SAFETY SHEET
LANSOPRAZOLE DELAYED RELEASE ORALLY DISINTEGRATING TABLETS
Strength : 15 MG & 30 MG
Revision No.: 00
Pack Style : NDC 68382-771-77 in carton of 100 tablets (10 x 10 unit-dose) for 15 mg
NDC 68382-772-77 in carton of 100 tablets (10 x 10 unit-dose) for 30 mg

EMERGENCY OVERVIEW
Each Lansoprazole delayed-release orally disintegrating tablet intended for oral administration contains enteric-coated micro granules consisting of 15 mg or 30 mg of lansoprazole and excipients generally considered to be non-toxic and non-hazardous in small quantities and under conditions of normal occupational exposure.

Section 1. IDENTIFICATION OF THE PRODUCT
Product Name: Lansoprazole delayed-release orally disintegrating tablet 15 mg & 30 mg
Active Pharmaceutical Ingredient: Lansoprazole
Formula: C16H14F3N3O2S
Chemical Name: 2-[[3-methyl-4-(2,2,2-trifluoroethoxy)-2-pyridyl]methyl] sulfinyl] benzimidazole

Mechanism of Action: Lansoprazole belongs to a class of antisecretory compounds, the substituted benzimidazoles, that suppress gastric acid secretion by specific inhibition of the (H+, K+)-ATPase enzyme system at the secretory surface of the gastric parietal cell. Because this enzyme system is regarded as the acid (proton) pump within the parietal cell, lansoprazole has been characterized as a gastric acid-pump inhibitor, in that it blocks the final step of acid production. This effect is dose-related and leads to inhibition of both basal and stimulated gastric acid secretion irrespective of the stimulus. Lansoprazole does not exhibit anticholinergic or histamine type-2 antagonist activity.
Therapeutic Category
Proton Pump inhibitor (PPI)

Indications:
Short-Term Treatment of Active Duodenal Ulcer
Lansoprazole is indicated for short-term treatment (for four weeks) for healing and symptom relief of active duodenal ulcer.

H. pylori Eradication to Reduce the Risk of Duodenal Ulcer Recurrence
Triple Therapy: Lansoprazole/amoxicillin/clarithromycin
Lansoprazole in combination with amoxicillin plus clarithromycin as triple therapy is indicated for the treatment of patients with H. pylori infection and duodenal ulcer disease (active or one year history of a duodenal ulcer) to eradicate H. pylori. Eradication of H. pylori has been shown to reduce the risk of duodenal ulcer recurrence.
Please refer to the full prescribing information for amoxicillin and clarithromycin.

Dual Therapy: Lansoprazole/amoxicillin
Lansoprazole in combination with amoxicillin as dual therapy is indicated for the treatment of patients with H. pylori infection and duodenal ulcer disease (active or one year history of a duodenal ulcer) who are either allergic or intolerant to clarithromycin or in whom resistance to clarithromycin is known or suspected (see the clarithromycin prescribing information, MICROBIOLOGY section). Eradication of H. pylori has been shown to reduce the risk of duodenal ulcer recurrence.
Please refer to the full prescribing information for amoxicillin.

Maintenance of Healed Duodenal Ulcers
Lansoprazole is indicated to maintain healing of duodenal ulcers. Controlled studies do not extend beyond 12 months.

Short-Term Treatment of Active Benign Gastric Ulcer
Lansoprazole is indicated for short-term treatment (up to eight weeks) for healing and symptom relief of active benign gastric ulcer.

**Healing of NSAID-Associated Gastric Ulcer**
Lansoprazole is indicated for the treatment of NSAID-associated gastric ulcer in patients who continue NSAID use. Controlled studies did not extend beyond eight weeks.

**Risk Reduction of NSAID-Associated Gastric Ulcer**
Lansoprazole is indicated for reducing the risk of NSAID-associated gastric ulcers in patients with a history of a documented gastric ulcer who require the use of an NSAID. Controlled studies did not extend beyond 12 weeks.

**Gastroesophageal Reflux Disease (GERD)**

**Short-Term Treatment of Symptomatic GERD**
Lansoprazole is indicated for the treatment of heartburn and other symptoms associated with GERD for up to eight weeks.

**Short-Term Treatment of Erosive Esophagitis**
Lansoprazole is indicated for short-term treatment (up to eight weeks) for healing and symptom relief of all grades of erosive esophagitis. For patients who do not heal with Lansoprazole for eight weeks (5 to 10%), it may be helpful to give an additional eight weeks of treatment. If there is a recurrence of erosive esophagitis an additional eight week course of Lansoprazole may be considered.

**Maintenance of Healing of Erosive Esophagitis (EE)**
Lansoprazole is indicated to maintain healing of erosive esophagitis. Controlled studies did not extend beyond 12 months.

**Pathological Hypersecretory Conditions Including Zollinger-Ellison Syndrome (ZES)**
Lansoprazole is indicated for the long-term treatment of pathological hypersecretory conditions, including Zollinger-Ellison syndrome.

**Recommended use**

**Nursing Mothers**
Lansoprazole or its metabolites are excreted in the milk of rats. It is not known whether lansoprazole is excreted in human milk. Because many drugs are excreted in human milk, because of the potential for serious adverse reactions in nursing infants from lansoprazole, and because of the potential for tumorigenicity shown for lansoprazole in rat carcinogenicity.
studies, a decision should be made whether to discontinue nursing or to discontinue lansoprazole, taking into account the importance of lansoprazole to the mother.

**Pediatric Use**

The safety and effectiveness of lansoprazole have been established in pediatric patients one to 17 years of age for short-term treatment of symptomatic GERD and erosive esophagitis, however, lansoprazole was not effective in patients with symptomatic GERD one month to less than one year of age in a multicenter, double-blind, placebo controlled study.

**Neonate to less than one year of age**

The pharmacokinetics of lansoprazole were studied in pediatric patients with GERD aged less than 28 days and one to 11 months. Compared to healthy adults receiving 30 mg, neonates had higher exposure (mean weight-based normalized AUC values 2.04- and 1.88-fold higher at doses of 0.5 mg/kg/day and 1 mg/kg/day, respectively). Infants aged ≤ 10 weeks had clearance and exposure values that were similar to neonates. Infants aged greater than 10 weeks who received 1 mg/kg/day had mean AUC values that were similar to adults who received a 30 mg dose.

Lansoprazole was not found to be effective in a U.S. and Polish four week multicenter, double-blind, placebo-controlled, parallel-group study of 162 patients between one month and less than 12 months of age with symptomatic GERD based on a medical history of crying/fussing/irritability associated with feedings who had not responded to conservative GERD management (i.e., non-pharmacologic intervention) for seven to 14 days. Patients received lansoprazole as a suspension daily (0.2 to 0.3 mg/kg/day in infants ≤ 10 weeks of age or 1 to 1.5 mg/kg/day in infants greater than 10 weeks or placebo) for up to four weeks of double-blind treatment.

The primary efficacy endpoint was assessed by greater than 50% reduction from baseline in either the percent of feedings with a crying/fussing/irritability episode or the duration (minutes) of a crying/fussing/irritability episode within one hour after feeding.

There was no difference in the percentage of responders between the lansoprazole pediatric suspension group and placebo group (54% in both groups).
There were no adverse events reported in pediatric clinical studies (one month to less than 12 months of age) that were not previously observed in adults.

Based on the results of the Phase 3 efficacy study, lansoprazole was not shown to be effective. Therefore, these results do not support the use of lansoprazole in treating symptomatic GERD in infants.

**One to 11 years of age**

In an uncontrolled, open-label, U.S. multicenter study, 66 pediatric patients (one to 11 years of age) with GERD were assigned, based on body weight, to receive an initial dose of either lansoprazole 15 mg daily if ≤ 30 kg or lansoprazole 30 mg daily if greater than 30 kg administered for eight to 12 weeks. The lansoprazole dose was increased (up to 30 mg twice daily) in 24 of 66 pediatric patients after two or more weeks of treatment if they remained symptomatic. At baseline 85% of patients had mild to moderate overall GERD symptoms (assessed by investigator interview), 58% had non-erosive GERD and 42% had erosive esophagitis (assessed by endoscopy).

After eight to 12 weeks of lansoprazole treatment, the intent-to-treat analysis demonstrated an approximate 50% reduction in frequency and severity of GERD symptoms. Twenty-one of 27 erosive esophagitis patients were healed at eight weeks and 100% of patients were healed at 12 weeks by endoscopy.

In a study of 66 pediatric patients in the age group one year to 11 years old after treatment with lansoprazole given orally in doses of 15 mg daily to 30 mg twice daily, increases in serum gastrin levels were similar to those observed in adult studies. Median fasting serum gastrin levels increased 89% from 51 pg/mL at baseline to 97 pg/mL [interquartile range (25th to 75th percentile) of 71 to 130 pg/mL] at the final visit.

The pediatric safety of lansoprazole delayed-release capsules has been assessed in 66 pediatric patients aged one to 11 years of age. Of the 66 patients with GERD 85% (56/66) took lansoprazole for 8 weeks and 15% (10/66) took it for 12 weeks.

The most frequently reported (two or more patients) treatment-related adverse reactions in patients one to 11 years of age (N=66) were constipation (5%) and headache (3%).
Twelve to 17 years of age

In an uncontrolled, open-label, U.S. multicenter study, 87 adolescent patients (12 to 17 years of age) with symptomatic GERD were treated with lansoprazole for 8 to 12 weeks. Baseline upper endoscopies classified these patients into two groups: 64 (74%) nonerosive GERD and 23 (26%) erosive esophagitis (EE). The nonerosive GERD patients received lansoprazole 15 mg daily for eight weeks and the EE patients received lansoprazole 30 mg daily for eight to 12 weeks. At baseline, 89% of these patients had mild to moderate overall GERD symptoms (assessed by investigator interviews). During 8 weeks of lansoprazole treatment, adolescent patients experienced a 63% reduction in frequency and a 69% reduction in severity of GERD symptoms based on diary results. Twenty-one of 22 (95.5%) adolescent erosive esophagitis patients were healed after eight weeks of lansoprazole treatment. One patient remained unhealed after 12 weeks of treatment.

In these 87 adolescent patients, increases in serum gastrin levels were similar to those observed in adult studies, median fasting serum gastrin levels increased 42% from 45 pg/mL at baseline to 64 pg/mL [interquartile range (25th to 75th percentile) of 44 to 88 pg/mL] at the final visit. (Normal serum gastrin levels are 25 to 111 pg/mL.)

The safety of lansoprazole delayed-release capsules has been assessed in these 87 adolescent patients. Of the 87 adolescent patients with GERD, 6% (5/87) took lansoprazole for less than six weeks, 93% (81/87) for six to 10 weeks, and 1% (1/87) for greater than 10 weeks.

The most frequently reported (at least 3%) treatment-related adverse reactions in these patients were headache (7%), abdominal pain (5%), nausea (3%) and dizziness (3%). Treatment-related dizziness, reported in this prescribing information as occurring in less than 1% of adult patients, was reported in this study by three adolescent patients with nonerosive GERD, who had dizziness concurrently with other reactions (such as migraine, dyspnea, and vomiting).

Geriatric Use

No dosage adjustment of lansoprazole is necessary in geriatric patients. The incidence rates of adverse reactions and
laboratory test abnormalities are similar to those seen in younger patients

**Renal Impairment**
No dosage adjustment of lansoprazole is necessary in patients with renal impairment. The pharmacokinetics of lansoprazole in patients with various degrees of renal impairment were not substantially different compared to those in subjects with normal renal function

**Hepatic Impairment**
In patients with various degrees of chronic hepatic impairment, an increase in the mean AUC of up to 500% was observed at steady state compared to healthy subjects. Consider dose reduction in patients with severe hepatic impairment

**Gender**
Over 4,000 women were treated with lansoprazole. Ulcer healing rates in females were similar to those in males. The incidence rates of adverse reactions in females were similar to those seen in males

**Race**
The pooled mean pharmacokinetic parameters of lansoprazole from twelve U.S. Phase 1 studies (N=513) were compared to the mean pharmacokinetic parameters from two Asian studies (N=20). The mean AUCs of lansoprazole in Asian subjects were approximately twice those seen in pooled U.S. data; however, the inter-individual variability was high. The Cmax values were comparable.

**Restriction on Use / Contraindications:**

Lansoprazole is contraindicated in patients with known severe hypersensitivity to any component of the formulation. Hypersensitivity reactions may include anaphylaxis, anaphylactic shock, angioedema, bronchospasm, acute interstitial nephritis, and urticaria

For information about contraindications of antibacterial agents (clarithromycin and amoxicillin) indicated in combination with lansoprazole, refer to the CONTRAINDICATIONS section of their prescribing information.
Dosage and Administration

Lansoprazole is available as an orally disintegrating tablet and is available in 15 mg and 30 mg strengths. Direction for use specific to the route and available methods of administration of this dosage form is presented below. Lansoprazole should be taken before eating. Lansoprazole delayed-release orally disintegrating tablets SHOULD NOT BE CRUSHED OR CHEWED. In the clinical trials, antacids were used concomitantly.

**Recommended Dose**

<table>
<thead>
<tr>
<th>Indication</th>
<th>Recommended Dose</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Duodenal Ulcers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short-Term Treatment</td>
<td>15 mg</td>
<td>Once daily for 4 weeks</td>
</tr>
<tr>
<td>Maintenance of Healed</td>
<td>15 mg</td>
<td>Once daily</td>
</tr>
<tr>
<td><em>H. pylori Eradication to Reduce the Risk of</em></td>
<td>30 mg</td>
<td>Twice daily (q12h) for 10 or 14 days</td>
</tr>
<tr>
<td><strong>Duodenal Ulcer Recurrence</strong></td>
<td>500 mg</td>
<td>Twice daily (q12h) for 10 or 14 days</td>
</tr>
<tr>
<td><em>Triple Therapy:</em></td>
<td>30 mg</td>
<td>Three times daily (q12h) for 14 days</td>
</tr>
<tr>
<td>Lansoprazole</td>
<td>1 gram</td>
<td>Three times daily (q8h) for 14 days</td>
</tr>
<tr>
<td>Amoxicillin</td>
<td></td>
<td></td>
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<tr>
<td>Clarithromycin</td>
<td></td>
<td></td>
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<tr>
<td><strong>Dual Therapy:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lansoprazole</td>
<td></td>
<td></td>
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<tr>
<td>Amoxicillin</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Benign Gastric Ulcer</strong></td>
<td>30 mg</td>
<td>Once daily for up to 8 weeks</td>
</tr>
<tr>
<td>Short-Term Treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NSAID-associated Gastric Ulcer</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Healing</td>
<td>30 mg</td>
<td>Once daily for 8 weeks</td>
</tr>
<tr>
<td>Risk Reduction</td>
<td>15 mg</td>
<td>Once daily for up to 12 weeks</td>
</tr>
</tbody>
</table>
**Gastroesophageal Reflux Disease (GERD)**

<table>
<thead>
<tr>
<th>Strength</th>
<th>Once daily for up to 8 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 mg</td>
<td></td>
</tr>
<tr>
<td>30 mg</td>
<td></td>
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</tbody>
</table>

**Pediatric (1 to 11 years of age)**

<table>
<thead>
<tr>
<th>Short-Term Treatment of Symptomatic GERD and Short-Term Treatment of Erosive Esophagitis</th>
<th>≤30kg</th>
<th>&gt;30 kg</th>
<th>(12 to 17 year of age)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 mg, 30 mg</td>
<td></td>
<td></td>
<td>15 mg</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>30 mg</td>
</tr>
<tr>
<td>Once daily for up to 12 weeks</td>
<td></td>
<td></td>
<td>Once daily for up to 12 weeks</td>
</tr>
</tbody>
</table>

**Short-Term Treatment of Symptomatic GERD**

<table>
<thead>
<tr>
<th>Nonerosive GERD</th>
<th>15 mg</th>
<th>Once daily for up to 8 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erosive Esophagitis</td>
<td>30 mg</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Maintenance of Healing of Erosive Esophagitis Pathological Hypersecretory Conditions including Zollinger- Ellison Syndrome</th>
<th>15 mg</th>
<th>Once daily</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>60 mg</td>
<td>Once daily</td>
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**Important Administration Information**

**Administration Options**

*Lansoprazole Delayed-release Orally Disintegrating Tablets*

- Lansoprazole delayed-release orally disintegrating tablet should not be broken or cut.
- Lansoprazole delayed-release orally disintegrating tablet should not be chewed.
- Place the tablet on the tongue and allow it to disintegrate, with or without water, until the particles can be swallowed.

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**Pack Style:**

- NDC 68382-771-77 in carton of 100 tablets (10 x 10 unit-dose) for 15 mg
- NDC 68382-772-77 in carton of 100 tablets (10 x 10 unit-dose) for 30 mg
The tablet typically disintegrates in less than one minute.

o Alternatively, for children or other patients who have difficulty swallowing tablets, lansoprazole delayed-release orally disintegrating tablet can be delivered in two different ways.

*Lansoprazole Delayed-release Orally Disintegrating Tablets – Oral Syringe*

For administration via oral syringe, lansoprazole delayed-release orally disintegrating tablet can be administered as follows:

▪ Place a 15 mg tablet in oral syringe and draw up 4 mL of water, or place a 30 mg tablet in oral syringe and draw up 10 mL of water.
▪ Shake gently to allow for a quick dispersal.
▪ After the tablet has dispersed, administer the contents within 15 minutes.
▪ Refill the syringe with approximately 2 mL (5 mL for the 30 mg tablet) of water, shake gently, and administer any remaining contents.

*Lansoprazole Delayed-release Orally Disintegrating Tablets – Nasogastric Tube (≥8 French) Administration*

For administration via a nasogastric tube, lansoprazole delayed-release orally disintegrating tablet can be administered as follows:

▪ Place a 15 mg tablet in a syringe and draw up 4 mL of water, or place a 30 mg tablet in a syringe and draw up 10 mL of water.
▪ Shake gently to allow for a quick dispersal.
▪ After the tablet has dispersed, inject through the nasogastric tube into the stomach within 15 minutes.
▪ Refill the syringe with approximately 5 mL of water, shake gently, and flush the nasogastric tube.

**Adverse Effects**

the serious adverse reactions are mentioned below.

- Acute Interstitial Nephritis
- Clostridium difficile-Associated Diarrhea
- Bone Fracture
- Cutaneous and Systemic Lupus Erythematosus
- Cyanocobalamin (Vitamin B-12) Deficiency
- Hypomagnesemia
Clinical Trials Experience
The following adverse reactions were reported by the treating physician to have a possible or probable relationship to drug in 1% or more of lansoprazole-treated patients and occurred at a greater rate in lansoprazole-treated patients than placebo-treated patients.

The most commonly reported possibly or probably treatment-related adverse event during maintenance therapy was diarrhea.

In the risk reduction study of lansoprazole for NSAID-associated gastric ulcers, the incidence of diarrhea for patients treated with lansoprazole, misoprostol, and placebo was 5%, 22%, and 3%, respectively.

Another study for the same indication, where patients took either a COX-2 inhibitor or lansoprazole and naproxen, demonstrated that the safety profile was similar to the prior study. Additional reactions from this study not previously observed in other clinical trials with lansoprazole included contusion, duodenitis, epigastric discomfort, esophageal disorder, fatigue, hunger, hiatal hernia, hoarseness, impaired gastric emptying, metaplasia, and renal impairment.

Additional adverse experiences occurring in less than 1% of patients or subjects who received lansoprazole in domestic trials are shown below:

**Body as a Whole**
abdomen enlarged, allergic reaction, asthenia, back pain, candidiasis, carcinoma, chest pain (not otherwise specified), chills, edema, fever, flu syndrome, halitosis, infection (not otherwise specified), malaise, neck pain, neck rigidity, pain, pelvic pain

**Cardiovascular System**
angina, arrhythmia, bradycardia, cerebrovascular accident/cerebral infarction, hypertension/hypotension, migraine, myocardial infarction, palpitations, shock (circulatory failure), syncope, tachycardia, vasodilation

**Digestive System**
abnormal stools, anorexia, bezoar, cardiospasm, cholelithiasis, colitis, dry mouth, dyspepsia, dysphagia, enteritis, eructation, esophageal stenosis, esophageal ulcer, esophagitis, fecal discoloration, flatulence, gastric nodules/fundic gland polyps, gastritis, gastroenteritis, gastrointestinal anomaly,
gastrointestinal disorder, gastrointestinal hemorrhage, glossitis, gum hemorrhage, hematemesis, increased appetite, increased salivation, melena, mouth ulceration, nausea and vomiting, nausea and vomiting and diarrhea, gastrointestinal moniliasis, rectal disorder, rectal hemorrhage, stomatitis, tenesmus, thirst, tongue disorder, ulcerative colitis, ulcerative stomatitis

**Endocrine System**
diabetes mellitus, goiter, hypothyroidism

**Hemic and Lymphatic System**
anemia, hemolysis, lymphadenopathy

**Metabolism and Nutritional Disorders**
avitaminosis, gout, dehydration, hyperglycemia/hypoglycemia, peripheral edema, weight gain/loss

**Musculoskeletal System**
arthralgia, arthritis, bone disorder, joint disorder, leg cramps, musculoskeletal pain, myalgia, myasthenia, ptosis, synovitis

**Nervous System**
abnormal dreams, agitation, amnesia, anxiety, apathy, confusion, convulsion, dementia, depersonalization, depression, diplopia, dizziness, emotional lability, hallucinations, hemiplegia, hostility aggravated, hyperkinesia, hypertonia, hypesthesia, insomnia, libido decreased/increased, nervousness, neurosis, paresthesia, sleep disorder, somnolence, thinking abnormality, tremor, vertigo

**Respiratory System**
asthma, bronchitis, cough increased, dyspnea, epistaxis, hemoptysis, hiccup, laryngeal neoplasia, lung fibrosis, pharyngitis, pleural disorder, pneumonia, respiratory disorder, upper respiratory inflammation/infection, rhinitis, sinusitis, stridor

**Skin and Appendages**
acne, alopecia, contact dermatitis, dry skin, fixed eruption, hair disorder, maculopapular rash, nail disorder, pruritus, rash, skin carcinoma, skin disorder, sweating, urticarial

**Special Senses**
abnormal vision, amblyopia, blepharitis, blurred vision, cataract, conjunctivitis, deafness, dry eyes, ear/eye disorder, eye pain, glaucoma, otitis media, parosmia, photophobia, retinal degeneration/disorder, taste loss, taste perversion, tinnitus, visual field defect
Urogenital System
abnormal menses, breast enlargement, breast pain, breast tenderness, dysmenorrhea, dysuria, gynecomastia, impotence, kidney calculus, kidney pain, leukorrhea, menorrhagia, menstrual disorder, penis disorder, polyuria, testis disorder, urethral pain, urinary frequency, urinary retention, urinary tract infection, urinary urgency, urination impaired, vaginitis.

Postmarketing Experience
Additional adverse experiences have been reported since lansoprazole has been marketed. The majority of these cases are foreign-sourced and a relationship to lansoprazole has not been established. Because these reactions were reported voluntarily from a population of unknown size, estimates of frequency cannot be made. These events are listed below by COSTART body system.

Body as a Whole
anaphylactic/anaphylactoid reactions, systemic lupus erythematosus;

Digestive System
hepatotoxicity, pancreatitis, vomiting;

Hemic and Lymphatic System
agranulocytosis, aplastic anemia, hemolytic anemia, leukopenia, neutropenia, pancytopenia, thrombocytopenia, and thrombotic thrombocytopenic purpura;

Infections and Infestations
Clostridium difficile associated diarrhea

Metabolism and Nutritional Disorders
hypomagnesemia;

Musculoskeletal System
bone fracture, myositis;

Skin and Appendages
severe dermatologic reactions including erythema multiforme, Stevens-Johnson syndrome, toxic epidermal necrolysis (some fatal), cutaneous lupus erythematosus;

Special Senses
speech disorder;

Urogenital System
interstitial nephritis, urinary retention.
Combination Therapy with Amoxicillin and Clarithromycin

**Triple Therapy: Lansoprazole/amoxicillin/clarithromycin**

The most frequently reported adverse reactions for patients who received triple therapy for 14 days were diarrhea (7%), headache (6%), and taste perversion (5%). There were no statistically significant differences in the frequency of reported adverse reactions between the 10- and 14-day triple therapy regimens. No treatment-emergent adverse reactions were observed at significantly higher rates with triple therapy than with any dual therapy regimen.

**Dual Therapy: Lansoprazole/amoxicillin**

The most frequently reported adverse reactions for patients who received lansoprazole three times daily plus amoxicillin three times daily dual therapy were diarrhea (8%) and headache (7%). No treatment-emergent adverse reactions were observed at significantly higher rates with lansoprazole three times daily plus amoxicillin three times daily dual therapy than with lansoprazole alone.

**Laboratory Values**

The following changes in laboratory parameters in patients who received lansoprazole were reported as adverse reactions:

- Abnormal liver function tests, increased SGOT (AST), increased SGPT (ALT), increased creatinine, increased alkaline phosphatase, increased globulins, increased GGTP, increased/decreased/abnormal WBC, abnormal AG ratio, abnormal RBC, bilirubinemia, blood potassium increased, blood urea increased, crystal urine present, eosinophilia, hemoglobin decreased, hyperlipemia, increased/decreased electrolytes, increased/decreased cholesterol, increased glucocorticoids, increased LDH, increased/decreased/abnormal platelets, increased gastrin levels and positive fecal occult blood. Urine abnormalities such as albuminuria, glycosuria, and hematuria were also reported. Additional isolated laboratory abnormalities were reported.

In the placebo-controlled studies, when SGOT (AST) and SGPT (ALT) were evaluated, 0.4% (4/978) and 0.4% (11/2677) patients, who received placebo and lansoprazole, respectively, had enzyme elevations greater than three times the upper limit of normal range at the final treatment visit.
None of these patients who received lansoprazole reported jaundice at any time during the study. In clinical trials using combination therapy with lansoprazole plus amoxicillin and clarithromycin, and lansoprazole plus amoxicillin, no increased laboratory abnormalities particular to these drug combinations were observed.

**Over Dose Effect**

Lansoprazole is not removed from the circulation by haemodialysis. In one reported overdose, a patient consumed 600 mg of lansoprazole with no adverse reaction. Oral lansoprazole doses up to 5000 mg/kg in rats [approximately 1300 times the 30 mg human dose based on body surface area (BSA)] and in mice (about 675.7 times the 30 mg human dose based on BSA) did not produce deaths or any clinical signs.

**Pregnancy Comments**

**Teratogenic effects**

**Pregnancy Category B.**

Reproduction studies have been performed in pregnant rats at oral doses up to 40 times the recommended human dose and in pregnant rabbits at oral doses up to 16 times the recommended human dose and have revealed no evidence of impaired fertility or harm to the fetus due to lansoprazole. There are, however, no adequate or well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

**Warnings & Precautions**

**Presence of Gastric Malignancy**

In adults, symptomatic response to therapy with lansoprazole does not preclude the presence of gastric malignancy. Consider additional follow-up and diagnostic testing in adult patients who have a suboptimal response or an early symptomatic relapse after completing treatment with a PPI. In older patients, also consider an endoscopy.

**Acute Interstitial Nephritis**

Acute interstitial nephritis has been observed in patients taking PPIs including lansoprazole. Acute interstitial nephritis may occur at any point during PPI therapy and is generally attributed to an idiopathic hypersensitivity reaction. Discontinue lansoprazole if acute interstitial nephritis develops.
Clostridium difficile-Associated Diarrhea
Published observational studies suggest that proton pump inhibitor (PPI) therapy like lansoprazole may be associated with an increased risk of Clostridium difficile associated diarrhea (CDAD), especially in hospitalized patients. This diagnosis should be considered for diarrhea that does not improve.

Patients should use the lowest dose and shortest duration of PPI therapy appropriate to the condition being treated.

CDAD has been reported with use of nearly all antibacterial agents. For more information specific to antibacterial agents (clarithromycin and amoxicillin) indicated for use in combination with lansoprazole, refer to WARNINGS and PRECAUTIONS sections of those prescribing information.

Bone Fracture
Several published observational studies suggest that PPI therapy may be associated with an increased risk for osteoporosis-related fractures of the hip, wrist or spine. The risk of fracture was increased in patients who received high-dose, defined as multiple daily doses, and long-term PPI therapy (a year or longer). Patients should use the lowest dose and shortest duration of PPI therapy appropriate to the condition being treated. Patients at risk for osteoporosis-related fractures should be managed according to established treatment guidelines.

Cutaneous and Systemic Lupus Erythematosus
Cutaneous lupus erythematosus (CLE) and systemic lupus erythematosus (SLE) have been reported in patients taking PPIs, including lansoprazole. These events have occurred as both new onset and an exacerbation of existing autoimmune disease. The majority of PPI-induced lupus erythematosus cases were CLE.

The most common form of CLE reported in patients treated with PPIs was subacute CLE (SCLE) and occurred within weeks to years after continuous drug therapy in patients ranging from infants to the elderly. Generally, histological findings were observed without organ involvement.

Systemic lupus erythematosus (SLE) is less commonly reported than CLE in patients receiving PPIs. PPI associated SLE is usually milder than non-drug induced SLE. Onset of SLE typically occurred within days to years after initiating
treatment primarily in patients ranging from young adults to the elderly. The majority of patients presented with rash; however, arthralgia and cytopenia were also reported.

Avoid administration of PPIs for longer than medically indicated. If signs or symptoms consistent with CLE or SLE are noted in patients receiving lansoprazole discontinue the drug and refer the patient to the appropriate specialist for evaluation. Most patients improve with discontinuation of the PPI alone in four to 12 weeks. Serological testing (e.g., ANA) may be positive and elevated serological test results may take longer to resolve than clinical manifestations.

**Cyanocobalamin (vitamin B-12) Deficiency**

Daily treatment with any acid-suppressing medications over a long period of time (e.g., longer than three years) may lead to malabsorption of cyanocobalamin (vitamin B-12) caused by hypo- or achlorhydria. Rare reports of cyanocobalamin deficiency occurring with acid-suppressing therapy have been reported in the literature. This diagnosis should be considered if clinical symptoms consistent with cyanocobalamin deficiency are observed.

**Hypomagnesemia**

Hypomagnesemia, symptomatic and asymptomatic, has been reported rarely in patients treated with PPIs for at least three months, in most cases after a year of therapy. Serious adverse events include tetany, arrhythmias, and seizures. In most patients, treatment of hypomagnesemia required magnesium replacement and discontinuation of the PPI.

For patients expected to be on prolonged treatment or who take PPIs with medications such as digoxin or drugs that may cause hypomagnesemia (e.g., diuretics), health care professionals may consider monitoring magnesium levels prior to initiation of PPI treatment and periodically.

**Concomitant Use of Lansoprazole with Methotrexate**

Literature suggests that concomitant use of PPIs with methotrexate (primarily at high dose; see methotrexate prescribing information) may elevate and prolong serum levels of methotrexate and/or its metabolite, possibly leading to methotrexate toxicities. In high-dose methotrexate administration, a temporary withdrawal of the PPI may be considered in some patients.
Drug Interactions:

Drugs with pH-Dependent Absorption

Due to its effects on gastric acid secretion, lansoprazole can reduce the absorption of drugs where gastric pH is an important determinant of their bioavailability. As with other drugs that decrease the intragastric acidity, the absorption of drugs such as ampicillin esters, ketoconazole, atazanavir, nelfinavir, iron salts, erlotinib, and mycophenolate mofetil (MMF) can decrease, while the absorption of drugs such as digoxin can increase during treatment with lansoprazole. Lansoprazole is likely to substantially decrease the systemic concentrations of HIV protease inhibitors, such as atazanavir and nelfinavir, which are dependent upon the presence of gastric acid for absorption, and may result in a loss of the therapeutic effect of atazanavir or nelfinavir and the development of HIV resistance. Therefore, lansoprazole should not be coadministered with atazanavir or nelfinavir.

Coadministration of PPIs in healthy subjects and in transplant patients receiving MMF has been reported to reduce the exposure to the active metabolite, mycophenolic acid (MPA), possibly due to a decrease in MMF solubility at an increased gastric pH. The clinical relevance of reduced MPA exposure on organ rejection has not been established in transplant patients receiving PPIs and MMF. Use lansoprazole with caution in transplant patients receiving MMF.

Warfarin

In a study of healthy subjects, coadministration of single or multiple 60 mg doses of lansoprazole and warfarin did not affect the pharmacokinetics of warfarin nor prothrombin time. However, there have been reports of increased INR and prothrombin time in patients receiving PPIs and warfarin concomitantly. Increases in INR and prothrombin time may lead to abnormal bleeding and even death. Patients treated with PPIs and warfarin concomitantly may need to be monitored for increases in INR and prothrombin time.

Tacrolimus

Concomitant administration of lansoprazole and tacrolimus may increase whole blood levels of tacrolimus, especially in transplant patients who are intermediate or poor metabolizers of CYP2C19.

Theophylline

A minor increase (10%) in the clearance of theophylline was
observed following the administration of lansoprazole concomitantly with theophylline. Although the magnitude of the effect on theophylline clearance is small, individual patients may require additional titration of their theophylline dosage when lansoprazole is started or stopped to ensure clinically effective blood levels.

**Clopidogrel**
Concomitant administration of lansoprazole and clopidogrel in healthy subjects had no clinically important effect on exposure to the active metabolite of clopidogrel or clopidogrel-induced platelet inhibition. No dose adjustment of clopidogrel is necessary when administered with an approved dose of lansoprazole.

**Methotrexate**
Case reports, published population pharmacokinetic studies, and retrospective analyses suggest that concomitant administration of PPIs and methotrexate (primarily at high dose; see methotrexate prescribing information) may elevate and prolong serum levels of methotrexate and/or its metabolite hydroxymethotrexate. However, no formal drug interaction studies of high dose methotrexate with PPIs have been conducted.

In a study of rheumatoid arthritis patients receiving low-dose methotrexate, lansoprazole and naproxen, no effect on pharmacokinetics of methotrexate was observed.

**Combination Therapy with Clarithromycin**
Concomitant administration of clarithromycin with other drugs can lead to serious adverse reactions due to drug interactions. Because of these, clarithromycin is contraindicated for coadministration with certain drugs.
**SAFETY SHEET**

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NDC 68382-772-77 in carton of 100 tablets (10 x 10 unit-dose) for 30 mg

---

**Section 3. COMPOSITION / INFORMATION ON INGREDIENTS**

<table>
<thead>
<tr>
<th>Component</th>
<th>Exposure limit</th>
<th>CAS no.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Principle component</strong></td>
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<td></td>
</tr>
<tr>
<td>Lansoprazole</td>
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<tr>
<td><strong>Inactive ingredients</strong></td>
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<tr>
<td>Mannitol</td>
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<tr>
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</tr>
<tr>
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<td>9004-34-6</td>
</tr>
<tr>
<td>Cross povidone</td>
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<td>9003-39-8</td>
</tr>
<tr>
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<td>77-92-9</td>
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<td>Mono and di glycerides</td>
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<td>Ferric oxide red</td>
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<td>1309-37-1</td>
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<tr>
<td>Sodium hydroxide</td>
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<td>1310-73-2</td>
</tr>
<tr>
<td>Hydrochloric acid</td>
<td>Not found</td>
<td>7647-01-0</td>
</tr>
</tbody>
</table>

**Section 4. FIRST-AID MEASURES**

**Swallowed**

Immediately give a glass of water.

First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

**Eye**

If this product comes in contact with the eyes:

Wash out immediately with fresh running water.
Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. If pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

**Skin**

If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

**Inhaled**

If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.

**Notes to physician**

- treat symptomatically.

---

**Section 5. FIRE FIGHTING MEASURES**

**Extinguishing media**

- Foam.
- Dry chemical powder.
- Bcf (where regulations permit).
- Carbon dioxide.
- Water spray or fog - large fires only.

**Fire fighting**

- Alert fire brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- Do not approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.
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Fire/explosion hazard
Combustible solid which burns but propagates flame with difficulty.
Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. Flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust may burn rapidly and fiercely if ignited.
Dry dust can be charged electrostatically by turbulence, pneumatic transport, pouring, in exhaust ducts and during transport.
Build-up of electrostatic charge may be prevented by bonding and grounding.
Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting.
All movable parts coming in contact with this material should have a speed of less than 1-meter/sec
Combustion products include: carbon monoxide (CO), carbon dioxide (CO2), hydrogen fluoride, nitrogen oxides (NOx), sulfur oxides (SOx), other pyrolysis products typical of burning organic material.
May emit poisonous fumes.
May emit corrosive fumes.

Fire incompatibility
Avoid contamination with oxidising agents i.e. Nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. As ignition may result.

Hazchem
None

Personal protective equipment
Gloves, boots (chemical resistant)
Breathing apparatus

Section 6. ACCIDENTAL RELEASE MEASURES

Minor Spill
Clean up waste regularly and abnormal spills immediately.
Avoid breathing dust and contact with skin and eyes.
Wear protective clothing, gloves, safety glasses and dust respirator.
Use dry clean up procedures and avoid generating dust.
Vacuum up or sweep up. NOTE: Vacuum cleaner must be fitted with an exhaust micro filter (HEPA type) (consider
explosion-proof machines designed to be grounded during storage and use). Dampen with water to prevent dusting before sweeping, place in suitable containers for disposal.

Major Spill
Clear area of personnel and move upwind. Alert Emergency Responders and tell them location and nature of hazard.

Spill Clean Up Procedures
Use proper personal protective equipment and clothing. Shut off the source of the spill or leak if it is safe to do so. Scoop or shovel spilled material into a suitable labeled open head drum. Secure the drum cover and move the container to a safe holding area. Wash spill area thoroughly with soapy water.

Treatment and Disposal
Decontaminate equipment. Dispose of protective clothing with spilled material.

Environmental precautions
Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

Section 7. HANDLING AND STORAGE

Storage
Store at 20° to 25°C (68° to 77°F).

Precautions for safe handling
Keep locked up. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk; evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Material data
Airborne particulate or vapour must be kept to levels as low as is practicably achievable given access to modern engineering controls and monitoring hardware. Biologically active compounds may produce idiosyncratic effects which are entirely unpredictable on the basis of literature searches and prior clinical experience (both recent and past).
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Eye

For laboratory, larger scale or bulk handling or where regular exposure in an occupational setting occurs:
Chemical goggles
Face shield - Full face shield may be required for supplementary but never for primary protection of eyes
Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [cdc niosh current intelligence bulletin 59].

Hands/feet

Suitability and durability of glove type is dependent on usage. Factors such as:
- Frequency and duration of contact,
- Chemical resistance of glove material,
- Glove thickness and
- Dexterity,

Are important in the selection of gloves.
Rubber gloves (nitrile or low-protein, powder-free latex). Employees allergic to latex gloves should use nitrile gloves in preference. Double gloving should be considered. Pvc gloves, Protective shoe covers, Head covering.

Other

Coveralls buttoned at collar and cuffs.
Disposal impermeable overalls.
Eye wash unit.

Respirator

<table>
<thead>
<tr>
<th>Protection</th>
<th>Half-face</th>
<th>Full-face</th>
<th>Powered air respirator</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 x es</td>
<td>P1 air-line*</td>
<td>-</td>
<td>Papr-p1 -</td>
</tr>
<tr>
<td>50 x es</td>
<td>Air-line**</td>
<td>P2</td>
<td>Papr-p2</td>
</tr>
<tr>
<td>100 x es</td>
<td>-</td>
<td>P3</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Air-line*</td>
<td>-</td>
</tr>
</tbody>
</table>
100+ x es - Air-line** Papr-p3

* - negative pressure demand ** - continuous flow.
The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.
For further information consult site specific chemwatch data (if available), or your occupational health and safety advisor.

**Engineering controls**
Enclosed local exhaust ventilation is required at points of dust, fume or vapour generation.
Hepa terminated local exhaust ventilation should be considered at point of generation of dust, fumes or vapours.
Barrier protection or laminar flow cabinets should be considered for laboratory scale handling.
The need for respiratory protection should also be assessed where incidental or accidental exposure is anticipated:
Dependent on levels of contamination, papr, full face air purifying devices with p2 or p3 filters or air supplied respirators should be evaluated.
Fume-hoods and other open-face containment devices are acceptable when face velocities of at least 1 m/s (200 feet/ minute) are achieved. Partitions, barriers, and other partial containment technologies are required to prevent migration of the material to uncontrolled areas. For non-routine emergencies maximum local and general exhaust are necessary. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.
Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe.
Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source.
The air velocity at the extraction fan, for example, should be a minimum of 1-2.5 m/s (200-500 f/min.) For extraction of gases discharged 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.
Unless written procedures, specific to the workplace are available, the following is intended as a guide:
For laboratory-scale handling of substances assessed to be toxic by inhalation. Quantities of up to 25 grams may be handled in class ii biological safety cabinets *; quantities of 25 grams to 1 kilogram may be handled in class ii biological safety cabinets* or equivalent containment systems quantities exceeding 1 kg may be handled either using specific containment, a hood or class ii biological safety cabinet*.
Hepa terminated local exhaust ventilation should be considered at point of generation of dust, fumes or vapours.
The need for respiratory protection should also be assessed where incidental or accidental exposure is anticipated.
Dependent on levels of contamination, papr, full face air purifying devices with p2 or p3 filters or air supplied respirators should be evaluated. When handling: quantities of up to 25 grams, an approved respirator with hepa filters or cartridges should be considered quantities of 25 grams to 1 kilogram, a half-face negative pressure, full negative pressure, or powered helmet-type air purifying respirator should be considered. Quantities in excess of 1 kilogram, a full face negative pressure, helmet-type air purifying, or supplied air respirator should be considered.
Written procedures, specific to a particular work-place, may replace these recommendations
* for class ii biological safety cabinets, types b2 or b3 should be considered. Where only class i, open fronted cabinets are available, glove panels may be added, laminar flow cabinets do not provide sufficient protection when handling these materials unless especially designed to do so.

### Section 9. Physical and Chemical Properties

Lansoprazole, USP is a white to brownish-white powder which melts with decomposition at approximately 166°C. Lansoprazole is freely soluble in dimethylformamide; and practically insoluble in water.

**Appearance of Dosage Form**

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Tablets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>15 mg</td>
</tr>
<tr>
<td></td>
<td>white to off-white, round, uncoated tablets with buff to light brown speckles, with ‘771’ debossed on one side of the tablet and plain on other side</td>
</tr>
<tr>
<td></td>
<td>30 mg</td>
</tr>
<tr>
<td></td>
<td>white to off-white, round, uncoated tablets with buff to light brown speckles, with ‘772’ debossed on one side of the tablet and plain on other side</td>
</tr>
</tbody>
</table>

**Pure/Mixture**

Mixture

### Section 10. Stability and Reactivity

**Stability**: The product is stable.
Section 11. TOXICOLOGICAL INFORMATION

Carcinogenesis, Mutagenesis, Impairment of Fertility
In two 24 month carcinogenicity studies, Sprague-Dawley rats were treated with oral lansoprazole doses of five to 150 mg/kg/day, about one to 40 times the exposure on a body surface (mg/m²) basis of a 50 kg person of average height [1.46 m² body surface area (BSA)] given the recommended human dose of 30 mg/day. Lansoprazole produced dose-related gastric enterochromaffin-like (ECL) cell hyperplasia and ECL cell carcinoids in both male and female rats. It also increased the incidence of intestinal metaplasia of the gastric epithelium in both sexes. In male rats, lansoprazole produced a dose-related increase of testicular interstitial cell adenomas. The incidence of these adenomas in rats receiving doses of 15 to 150 mg/kg/day (four to 40 times the recommended human dose based on BSA) exceeded the low background incidence (range = 1.4 to 10%) for this strain of rat.

In a 24 month carcinogenicity study, CD-1 mice were treated with oral lansoprazole doses of 15 to 600 mg/kg/day, two to 80 times the recommended human dose based on BSA. Lansoprazole produced a dose-related increased incidence of gastric ECL cell hyperplasia. It also produced an increased incidence of liver tumors (hepatocellular adenoma plus carcinoma). The tumor incidences in male mice treated with 300 and 600 mg/kg/day (40 to 80 times the recommended human dose based on BSA) and female mice treated with 150 to 600 mg/kg/day (20 to 80 times the recommended human dose based on BSA) exceeded the ranges of background incidences in historical controls for this strain of mice. Lansoprazole treatment produced adenoma of rete testis in male mice receiving 75 to 600 mg/kg/day (10 to 80 times the recommended human dose based on BSA).

A 26 week p53 (+/-) transgenic mouse carcinogenicity study was not positive.
Lansoprazole was positive in the Ames test and the in vitro human lymphocyte chromosomal aberration assay. Lansoprazole was not genotoxic in the ex vivo rat hepatocyte unscheduled DNA synthesis (UDS) test, the in vivo mouse micronucleus test, or the rat bone marrow cell chromosomal aberration test.
Lansoprazole at oral doses up to 150 mg/kg/day (40 times the recommended human dose based on BSA) was found to have no effect on fertility and reproductive performance of male and female rats.

Animal Toxicology and/or Pharmacology
Reproductive Toxicology Studies
Reproduction studies have been performed in pregnant rats at oral lansoprazole doses up to 150 mg/kg/day [40 times the recommended human dose (30 mg/day) based on body surface area (BSA)] and pregnant rabbits at oral lansoprazole doses up to 30 mg/kg/day (16 times the
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recommended human dose based on BSA) and have revealed no evidence of impaired fertility or harm to the foetus due to lansoprazole.

Section 12. ECOLOGICAL INFORMATION

Do not discharge into sewer or waterways.

Section 13. DISPOSAL CONSIDERATION

All waste must be handled in accordance with local, state and federal regulations. Legislation addressing waste disposal requirements may differ by country, state and/or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate:

• Reduction
• Reuse
• Recycling
• Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.

• Recycle wherever possible.
• Consult manufacturer for recycling options or consult Waste Management Authority for disposal if no suitable treatment or disposal facility can be identified.

Section 14. TRANSPORT INFORMATION

The product is not hazardous when shipping via air (IATA), ground (DOT), or sea (IMDG).

Section 15. REGULATORY INFORMATION

Generic Medicine, ANDA Number - 200816
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Section 16. OTHER INFORMATION

Hazard identification:

Chemwatch hazard ratings
Flammability: 1
Toxicity: 2
Body Contact: 2
Reactivity: 1
Chronic: 2


The information presented in the safety data sheet is, to the best our knowledge, accurate and reliable. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.