

# LUPIN LIMITED

## SAFETY DATA SHEET

### Section 1: Identification

#### Section 1, Identification

<b>Material</b>	<b>Telmisartan and Amlodipine Tablets USP</b> 40 mg/5 mg; 40 mg/10 mg; 80 mg/5 mg and 80 mg/10 mg
<b>Manufacturer</b>	<b>Lupin Limited</b> Goa 403 722 INDIA
<b>Distributor</b>	Lupin Pharmaceuticals, Inc. 111 South Calvert Street, Harborplace Tower, 21st Floor, Baltimore, Maryland 21202 United States Tel. 001-410-576-2000 Fax. 001-410-576-2221

### Section 2: Hazard(s) Identification

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<b>Fire and Explosion</b>	Expected to be non-combustible.
<b>Health</b>	Telmisartan and amlodipine tablets are contraindicated in patients with known hypersensitivity (e.g., anaphylaxis or angioedema) to telmisartan, amlodipine, or any other component of this product.  Do not co-administer aliskiren with telmisartan and amlodipine tablets in patients with diabetes
<b>Environment</b>	No information is available about the potential of this product to produce adverse environmental effects.

### Section 3: Composition/Information on Ingredients

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<b>Ingredients</b>	<b>CAS</b>
Telmisartan USP	144701-48-4
Amlodipine USP	111470-99-6

### Section 4: First-Aid Measures

#### Section 4, First-aid measures

<b>Ingestion</b>	Rinse mouth immediately and then drink plenty of water, seek medical attention.
<b>Inhalation</b>	Keep patient calm, remove to fresh air, seek medical attention.

**Skin Contact**

Wash off immediately with plenty of water. Cover wound with sterile dressing. Call a physician immediately.

**Eye Contact**

Rinse immediately with plenty of water for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately.

**NOTES TO HEALTH PROFESSIONALS****Medical Treatment**

Treat according to locally accepted protocols. For additional guidance, refer to the current prescribing information or to the local poison control information center. Protect the patient's airway and support ventilation and perfusion. Meticulously monitor and maintain, within acceptable limits, the patient's vital signs, blood gases, serum electrolytes, etc.

**OVERDOSAGE**

Limited data are available with regard to overdosage in humans. The most likely manifestations of overdosage with telmisartan tablets would be hypotension, dizziness, and tachycardia; bradycardia could occur from parasympathetic (vagal) stimulation. If symptomatic hypotension should occur, supportive treatment should be instituted. Telmisartan is not removed by hemodialysis.

Overdosage might be expected to cause excessive peripheral vasodilation with marked hypotension and possibly a reflex tachycardia. In humans, experience with intentional overdosage of amlodipine is limited.

Single oral doses of amlodipine maleate equivalent to 40 mg amlodipine/kg and 100 mg amlodipine/kg in mice and rats, respectively, caused deaths. Single oral amlodipine maleate doses equivalent to 4 or more mg amlodipine/kg or higher in dogs (11 or more times the maximum recommended human dose on a mg/m<sup>2</sup> basis) caused a marked peripheral vasodilation and hypotension.

If massive overdose should occur, initiate active cardiac and respiratory monitoring. Frequent blood pressure measurements are essential. Should hypotension occur, provide cardiovascular support including elevation of the extremities and the judicious administration of fluids. If hypotension remains unresponsive to these conservative measures, consider administration of vasopressors (such as phenylephrine) with attention to circulating volume and urine output. As amlodipine is highly protein bound, hemodialysis is not likely to be of benefit.

## Section 5: Fire-Fighting Measures

**Section 5, Fire-fighting measures****Fire and Explosion Hazards**

Fine particles (such as dust and mists) may fuel fires/explosions.

**Extinguishing Media**

Use carbon dioxide, dry chemical, or water spray.

**Special Firefighting Procedures**

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

**Hazardous Combustion Products**

May emit toxic fumes of carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen chloride, and other chlorine-containing compounds.

## Section 6: Accidental Release Measures

### Section 6, Accidental release measures

<b>Personal Precautions</b>	Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation. Never return spills in original containers for re-use. Knock down dust with water spray jet.
<b>Environmental Precautions</b>	Do not flush into surface water or sanitary sewer system.
<b>Clean-up Methods</b>	Contain the source of spill if it is safe to do so. Collect spill with absorbent material. Clean spill area thoroughly. Avoid use of a filtered vacuum to clean spills of dry solids, due to the potential for electrostatic discharge and the strong dust explosion characteristic and high sensitivity to ignition.

## Section 7: Handling and Storage

### Section 7, Handling and storage

<b>Handling</b>	If tablets or capsules are crushed and/or broken, avoid breathing dust and avoid contact with eyes, skin and clothing. Use adequate ventilation.
<b>Storage</b>	Store at 25°C (77°F); excursions permitted to 15 to 30°C (59 to 86°F) [see USP Controlled Room Temperature].  Do not remove from blisters until immediately before administration. Protect from moisture and light.

## Section 8: Exposure Controls/Personal Protection

### Section 8, Exposure controls/personal protection

Wear appropriate clothing to avoid skin contact. Wash hands and arms thoroughly after handling.

## Section 9: Physical and Chemical Properties

### Section 9, Physical and chemical properties

#### Physical Form

Telmisartan and amlodipine tablets USP are available as

#### **40 mg/5 mg**

Oval shaped, biconvex, bilayer, uncoated tablets where Amlodipine layer is white but may have yellow specks, debossed with 'C54' and Telmisartan layer is yellow in colour but may have white specks, debossed with 'LU'.

#### **40 mg/10 mg**

Oval shaped, biconvex, bilayer, uncoated tablets where Amlodipine layer is white but may have red specks, debossed with 'C55' and Telmisartan layer is red in colour but may have white specks, debossed with 'LU'.

#### **80 mg/5 mg**

Capsule shaped, biconvex, bilayer, uncoated tablets where Amlodipine layer is white but may have red specks, debossed with 'C56' and Telmisartan layer is red in colour but may have white specks, debossed with 'LU'.

**80 mg/10 mg**

Capsule shaped, biconvex, bilayer, uncoated tablet where Amlodipine layer is white but may have yellow specks, debossed with 'C57' and Telmisartan layer is yellow in colour but may have white specks, debossed with 'LU'.

Telmisartan and amlodipine tablets USP are supplied for oral administration in the following strengths and package configurations:

Tablet strength (telmisartan/ amlodipine besylate equivalent to amlodipine) mg	Package Configuration	NDC#
40 mg/5 mg	Bottles of 30 Bottles of 90 A box containing 100 Tablets (10 X 10 unit-dose)	68180-196-06 68180-196-09 68180-196-13
40 mg/10 mg	Bottles of 30 Bottles of 90 A box containing 100 Tablets (10 X 10 unit-dose)	68180-197-06 68180-197-09 68180-197-13
80 mg/5 mg	Bottles of 30 Bottles of 90 A box containing 100 Tablets (10 X 10 unit-dose)	68180-198-06 68180-198-09 68180-198-13
80 mg/10 mg	Bottles of 30 Bottles of 90 A box containing 100 Tablets (10 X 10 unit-dose)	68180-199-06 68180-199-09 68180-199-13

## Section 10: Stability and Reactivity

### Section 10, Stability and reactivity

Stable under recommended storage conditions.

## Section 11: Toxicological Information

### Section 11, Toxicological information

#### Carcinogenesis, Mutagenesis, Impairment of Fertility

There was no evidence of carcinogenicity when telmisartan was administered in the diet to mice and rats for up to 2 years. The highest doses administered to mice (1000 mg/kg/day) and rats (100 mg/kg/day) are, on a mg/m<sup>2</sup> basis, about 59 and 13 times, respectively, the maximum recommended human dose (MRHD) of telmisartan. These same doses have been shown to provide average systemic exposures to telmisartan >100 times and >25 times, respectively, the systemic exposure in humans receiving the MRHD (80 mg/day).

Genotoxicity assays did not reveal any telmisartan-related effects at either the gene or chromosome level. These assays included bacterial mutagenicity tests with *Salmonella* and *E. coli* (Ames), a gene mutation test with Chinese hamster V79 cells, a cytogenetic test with human lymphocytes, and a mouse micronucleus test.

No drug-related effects on the reproductive performance of male and female rats were noted at 100 mg/kg/day (the highest dose administered), about 13 times, on a mg/m<sup>2</sup> basis, the MRHD of telmisartan. This dose in the rat resulted in an average systemic exposure (telmisartan AUC as determined on day 6 of pregnancy) at least 50 times the average systemic exposure in humans at the MRHD (80 mg/day).

Rats and mice treated with amlodipine maleate in the diet for up to two years, at concentrations calculated to provide daily dosage levels of 0.5, 1.25, and 2.5 mg amlodipine/kg/day, showed no evidence of a carcinogenic effect of the drug. For the mouse, the highest dose was, on mg/m<sup>2</sup> basis, similar to the maximum recommended human dose [MRHD] of 10 mg amlodipine/day. For the rat, the highest dose was, on a mg/m<sup>2</sup> basis, about two and a half times the MRHD. (Calculations based on a 60 kg patient.)

Mutagenicity studies conducted with amlodipine maleate revealed no drug-related effects at either the gene or chromosome level.

There was no effect on the fertility of rats treated orally with amlodipine maleate (males for 64 days and females for 14 days prior to mating) at doses of up to 10 mg amlodipine/kg/day (about 10 times the MRHD of 10 mg/day on a mg/m<sup>2</sup> basis).

## Section 12: Ecological Information

### Section 12: Ecological Information

No relevant studies identified.

## Section 13: Disposal Considerations

### Section 13: Disposal Considerations

Incinerate in an approved facility. Follow all federal state and local environmental regulations.

## Section 14: Transport Information

### Section 14: Transport Information

#### IATA/ICAO - Not Regulated

IATA Proper shipping Name	:	N/A
IATA UN/ID No	:	N/A
IATA Hazard Class	:	N/A
IATA Packaging Group	:	N/A
IATA Label	:	N/A

#### IMDG - Not Regulated

IMDG Proper shipping Name	:	N/A
IMDG UN/ID No	:	N/A
IMDG Hazard Class	:	N/A
IMDG Flash Point	:	N/A
IMDG Label	:	N/A

**DOT - Not Regulated**

DOT Proper shipping Name	:	N/A
DOT UN/ID No	:	N/A
DOT Hazard Class	:	N/A
DOT Flash Point	:	N/A
DOT Packing Group	:	N/A
DOT Label	:	N/A

**Section 15: Regulatory Information****Section 15: Regulatory Information**

This Section Contains Information relevant to compliance with other Federal and/or state laws.

**Section 16: Other Information****Section 16, Other information**

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Nothing herein shall be deemed to create any warranty, express or implied. It is the responsibility of the user to determine the applicability of this information and the suitability of the material or product for any particular purpose.

**Lupin** shall not be held liable for any damage resulting from handling or from contact with the above product. Lupin reserves the right to revise this SDS.