U.S.:

ALLERGAN

U.S. ADDRESS:

400 Interpace Parkway, Morris Corporate Center III
Parsippany, NJ 07054, USA

U.S. BUSINESS PHONE/GENERAL SDS INFORMATION

+1-800-272-5525

RESPONSIBLE PARTY EUROPE:

EUROPEAN ADDRESS:

EUROPEAN BUSINESS PHONE:

EMERGENCY PHONE (U.S./NORTH AMERICA): CHEMTREC: 1-800-424-9300 (24 hours) U.S., Canada, Puerto Rico

EMERGENCY PHONE (OUTSIDE U.S.): CHEMTREC: +1-703-527-3887 (24 hours) Outside North America

Email: SDS@Allergan.com

NOTE: ALL United States Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards, Canadian WHMIS [Controlled Products Regulations], EU Directives through EC 1907: 2006, and European Union CLP EC 1272/2008, required information is included in appropriate sections based on the U.S. ANSI Z400.1-2010 format. This product has been classified in accordance with the hazard criteria of the countries listed above.

DATE OF PREPARATION: November 30, 2015

DATE OF REVISION: New

2. HAZARDS IDENTIFICATION

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 exempted from classification and other criteria of 1272/2008.

EU 67/548/EEC LABELING AND 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 oval tablets which are yellow, pink, orange or blue.

Health Hazards: In the workplace, exposure via inhalation or eye contact may cause irritation. No information is available on possible effects from skin exposure. Accidental ingestion may be harmful. In therapeutic use, the most common adverse effects reported include back pain, muscle pain, abdominal pain, and upset stomach. Hypersensitivity reactions and sometimes severe effects on the musculoskeletal system have been reported. May cause harm to the fetus during pregnancy and adverse effects on fertility, based on animal information. Other adverse effects seen from therapeutic use are described in Section 11 (Toxicological information).

Flammability Hazards: If heated to high temperatures for a prolonged period, the product may ignite. When involved in a fire, this material may decompose and produce irritating vapors and toxic compounds (including iron, titanium, carbon, magnesium, silicon and nitrogen oxides and hydrogen chloride).

Reactivity Hazards: This product is not reactive.

Environmental Hazards: Large quantities of this product released to the aquatic and terrestrial environment may have an adverse effect.

Emergency Considerations: Emergency responders should wear appropriate protection for the situation to which they respond.

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/Symbol
ACTIVE INGREDIENTS:				
Risedronate Sodium [1-hydroxy-2-(3-pyridinyl)ethylidene]bis[phosphonic acid] monosodium salt	115436-72-1	Not Listed	Proprietary	SELF-CLASSIFICATION <u>EU 67/548</u> Classification: Reproductive Toxicity Cat. 3, Irritant Risk Phrase Codes: R63, R62, R36/38 Hazard Symbols: Xn/Xi <u>GHS and EU 1272/2008</u> Classification: Reproductive Toxicity Cat. 2, Acute Oral Toxicity Cat. 5, Skin Irritation Cat. 2, Eye Irritation Cat. 2A Hazard Codes: H361fd, H303, H315, H319 Hazard Symbol/Pictogram: GHS07, GHS08
EXCIPIENTS:				
Crospovidone	9003-39-8	Not Listed	Proprietary	<u>EU (67/548/EEC):</u> No Classification Applicable <u>EU/GHS 1272/2008:</u> No Classification Applicable
FD&C Blue No. 2 Aluminum Lake	16251-28-3	240-589-3	Proprietary	<u>EU (67/548/EEC):</u> No Classification Applicable <u>EU/GHS 1272/2008:</u> No Classification Applicable
Ferric Oxide Red (5, 35 & 75 mg only)	1309-37-1	215-168-2	Proprietary	<u>EU (67/548/EEC):</u> No Classification Applicable <u>EU/GHS 1272/2008:</u> No Classification Applicable
Ferric Oxide Yellow (5, 35 & 75 mg only)	20344-49-4	243-746-4	Proprietary	<u>EU (67/548/EEC):</u> No Classification Applicable <u>EU/GHS 1272/2008:</u> No Classification Applicable
Hypromellose	9004-65-3	Not Listed	Proprietary	<u>EU (67/548/EEC):</u> No Classification Applicable <u>EU/GHS 1272/2008:</u> No Classification Applicable
Lactose Monohydrate	64044-51-1	200-559-2	Proprietary	<u>EU (67/548/EEC):</u> No Classification Applicable <u>EU/GHS 1272/2008:</u> No Classification Applicable
Magnesium Stearate	557-04-0	209-150-3	Proprietary	<u>EU (67/548/EEC):</u> No Classification Applicable <u>EU/GHS 1272/2008:</u> No Classification Applicable
Microcrystalline Cellulose	9004-34-6	232-674-9	Proprietary	<u>EU (67/548/EEC):</u> No Classification Applicable <u>EU/GHS 1272/2008:</u> No Classification Applicable
Polyethylene Glycol	25322-68-3	NLP # 500-038-2	Proprietary	<u>EU (67/548/EEC):</u> No Classification Applicable <u>EU/GHS 1272/2008:</u> No Classification Applicable
Silicon Dioxide	112945-52-5	Not Listed	Proprietary	<u>EU (67/548/EEC):</u> No Classification Applicable <u>EU/GHS 1272/2008:</u> No Classification Applicable
Titanium Dioxide	13463-67-7	236-675-5	Proprietary	<u>EU (67/548/EEC):</u> No Classification Applicable <u>EU/GHS 1272/2008:</u> No Classification Applicable

See Section 16 for full classification information of product and components.

4 FIRST-AID MEASURES

PROTECTION OF FIRST AID RESPONDERS: First-aid responders should not attempt to treat victims of exposure to this material without adequate personal protective equipment. Rescuers should be taken for medical attention, if necessary.

DESCRIPTION OF FIRST AID MEASURES: Victim(s) must be taken for medical attention. Remove victim(s) to fresh air, as quickly as possible. Only trained personnel should administer supplemental oxygen and/or cardio-pulmonary resuscitation, when necessary. Take copy of label and SDS to physician or other health professional with victim(s).

Inhalation: If dusts or particulates from this product are inhaled, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention if adverse effect occurs after removal to fresh air.

Skin Exposure: If the product contaminates the skin and adverse effect occurs, begin decontamination with running water. Minimum flushing is for 20 minutes. Do not interrupt flushing. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Seek medical attention if adverse effect occurs after flushing.

Eye Exposure: If particulates from this product enter the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 20 minutes. Do not interrupt flushing. Seek immediate medical attention after flushing if adverse effect occurs.

Ingestion Exposure: If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Rinse mouth with water immediately. Victim should drink large quantities of water. If milk is available, victim should drink it after drinking water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

IMPORTANT SYMPTOMS AND EFFECTS: See Sections 2 (Hazard Identification) and 11 (Toxicological Information).

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: In therapeutic use, pre-existing renal impairment, esophagus abnormalities, mobility problems, Paget's disease, osteonecrosis of the jaw (ONJ), glucocorticoid-induced osteoporosis, low calcium or phosphorus conditions and asthma may be aggravated. Workplace exposure may also aggravate these conditions. Persons who may have hypersensitivity reactions to any ingredient or other disorders described in Section 11 (Toxicological Information) may experience aggravation upon exposure.

IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED: Treat symptoms and eliminate exposure. Persons developing hypersensitivity reactions should receive immediate medical attention. No specific antidote is known. Gastric lavage may be considered to remove unabsorbed drug. Standard procedures that are effective for treating hypocalcemia, including the administration of calcium intravenously, would be expected to restore physiologic amounts of ionized calcium and to relieve signs and symptoms of hypocalcemia.

5. FIRE-FIGHTING MEASURES

FLASH POINT: Not established.

AUTOIGNITION TEMPERATURE: Not established.

FLAMMABLE LIMITS & METHOD OF DETERMINATION (in air by volume, %): Not determined.

FIRE EXTINGUISHING MEDIA: Use extinguishing media appropriate for surrounding fire.

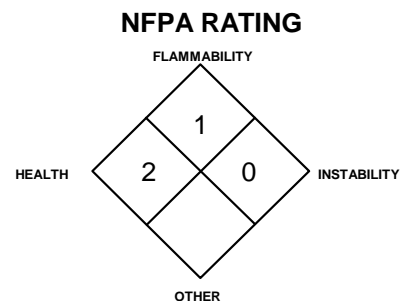
UNSUITABLE EXTINGUISHING MEDIA: None known.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: This product may ignite if highly heated for a prolonged period of time. When involved in a fire, the products of thermal decomposition may include irritating fumes and toxic gases (e.g., iron, titanium, carbon, magnesium, silicon and nitrogen oxides and hydrogen chloride).

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Discharge: Not sensitive.

SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus (SCBA) and full protective equipment. Contaminated protective equipment should be thoroughly washed with running water prior to removal of SCBA respiratory protection. Firefighters whose protective equipment becomes contaminated should thoroughly shower with warm, soapy water and should receive medical evaluation if they experience any adverse effects.



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

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: In the event of a spill, clear the area and protect people.

PROTECTIVE EQUIPMENT:

Small Spills: For incidental spills (e.g., 1 vial of tablets), wear double latex or nitrile disposable gloves and eye protection.

Large Spills: For large spills (e.g., a pallet of vials), protective apparel should be used with a respirator when there is any danger of airborne dusts being generated. Minimum Personal Protective Equipment should be rubber gloves, rubber boots, face shield, and Tyvek suit.

METHODS FOR CLEANUP AND CONTAINMENT:

Small Spills: Pick-up or sweep-up spilled tablets.

Large Spills: Trained personnel following pre-planned procedures should handle non-incident releases. Access to the spill areas should be restricted. Sweep up spilled product carefully, avoiding the generation of airborne dusts.

All Spills: Decontaminate the area of the spill thoroughly using detergent and water. Place all spill residue in an appropriate container and seal. Move to a secure area. Do not mix with wastes from other materials. If necessary, discard contaminated response equipment or rinse with soapy water before returning such equipment to service. Dispose of in accordance with applicable international, national, state, and local procedures (see Section 13, Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS: Prevent material 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.

7. HANDLING and USE

PRECAUTIONS FOR SAFE HANDLING: Employees must be trained to properly use this compound. Particular care in working with this material must be practiced in pharmacies and other preparation areas, during manufacture of pharmaceutical preparations, and during patient administration. Use of this compound should be performed in a designated area for working with narcotic compounds. As with all chemicals, avoid getting this product ON YOU or IN YOU. Do not eat, drink, smoke, or apply cosmetics in work areas where this product is handled or stored. Wash thoroughly after handling this product or equipment and containers of this product. Follow SPECIFIC USE INSTRUCTIONS supplied with this product. Use of this product should be performed in a designated area for working with drugs. Particular care in working with this product must be practiced in pharmacies and other preparation areas, during manufacture of this product, and during patient administration. If necessary, work areas must be regularly cleaned and decontaminated.

PRODUCT PREPARATION INSTRUCTIONS FOR MEDICAL PERSONNEL: Handle this material following standard medical practices and following the recommendations presented on the Package Insert.

CONDITIONS FOR SAFE STORAGE: Containers of this product must be properly labeled. Store this product in original container. Store at 20°C to 25°C (68°F to 77°F). (See USP Controlled Room Temperature.) Inspect bottles containing this product for leaks or damage. Store away from incompatible materials (see Section 10, Stability and Reactivity).

SPECIFIC END USE(S): This product human pharmaceutical. Follow all industry standards for use of this product.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

EXPOSURE LIMITS/CONTROL PARAMETERS:

Ventilation and Engineering Controls: Use with adequate ventilation. Follow standard medical product handling procedures. During decontamination of work surfaces, workers should wear the same equipment recommended in Section 6 (Accidental Release Measures) of this SDS.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION (Continued)

EXPOSURE LIMITS/CONTROL PARAMETERS (continued):

Occupational/Workplace Exposure Limits/Guidelines:

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	mg/m ³
Risedronate Sodium	115436-72-1	NE	NE	NE	NE	NE	NE	NE	Allergen OEL: 40 µg/m ³
Crospovidone	9003-39-8	NE	NE	NE	NE	NE	NE	NE	Carcinogen: IARC-3
Ferric Oxide Red Ferric 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
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 (respirable fraction)	NE	NE	Carcinogen: IARC-3
Lactose Monohydrate	64044-51-5	NE	NE	NE	NE	NE	NE	NE	NE
Magnesium Stearate	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); due to possible mist formation, exposure should be minimized. PEAK = 8•MAK 15 min. average value, 1-hr interval, 4 per shift DFG MAK Pregnancy Risk Classification: C AIHA WEEL TWA = 10
Silicon Dioxide	112945-52-5	NE	NE	NE	NE	NE	NE	NE	Carcinogen: IARC-3
Titanium Dioxide	13463-67-7	10	NE	15 (total dust) 10 (vacated 1989 PEL)	NE	See NIOSH Pocket Guide Appendix A	Ca, 5000	Ca, 5000	Carcinogen: IARC-2B, MAK-3A, NIOSH-Ca, TLV-A4; NIC: TLV-A3

NE = Not Established. NIC = Notice of Intended Change

International Occupational Exposure Limits: In addition to the exposure limit values cited in this section, other exposure limits have been established by various countries for the components of this product. The exposure limits given may not be the most current; individual country authorities should be contacted to check on more current limits.

CROSPROVIDONE:

Russia: STEL = 10 mg/m³, JUN 2003

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

IRON OXIDES (continued):

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), JAN 1993

Turkey: TWA = 10 mg/m³ (fume), JAN 1993

United Kingdom: TWA = 4 mg/m³ (respirable), 2005

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

Sweden: TWA = 5 mg/m³, JUN 2005

Belgium: TWA = 10 mg/m³, MAR 2002

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

SILICON DIOXIDE:

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

SILICON DIOXIDE (continued):

United Kingdom: TWA = 6 mg/m³ (inhal. dust), OCT 2007

United Kingdom: TWA = 2.4 mg/m³ (resp. dust), OCT 2007

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

PERSONAL PROTECTIVE EQUIPMENT: Use of personal protective equipment must be in compliance with U.S. OSHA 29 CFR Subpart I (beginning at 1910.132), Canadian CSA Standards Z94.4-02 and Z94.3-02, EU EN 529:2005, CEN/TR 15419:2006, and CR 13464:1999. Please reference applicable regulations and standards for relevant details.

Respiratory Protection: Respiratory protection is generally not needed during routine conditions of use of this product. If respiratory protection is needed, use only respiratory protection authorized under appropriate regional regulations.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION (Continued)

PERSONAL PROTECTIVE EQUIPMENT (continued):

Eye Protection: No eye protection is normally needed during medical administration of this product. During operations in which dusts of the product may be generated, splash goggles or safety glasses should be considered.

Hand Protection: During medical administration of this product, medical latex or nitrile gloves should be worn to avoid absorption of the product. During manufacture or other similar industrial operations, wear the appropriate hand protection for the process. Use double gloves for spill response, as stated in Section 6 (Accidental Release Measures) of this SDS.

Body Protection: Use appropriate protective clothing for the task (e.g., lab coat, etc.)

9. PHYSICAL and CHEMICAL PROPERTIES

The following information is for the product.

FORM: Oval tablets.

COLOR: Yellow, blue, pink or orange.

ODOR: Odorless.

ODOR THRESHOLD: Not applicable.

HOW TO DETECT THIS SUBSTANCE (identification properties): The appearance of this product is a distinguishing characteristic.

The following values are available for the active ingredient, Risedronate Sodium:

FORM: Crystalline solid.

COLOR: White to off-white.

MOLECULAR FORMULA: C₇H₁₀NO₇P₂Na•2.5 H₂O

MOLECULAR WEIGHT: 350.13

ODOR: Slight.

ODOR THRESHOLD: Not available.

BOILING POINT @ 760 mmHg: 692.3°C (1278) [predict.]

MELTING POINT: 252-262°C (485.6-835°F)

VAPOR PRESSURE (air = 1) @ 25°C: 4.03E-20 mmHg [predict.]

SPECIFIC GRAVITY (water = 1): Not available.

EVAPORATION RATE (nBuAc = 1): Not applicable.

pH: 4.1

FLASH POINT: 372.5°C (705.2) [predict.]

DECOMPOSITION TEMPERATURE: Not available.

SOLUBILITY IN WATER @ 25°C: Soluble in water.

COEFFICIENT WATER/OIL DISTRIBUTION: Log P: 4.5

OTHER SOLUBILITIES: Soluble in chloroform, dimethylsulfoxide, methanol, and ethanol.

10. STABILITY and REACTIVITY

CHEMICAL STABILITY: This product is not reactive.

DECOMPOSITION PRODUCTS: *Combustion:* If exposed to extremely high temperatures, the products of thermal decomposition may include irritating fumes and toxic gases (e.g. iron, titanium, carbon, magnesium, silicon and nitrogen oxides and hydrogen chloride). *Hydrolysis:* None known.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product is generally compatible with other common materials in a medical facility. Acids and alkalies, and other chemicals that could affect its performance should be avoided.

POSSIBILITY HAZARDOUS REACTION/POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Avoid heat, light, and contact with incompatible chemicals.

11. TOXICOLOGICAL INFORMATION

SYMPTOMS OF EXPOSURE BY ROUTE OF EXPOSURE: The health hazard information provided below is pertinent to medical employees using this product in an occupational setting. The following paragraphs describe the symptoms of exposure by route of exposure.

Inhalation: Inhalation of airborne dusts generated from the drug product may slightly irritate the nose, throat, and lungs. Inhalation of large amounts may also cause under 'Other Potential Health Effects'.

Contact with Skin or Eyes: Acute skin contact is not expected to cause adverse effect. Prolonged or repeated skin contact may cause dermatitis (dry, red skin). Contact with the eyes of airborne dusts generated by damaged tablets of this product may cause mild to moderate irritation, redness, and tearing.

Skin Absorption: No information available.

Ingestion: Ingestion is not a significant route of occupational overexposure. Acute ingestion of large quantities of this product caused by poor hygiene practices may be harmful. Symptoms of prolonged or repeated ingestion, as may occur when poor industrial hygiene is practiced, may include those described for 'Other Potential Health Effects'.

Injection: Injection is not a likely route of exposure for the form of this product.

OTHER POTENTIAL HEALTH EFFECTS-Therapeutic Doses: In therapeutic use, the most common adverse effects reported include back pain, muscle pain, abdominal pain, and upset stomach. Hypersensitivity reactions and sometimes severe effects on the musculoskeletal system have been reported. May cause harm to the fetus during pregnancy and adverse effects on fertility, based on animal information.



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)

OTHER POTENTIAL HEALTH EFFECTS (continued): In therapeutic use the following additional adverse effects described by body system have included:

- **Body as a Whole:** Infection, flu syndrome, weakness, chest pain.
- **Cardiovascular System:** High blood pressure.
- **Eyes:** Cataracts. Reactions of eye inflammation including iritis and uveitis have been reported rarely.
- **Gastrointestinal System:** Abdominal pain, constipation, diarrhea, upset stomach, nausea, upper gastrointestinal irritation, such as esophagitis and esophageal or gastric ulcers.
- **Metabolic System:** Glucocorticoid-induced osteoporosis,
- **Musculoskeletal System:** severe and occasionally incapacitating bone, joint, and/or muscle pain, atypical, low-energy, or low trauma fractures of the femoral shaft, osteonecrosis of the jaw (ONJ), peripheral edema, arthritis, back pain, other joint disorders.
- **Nervous System:** Dizziness, depression, insomnia, headache.
- **Reproductive System:** Adverse effects on fertility and potential harm to fetus during pregnancy.
- **Respiratory System:** Bronchitis, sinusitis, runny nose, pharyngitis, increased cough, exacerbation of asthma.
- **Skin:** Rash. Rarely angioedema, generalized rash and bullous skin reactions, some severe.
- **Urinary System:** Urinary tract infection.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in Lay Terms. Exposure to this product may cause the following health effects:

Acute: Accidental ingestion may be harmful. Eye contact with dusts may cause mechanical irritation. Inhalation of dusts from product may also cause effects described under 'Other Potential Health Effects'.

Chronic: Repeated workplace exposure to the skin contact may cause dermatitis (dry, red skin). Chronic therapeutic use or workplace exposure may cause effects described under 'Other Potential Health Effects'.

TARGET ORGANS: Acute: *Industrial Exposure:* Skin, eyes, respiratory system (dusts from product). *Therapeutic Doses:* Reproductive system. Chronic: *Industrial Exposure:* Skin. *Therapeutic Doses:* Body systems as given under 'Other Potential Health Effects'.

IRRITANCY OF PRODUCT: Dusts from this product may irritate contaminated tissue.

SENSITIZATION TO THE PRODUCT: In therapeutic use, hypersensitivity reactions (angioedema, generalized rash, bullous skin reactions), and eye inflammation (iritis, uveitis) have been reported rarely.

TOXICITY DATA: Currently the following toxicity data are available for the active component. Data for excipients are also available but are not presented in this SDS. Contact Allergan for more information.

RISEDRONATE SODIUM:

TDLo (Oral-Human) 1800 µg/kg/3 days-intermittent: Sense Organs and Special Senses (Eye): iritis

TDLo (Oral-Dog) 182 mg/kg/1 year-intermittent: Musculoskeletal: other changes

TDLo (Subcutaneous-Rat) 50 µg/kg: Behavioral: analgesia; Biochemical: Metabolism (Intermediary): effect on inflammation or mediation of inflammation

TDLo (Subcutaneous-Mouse) 100 µg/kg: Behavioral: analgesia

OTHER ANIMAL TOXICITY DATA: Risedronate demonstrated potent anti-osteoclast, anti-resorptive activity in ovariectomized rats and minipigs. Bone mass and biomechanical strength were increased dose-dependently at daily oral doses up to 4 and 25 times the human recommended oral dose of 5 mg for rats and minipigs, respectively. Risedronate treatment maintained the positive correlation between BMD and bone strength and did not have a negative effect on bone structure or mineralization. In intact dogs, Risedronate induced positive bone balance at the level of the bone remodeling unit at oral doses ranging from 0.5 to 1.5 times the 5 mg/day human daily dose. In dogs treated with an oral dose approximately 5 times the human daily dose, Risedronate caused a delay in fracture healing of the radius. The observed delay in fracture healing is similar to other bisphosphonates. This effect did not occur at a dose approximately 0.5 times the human daily dose. The Schenk rat assay, based on histologic examination of the epiphyses of growing rats after drug treatment, demonstrated that Risedronate did not interfere with bone mineralization even at the highest dose tested, which was approximately 3500 times the lowest anti-resorptive dose in this model (1.5 mcg/kg/day) and approximately 800 times the human daily dose of 5 mg. This indicates that Actonel administered at the therapeutic dose is unlikely to induce osteomalacia. Dosing multiples provided above are based on the recommended human dose of 5 mg/day and normalized using body surface area (mg/m²).

CARCINOGENIC POTENTIAL OF COMPONENTS: In a 104-week carcinogenicity study, rats were administered daily oral doses up to approximately 8 times the maximum recommended human daily dose. There were no significant drug-induced tumor findings in male or female rats. The high dose male group was terminated early in the study (Week 93) due to excessive toxicity, and data from this group were not included in the statistical evaluation of the study results. In an 80-week carcinogenicity study, mice were administered daily oral doses approximately 6.5 times the human dose. There were no significant drug-induced tumor findings in male or female mice. This material is not listed by agencies tracking the carcinogenic potential of chemical compounds.

The following excipient ingredients are listed:

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 (as a stearate compound): ACGIH TLV-A4 (Not Classifiable as Human Carcinogen)

SILICON DIOXIDE, POVIDONE: IARC-3 (Unclassifiable as to Carcinogenicity in Humans)

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)

11. TOXICOLOGICAL INFORMATION (Continued)

CARCINOGENIC POTENTIAL OF COMPONENTS (continued): The remaining components of this product 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.

REPRODUCTIVE TOXICITY INFORMATION: There are no adequate and well-controlled studies of this product or Risedronate Sodium in pregnant women; this product 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. Bisphosphonates are incorporated into the bone matrix, from which they are gradually released over periods of weeks to years. The amount of bisphosphonate incorporation into adult bone, and hence, the amount available for release back into the systemic circulation, is directly related to the dose and duration of bisphosphonate use. There are no data on fetal risk in humans. However, there is a theoretical risk of fetal harm, predominantly skeletal, if a woman becomes pregnant after completing a course of bisphosphonate therapy. The impact of variables such as time between cessation of bisphosphonate therapy to conception, the particular bisphosphonate used, and the route of administration (intravenous versus oral) on this risk has not been studied. This product is rated by the FDA for therapeutic risk as Pregnancy Risk 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).

Mutagenicity: Risedronate did not exhibit genetic toxicity in the following assays: In vitro bacterial mutagenesis in Salmonella and E. coli (Ames assay), mammalian cell mutagenesis in CHO/HGPRT assay, unscheduled DNA synthesis in rat hepatocytes and an assessment of chromosomal aberrations in vivo in rat bone marrow. Risedronate was positive in a chromosomal aberration assay in CHO cells at highly cytotoxic concentrations (greater than 675 mcg/mL, survival of 6% to 7%). When the assay was repeated at doses exhibiting appropriate cell survival (29%), there was no evidence of chromosomal damage.

Embryotoxicity/Teratogenicity: In animal studies, pregnant rats received Risedronate Sodium during organogenesis at doses 1 to 26 times the human dose of 30 mg/day. Survival of neonates was decreased in rats treated during gestation with oral doses approximately 5 times the human dose and body weight was decreased in neonates from dams treated with approximately 26 times the human dose. The number of fetuses exhibiting incomplete ossification of sternebrae or skull from dams treated with approximately 2.5 times the human dose was significantly increased compared to controls. Both incomplete ossification and unossified sternebrae were increased in rats treated with oral doses approximately 5 times the human dose. A low incidence of cleft palate was observed in fetuses from female rats treated with oral doses approximately equal to the human dose. The relevance of this finding to human use of Actonel is unclear. No significant fetal ossification effects were seen in rabbits treated with oral doses approximately 7 times the human dose (the highest dose tested). However, 1 of 14 litters were aborted and 1 of 14 litters were delivered prematurely.

Similar to other bisphosphonates, treatment during mating and gestation with doses of Risedronate Sodium approximately the same as the 30 mg/day human dose resulted in periparturient hypocalcemia and mortality in pregnant rats allowed to deliver. Dosing multiples provided above are based on the recommended human dose of 30 mg/day and normalized using body surface area (mg/m²). Actual animal doses were 3.2, 7.1 and 16 mg/kg/day in the rat and 10 mg/kg/day in the rabbit.

Reproductive Toxicity: In female rats, ovulation was inhibited at an oral dose approximately 5 times the human dose. Decreased implantation was noted in female rats treated with doses approximately 2.5 times the human dose. In male rats, testicular and epididymal atrophy and inflammation were noted at approximately 13 times the human dose. Testicular atrophy was also noted in male rats after 13 weeks of treatment at oral doses approximately 5 times the human dose. There was moderate-to-severe spermatid maturation block after 13 weeks in male dogs at an oral dose approximately 8 times the human dose. These findings tended to increase in severity with increased dose and exposure time. Dosing multiples provided above are based on the recommended human dose of 30 mg/day and normalized using body surface area (mg/m²). Actual doses were 24 mg/kg/day in rats, 32 mg/kg/day in mice, and 8, 16 and 40 mg/kg/day in dogs. Risedronate was detected in feeding pups exposed to lactating rats for a 24-hour period post-dosing, indicating a small degree of lacteal transfer. It is not known whether Actonel is excreted in human milk. Because many drugs are excreted in human milk, and 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.

ACGIH BIOLOGICAL EXPOSURE INDICES (BEIs): Currently, ACGIH Biological Exposure Indices (BEIs) have not been determined for the components of this product.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

MOBILITY: This product has not been tested for mobility in soil.

PERSISTENCE AND BIODEGRADABILITY: This product has not been tested for persistence or biodegradability. It is expected that the components will slowly degrade in the environment and form a variety of organic and inorganic materials; however, no specific information is known.

BIO-ACCUMULATION POTENTIAL: This product has not been tested for bio-accumulation potential.

ECOTOXICITY: This product may be harmful to aquatic and terrestrial organisms; all releases to terrestrial, atmospheric and aquatic environments should be avoided. The active ingredient can cause long-term harm to algae and other aquatic organisms.

RISEDRONATE SODIUM:
LC₅₀ (fishes) 96 hours = 381 mg/L

RISEDRONATE SODIUM (continued):
EC₅₀ (*Daphnia magna*) 184 mg/L

OTHER ADVERSE EFFECTS: This product does not contain any component with known ozone depletion potential.

12. ECOLOGICAL INFORMATION (Continued)

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.

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.

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

U.S. EPA WASTE NUMBER: Not applicable to wastes consisting only of this product.

EUROPEAN WASTE CODES: Wastes from Human or Animal Health Care or Related Research: 18 01 08: Medicines Other Than Those Mentioned in 18 01 07.

14. TRANSPORTATION INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION REGULATIONS: 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 is not classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA): This product is not classified as Dangerous Goods, by 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 is not classified by the United Nations Economic Commission for Europe to be dangerous goods.

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 not component is specifically listed in Annex III under MARPOL 73/78.

15. REGULATORY INFORMATION

UNITED STATES 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 any component of this product. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) therefore applies, per 40 CFR 370.20.

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

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

Other U.S. Federal Regulations: Regulations of the FDA under the Federal Food, Drug and Cosmetic Act are applicable when this material is used in pharmaceutical preparations. 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.

CANADIAN REGULATIONS:

Canadian DSL Inventory Status: This product regulated by the Therapeutic Products Programme (TPP) of Health Canada and so it excepted from requirements of the DSL/NDSL Inventory.

Canadian Environmental Protection Act (CEPA) Priorities Substances Lists: The components of this product are not on the CEPA Priorities Substances Lists.

Canadian WHMIS Classification and Symbol: 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.

EUROPEAN REGULATIONS:

Safety, Health, and Environmental Regulations/Legislation Specific for the Product: When formulated in a finished medicinal product for human use, this material is 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 (Based on 129.1, Provided to Summarize Occupational Exposure Hazards): **WARNING!** MAY BE HARMFUL IF ACCIDENTALLY INGESTED. LIMITED EVIDENCE OF HARM TO FETUS AND ADVERSE EFFECTS ON FERTILITY DURING PREGNANCY, BASED ON ANIMAL DATA. CONTAINS COMPOUND THAT CAN CAUSE HARM TO AQUATIC ORGANISMS. COMBUSTIBLE IF EXPOSED TO HIGH TEMPERATURES. Do not take internally without prescription. Avoid unnecessary contact with skin, eyes, and clothing. Wash thoroughly after handling. Wear gloves, goggles, and appropriate body protection during handling or administration. **FIRST-AID:** In case of contact, flush skin or eyes with plenty of water. If adverse respiratory reaction occurs, give oxygen and seek immediate medical attention. If ingested, DO NOT induce vomiting—seek immediate medical attention. **IN CASE OF FIRE:** Use water fog, dry chemical, CO₂, or “alcohol” foam. **IN CASE OF SPILL:** Pick up or sweep up spilled product. Place residual in appropriate container and seal. Dispose of according to applicable regulations. Consult Safety Data Sheet 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.

EU LABELING AND CLASSIFICATION 67/548/EEC: 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 OF COMPONENTS:

CLP Regulation (EC) 1272/2008

Risedronate Sodium: This is a self-classification:

Classification: Reproductive Toxicity Category 2, Acute Oral Toxicity Category 5, Eye Skin Irritation Category 2, Irritation Category 2A

Hazard Statements: H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child. H303: May be harmful if swallowed. H315: Causes skin irritation. H319: Causes serious eye irritation.

All Other Components: An official classification for these substances has not been published nor is applicable.

67/548/EEC:

Risedronate Sodium: This is a self-classification:

Classification: Reproductive Toxicity Category 3, Irritant.

Risk Phrases: R63: Possible risk of harm to the unborn child. R62: Possible risk of impaired fertility. R36/38: Irritating to eyes and skin.

All Other Components: An official classification for these substances has not been published nor is applicable.

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.

REVISION DETAILS: New.

This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of Allergan knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this product is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.

PREPARED BY: CHEMICAL SAFETY ASSOCIATES, Inc. • PO Box 1961, Hilo, HI 96721 • 800/441-3365 • 808/969-4846

DATE OF PRINTING: January 5, 2017