

## SUMMARY OF PRODUCT CHARACTERISTICS

### 1 NAME OF THE MEDICINAL PRODUCT

Metformin Colonis 500 mg/5ml Oral Solution

### 2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each 5 ml oral solution contains 500 mg of metformin hydrochloride.

*Excipients with known effect:*

Sodium propyl parahydroxybenzoate (E217): 0.55 mg per 5 ml

Propylene glycol (E1520): 16.5 mg per 5 ml

Ethanol: 5.4 mg per 5 ml

Sodium

For the full list of excipients, see section 6.1.

### 3 PHARMACEUTICAL FORM

Oral solution.

Clear, colourless solution with characteristic peach odour.

### 4 CLINICAL PARTICULARS

#### 4.1 Therapeutic indications

Treatment of type 2 diabetes mellitus, particularly in overweight patients, when dietary management and exercise alone does not result in adequate glycaemic control.

- In adults, Metformin Colonis Oral Solution may be used as monotherapy or in combination with other oral antidiabetic agents or with insulin.
- In children from 10 years of age and adolescents, Metformin Colonis Oral Solution may be used as monotherapy or in combination with insulin.

A reduction of diabetic complications has been shown in overweight type 2 diabetic adult patients treated with metformin as first-line therapy after diet failure (see section 5.1).

## 4.2 Posology and method of administration

Note: Metformin Colonis Oral Solution 500 mg/5 ml is intended for the administration of doses of 500 mg or multiples of 500 mg. 850 mg/5 ml and 1000 mg/5 ml presentations are also available.

### Posology

#### *Adults*

#### **Monotherapy and combination with other oral antidiabetic agents**

The usual starting dose is 500 mg (5 ml) or 850 mg metformin hydrochloride 2 or 3 times daily given during or after meals.

After 10 to 15 days the dose should be adjusted on the basis of blood glucose measurements. A slow increase of dose may improve gastrointestinal tolerability. In patients receiving a high metformin hydrochloride dose (2 to 3 grams per day), it is possible to replace the 500 mg/5 ml presentation with the 1000 mg/5 ml presentation in order to administer a lower volume.

The maximum recommended dose of metformin hydrochloride is 3 g (30 ml) daily, taken as 3 divided doses.

If transfer from another oral antidiabetic agent is intended: discontinue the other agent and initiate metformin at the dose indicated above.

#### **Combination with insulin**

Metformin hydrochloride and insulin may be used in combination therapy to achieve better blood glucose control. Metformin hydrochloride is given at the usual starting dose of 500 mg (5 ml) or 850 mg 2 or 3 times daily, while insulin dosage is adjusted on the basis of blood glucose measurements.

#### *Elderly*

Due to the potential for decreased renal function in elderly subjects, the metformin hydrochloride dosage should be adjusted based on renal function. Regular assessment of renal function is necessary (see section 4.4).

#### *Patients with renal impairment*

Metformin hydrochloride may be used in patients with moderate renal impairment, stage 3a (creatinine clearance [CrCl] 45-59 mL/min or estimated glomerular filtration rate [eGFR] 45-59 mL/min/1.73 m<sup>2</sup>) only in the absence of other conditions that may increase the risk of lactic acidosis and with the following dose adjustments:

The starting dose is 500 mg (5 ml) or 850 mg metformin hydrochloride, once daily. The maximum dose is 1000 mg (10 ml) daily, given as 2 divided doses. The renal function should be closely monitored (every 3-6 months).

If CrCl or eGFR fall  $<45$  mL/min or  $<45$  mL/min/ $1.73$  m<sup>2</sup> respectively, metformin hydrochloride must be discontinued immediately.

### *Paediatric population*

#### **Monotherapy and combination with insulin**

- Metformin Colonis Oral Solution can be used in children from 10 years of age and adolescents.
- The usual starting dose is 500 mg (5 ml) or 850 mg metformin hydrochloride once daily, given during or after meals.

After 10 to 15 days the dose should be adjusted on the basis of blood glucose measurements. A slow increase of dose may improve gastrointestinal tolerability. The maximum recommended dose of metformin hydrochloride is 2 g (20 ml) daily, taken as 2 or 3 divided doses.

Alternative commercially available strengths of metformin Colonis oral solution can be used to ensure optimal dose titration.

#### Method of administration

Metformin Colonis Oral Solution is for oral use only.

A graduated 10 ml dosing spoon is included in the pack.

#### Note

If necessary, Metformin Colonis oral solution can be administered via a gastric, duodenal, and nasal feeding tube, that should be rinsed twice with 10 ml of water immediately after administration.

### **4.3 Contraindications**

- Hypersensitivity to metformin hydrochloride or to any of the excipients listed in section 6.1.
- Diabetic ketoacidosis, diabetic pre-coma.
- Moderate (stage 3b) and severe renal failure or renal dysfunction (CrCL  $<45$  mL/min or eGFR  $<45$  mL/min/ $1.73$  m<sup>2</sup>).
- Acute conditions with the potential to alter renal function such as: dehydration, severe infection, shock.
- Disease which may cause tissue hypoxia (especially acute disease, or worsening of chronic disease) such as: decompensated heart failure, respiratory failure, recent myocardial infarction, shock.
- Hepatic insufficiency, acute alcohol intoxication, alcoholism.

#### 4.4 Special warnings and precautions for use

##### Lactic acidosis

Lactic acidosis is a very rare, but serious (high mortality rate in the absence of prompt treatment), metabolic complication that can occur due to metformin accumulation. Reported cases of lactic acidosis in patients on metformin have occurred primarily in diabetic patients with impaired renal failure or acute worsening of renal function. Special caution should be paid to situations where renal function may become impaired, for example in case of dehydration (severe diarrhoea or vomiting), or when initiating antihypertensive therapy or diuretic therapy and when starting therapy with a non-steroidal anti-inflammatory drug (NSAID). In the acute conditions listed, metformin hydrochloride should be temporarily discontinued.

Other associated risk factors should be considered to avoid lactic acidosis such as poorly controlled diabetes, ketosis, prolonged fasting, excessive alcohol intake, hepatic insufficiency and any condition associated with hypoxia (such as decompensated cardiac failure, acute myocardial infarction) (see also section 4.3).

The risk of lactic acidosis must be considered in the event of non-specific signs such as muscle cramps, digestive disorders as abdominal pain and severe asthenia. Patients should be instructed to notify these signs immediately to their physicians if they occur, notably if patients had a good tolerance to metformin before. Metformin hydrochloride should be discontinued, at least temporarily, until the situation is clarified. Reintroduction of metformin should then be discussed taking into account the benefit/risk ratio on an individual basis as well as renal function.

##### Diagnosis:

Lactic acidosis is characterised by acidotic dyspnoea, abdominal pain and hypothermia followed by coma. Diagnostic laboratory findings are decreased blood pH, plasma lactate levels above 5 mmol/L, and an increased anion gap and lactate/pyruvate ratio. In case of lactic acidosis, the patient should be hospitalised immediately (see section 4.9).

Physicians should alert patients to the risk and the symptoms of lactic acidosis.

##### Patients with known or suspected mitochondrial diseases

In patients with known mitochondrial diseases such as Mitochondrial Encephalopathy with Lactic Acidosis, and Stroke-like episodes (MELAS) syndrome and Maternal inherited diabetes and deafness (MIDD), metformin is

not recommended due to the risk of lactic acidosis exacerbation and neurologic complications which may lead to worsening of the disease.

In case of signs and symptoms suggestive of MELAS syndrome or MIDD after the intake of metformin, treatment with metformin should be withdrawn immediately and prompt diagnostic evaluation should be performed.

### Renal function

As metformin is excreted by the kidney, creatinine clearance (this can be estimated from serum creatinine levels by using the Cockcroft-Gault formula) or eGFR should be determined before initiating treatment and regularly thereafter:

- at least annually in patients with normal renal function,
- at least two to four times a year in patients with creatinine clearance at the lower limit of normal, and in elderly subjects.

In case CrCl is  $<45$  mL/min (eGFR $<45$  mL/min/1.73 m<sup>2</sup>), metformin hydrochloride is contraindicated (see section 4.3).

Decreased renal function in elderly subjects is frequent and asymptomatic. Special caution should be exercised in situations where renal function may become impaired, for example in case of dehydration, or when initiating antihypertensive therapy or diuretic therapy and when starting therapy with a non-steroidal anti-inflammatory drug (NSAID).

In these cases, it is also recommended to check renal function before initiating treatment with metformin hydrochloride.

### Cardiac function

Patients with heart failure are more at risk of hypoxia and renal insufficiency. In patients with stable chronic heart failure, metformin hydrochloride may be used with regular monitoring of cardiac and renal function.

For patients with acute and unstable heart failure, metformin hydrochloride is contraindicated (see section 4.3).

### Administration of iodinated contrast media

The intravascular administration of iodinated contrast media in radiologic studies can lead to renal failure. This may induce metformin accumulation and may increase the risk for lactic acidosis. In patients with eGFR  $>60$  mL/min/1.73 m<sup>2</sup>, metformin hydrochloride must be discontinued prior to, or at the time of the test and not be reinstated until at least 48 hours afterwards, and only after renal function has been re-evaluated and has not deteriorated further (see section 4.5).

In patients with moderate renal impairment (eGFR between 45 and 60 mL/min/1.73 m<sup>2</sup>), metformin hydrochloride must be discontinued 48 hours before administration of iodinated contrast media and not be reinstated until at least 48 hours afterwards and only after renal function has been re-evaluated and has not deteriorated further (see section 4.5).

### Surgery

Metformin hydrochloride must be discontinued 48 hours before elective surgery under general, spinal or peridural anaesthesia. Therapy may be restarted no earlier than 48 hours following surgery or resumption of oral nutrition and only if normal renal function has been established.

### Paediatric population

The diagnosis of type 2 diabetes mellitus should be confirmed before treatment with metformin hydrochloride is initiated.

No effect of metformin on growth and puberty has been detected during controlled clinical studies of one-year duration but no long-term data on these specific points are available. Therefore, a careful follow-up of the effect of metformin on these parameters in metformin-treated children, especially prepubescent children, is recommended.

### **Children aged between 10 and 12 years**

Only 15 subjects aged between 10 and 12 years were included in the controlled clinical studies conducted in children and adolescents. Although efficacy and safety of metformin hydrochloride in these children did not differ from efficacy and safety in older children and adolescents, particular caution is recommended when prescribing to children aged between 10 and 12 years.

### Other precautions

All patients should continue their diet with a regular distribution of carbohydrate intake during the day. Overweight patients should continue their energy-restricted diet.

The usual laboratory tests for diabetes monitoring should be performed regularly.

Metformin may reduce vitamin B12 serum levels. The risk of low vitamin B12 levels increases with increasing metformin dose, treatment duration, and/or in patients with risk factors known to cause vitamin B12 deficiency. In case of suspicion of vitamin B12 deficiency (such as anaemia or neuropathy), vitamin B12 serum levels should be monitored. Periodic vitamin B12 monitoring could be necessary in patients with risk factors for vitamin B12 deficiency. Metformin therapy should be continued for as long as it is tolerated and not contra-indicated and appropriate corrective treatment for vitamin B12 deficiency provided in line with current clinical guidelines.

Metformin alone does not cause hypoglycaemia, but caution is advised when it is used in combination with insulin or other antidiabetics (e.g. sulfonylureas or meglitinides).

#### Excipient warnings

Metformin Colonis Oral Solution contains sodium propyl parahydroxybenzoate (E217), propylene glycol (E1520), ethanol and sodium.

- Parahydroxybenzoates may cause allergic reactions (possibly delayed).
- This medicine contains 16.5 mg propylene glycol in each 5 ml.
- This medicine contains 5.4 mg of alcohol (ethanol) in each 5 ml. The amount in 5 ml of this medicine is equivalent to less than 1 ml beer or 1 ml wine. The small amount of alcohol in this medicine will not have any noticeable effects.
- This medicinal product contains 5.6 mg sodium per 5 ml, equivalent to 0.28% of the WHO recommended maximum daily intake of 2 g sodium for an adult.

## **4.5 Interaction with other medicinal products and other forms of interaction**

### Concomitant use not recommended

#### *Alcohol*

Acute alcohol intoxication is associated with an increased risk of lactic acidosis, particularly in case of fasting or malnutrition, and hepatic insufficiency.

Avoid consumption of alcohol and alcohol-containing medicinal products.

### *Iodinated contrast media*

Intravascular administration of iodinated contrast media may lead to renal failure, resulting in metformin accumulation and an increased risk of lactic acidosis.

In patients with eGFR  $>60$  mL/min/1.73 m<sup>2</sup>, metformin hydrochloride must be discontinued prior to, or at the time of the test and not be reinstated until at least 48 hours afterwards, and only after renal function has been re-evaluated and has not deteriorated further (see section 4.4).

In patients with moderate renal impairment (eGFR between 45 and 60 mL/min/1.73 m<sup>2</sup>), metformin hydrochloride must be discontinued 48 hours before administration of iodinated contrast media and not be reinstated until at least 48 hours afterwards and only after renal function has been re-evaluated and has not deteriorated further.

### Combinations requiring precautions for use

Some medicinal products can adversely affect renal function which may increase the risk of lactic acidosis, e.g. NSAIDs, including selective cyclo-oxygenase (COX) II inhibitors, ACE inhibitors, angiotensin II receptor antagonists and diuretics, especially loop diuretics. When starting or using such products in combination with metformin, close monitoring of renal function is necessary.

### *Medicinal products with intrinsic hyperglycaemic activity (e.g. glucocorticoids (systemic and local routes) and sympathomimetics)*

More frequent blood glucose monitoring may be required, especially at the beginning of treatment. If necessary, adjust the metformin hydrochloride dosage during therapy with the respective medicinal product and upon its discontinuation.

### *Organic cation transporters (OCT)*

Metformin is a substrate of both transporters OCT1 and OCT2.

Co-administration of metformin with

- Inhibitors of OCT1 (such as verapamil) may reduce efficacy.
- Inducers of OCT1 (such as rifampicin) may increase gastrointestinal absorption and efficacy of metformin
- Inhibitors of OCT2 (such as cimetidine, dolutegravir, ranolazine, trimethoprim, vandetanib, isavuconazole) may decrease the renal elimination of metformin and thus lead to an increase in metformin plasma concentration
- Inhibitors of both OCT1 and OCT2 (such as crizotinib, olaparib) may alter efficacy and renal elimination of metformin.

Caution is therefore advised, especially in patients with renal impairment, when these drugs are co-administered with metformin, as metformin plasma concentration may increase. If needed, dose adjustment of metformin may be considered as OCT inhibitors/inducers may alter the efficacy of metformin.

#### **4.6 Fertility, pregnancy and lactation**

##### Pregnancy

Uncontrolled hyperglycemia in the periconceptional phase and during pregnancy is associated with increased risk of congenital abnormalities, pregnancy loss, pregnancy-induced hypertension, preeclampsia and perinatal mortality. It is important to maintain blood glucose levels as close to normal as possible throughout pregnancy, to reduce the risk of adverse hyperglycaemia-related outcomes to the mother and her child.

Metformin crosses the placenta with levels that can be as high as maternal concentrations.

A large amount of data on pregnant women (more than 1000 exposed outcomes) from a register-based cohort study and published data (meta-analyses, clinical studies, and registries) indicates no increased risk of congenital abnormalities nor foeto/neonatal toxicity after exposure to metformin in the periconceptional phase and/or during pregnancy.

There is limited and inconclusive evidence on the metformin effect on the long-term weight outcome of children exposed in utero. Metformin does not appear to affect motor and social development up to 4 years of age in children exposed during pregnancy although data on long term outcomes are limited.

If clinically needed, the use of metformin can be considered during pregnancy and in the periconceptional phase as an addition or an alternative to insulin.

##### Breast-feeding

Metformin is excreted into human breast milk. No adverse effects were observed in breastfed newborns/infants. However, as only limited data are available, breast-feeding is not recommended during metformin hydrochloride treatment. A decision on whether to discontinue breast-feeding should be made, taking into account the benefit of breast-feeding and the potential risk to adverse effects on the child.

##### Fertility

Fertility of male or female rats was unaffected by metformin when administered at doses as high as 600 mg/kg/day, which is approximately three times the maximum recommended human daily dose based on body surface area comparisons.

#### **4.7 Effects on ability to drive and use machines**

Metformin monotherapy does not cause hypoglycaemia and therefore has no effect on the ability to drive or to use machines. However, patients should be alerted to the risk of hypoglycaemia when metformin hydrochloride is used in combination with other antidiabetic agents (e.g. sulfonylureas, insulin or meglitinides).

#### **4.8 Undesirable effects**

During treatment initiation, the most common adverse reactions are nausea, vomiting, diarrhoea, abdominal pain and loss of appetite which resolve spontaneously in most cases. To prevent them, it is recommended to take metformin hydrochloride in 2 or 3 daily doses and to increase the doses slowly.

The following adverse reactions may occur under treatment with metformin hydrochloride. Frequencies are defined as follows: very common:  $\geq 1/10$ ; common  $\geq 1/100$ ,  $< 1/10$ ; uncommon  $\geq 1/1,000$ ,  $< 1/100$ ; rare  $\geq 1/10,000$ ,  $< 1/1,000$ ; very rare  $< 1/10,000$ .

Within each frequency grouping, adverse reactions are presented in order of decreasing seriousness.

##### Metabolism and nutrition disorders

###### *Common*

- Vitamin B12 decrease/deficiency (see section 4.4).

###### *Very rare*

- Lactic acidosis (see section 4.4).

##### Nervous system disorders

###### *Common*

- Taste disturbance.

##### Gastrointestinal disorders

###### *Very common*

- Gastrointestinal disorders such as nausea, vomiting, diarrhoea, abdominal pain and loss of appetite. These undesirable effects occur most frequently during initiation of therapy and resolve spontaneously in most cases. To prevent them, it is recommended that metformin hydrochloride be taken in 2 or 3 daily doses during or after meals. A slow increase of the dose may also improve gastrointestinal tolerability.

### Hepatobiliary disorders

*Very rare*

- Isolated reports of liver function test abnormalities or hepatitis resolving upon metformin hydrochloride discontinuation.

### Skin and subcutaneous tissue disorders

*Very rare*

- Skin reactions such as erythema, pruritus and urticaria.

### **Paediatric population**

In published and post marketing data, and in controlled clinical studies in a limited paediatric population aged 10-16 years treated during 1 year, adverse event reporting was similar in nature and severity to that reported in adults.

### Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the Yellow Card Scheme at: [www.mhra.gov.uk/yellowcard](http://www.mhra.gov.uk/yellowcard) or search for MHRA Yellow Card in the Google Play or Apple App Store.

## **4.9 Overdose**

Hypoglycaemia has not been seen with metformin hydrochloride doses of up to 85 g, although lactic acidosis has occurred in such circumstances. High overdose of metformin or concomitant risks may lead to lactic acidosis. Lactic acidosis is a medical emergency and must be treated in hospital. The most effective method to remove lactate and metformin is haemodialysis.

## **5 PHARMACOLOGICAL PROPERTIES**

### **5.1 Pharmacodynamic properties**

Pharmacotherapeutic group: Blood glucose lowering drugs. Biguanides; ATC code: A10BA02

### Mechanism of action

Metformin hydrochloride is a biguanide with antihyperglycaemic effects, lowering both basal and postprandial plasma glucose. It does not stimulate insulin secretion and therefore does not produce hypoglycaemia.

Metformin hydrochloride may act via 3 mechanisms:

- reduction of hepatic glucose production by inhibiting gluconeogenesis and glycogenolysis.
- in muscle, by increasing insulin sensitivity, improving peripheral glucose uptake and utilization.
- delay of intestinal glucose absorption.

Metformin hydrochloride stimulates intracellular glycogen synthesis by acting on glycogen synthase.

Metformin hydrochloride increases the transport capacity of all types of membrane glucose transporters (GLUTs) known to date.

### Pharmacodynamic effects

In clinical studies, use of metformin hydrochloride was associated with either a stable body weight or modest weight loss.

In humans, independently of its action on glycaemia, metformin hydrochloride has favourable effects on lipid metabolism. This has been shown at therapeutic doses in controlled, medium-term or long-term clinical studies: metformin hydrochloride reduces total cholesterol, LDL cholesterol and triglyceride levels.

### Clinical efficacy

The prospective randomised study (UKPDS) has established the long-term benefit of intensive blood glucose control in adult patients with type 2 diabetes.

Analysis of the results for overweight patients treated with metformin hydrochloride after failure of diet alone showed:

- a significant reduction of the absolute risk of any diabetes-related complication in the metformin group (29.8 events/1000 patient-years) versus diet alone (43.3 events/1000 patient-years),  $p=0.0023$ , and versus the combined sulfonylurea and insulin monotherapy groups (40.1 events/1000 patient-years),  $p=0.0034$ ;
- a significant reduction of the absolute risk of diabetes-related mortality: metformin 7.5 events/1000 patient-years, diet alone 12.7 events/1000 patient-years,  $p=0.017$ ;
- a significant reduction of the absolute risk of overall mortality: metformin 13.5 events/1000 patient-years versus diet alone 20.6 events/1000 patient-years ( $p=0.011$ ), and versus the combined sulfonylurea and insulin monotherapy groups 18.9 events/1000 patient-years ( $p=0.021$ );

- a significant reduction in the absolute risk of myocardial infarction: metformin 11 events/1000 patient-years, diet alone 18 events/1000 patient-years (p=0.01).

Benefit regarding clinical outcome has not been shown for metformin hydrochloride used as second-line therapy, in combination with a sulfonylurea.

In type 1 diabetes, the combination of metformin and insulin has been used in selected patients, but the clinical benefit of this combination has not been formally established.

### Paediatric population

Controlled clinical studies in a limited paediatric population aged 10-16 years treated during 1 year demonstrated a similar response in glycaemic control to that seen in adults.

## **5.2 Pharmacokinetic properties**

### Absorption

After an oral dose of metformin, maximum plasma concentration ( $C_{max}$ ) is reached in approximately 2.5 hours ( $t_{max}$ ). Absolute bioavailability of a 500 mg or 850 mg metformin tablet is approximately 50-60% in healthy subjects. After an oral dose, the non-absorbed fraction recovered in faeces was 20-30%.

After oral administration, metformin absorption is saturable and incomplete. It is assumed that the pharmacokinetics of metformin absorption is non-linear.

At the recommended metformin doses and dosing schedules, steady state plasma concentrations are reached within 24 to 48 hours and are generally less than 1 microgram/ml. In controlled clinical trials, maximum metformin plasma levels ( $C_{max}$ ) did not exceed 5 microgram/ml, even at maximum doses.

Food decreases the extent and slightly delays the absorption of metformin tablets. Following oral administration of a 850 mg tablet, a 40% lower plasma peak concentration, a 25% decrease in AUC (area under the curve) and a 35-minute prolongation of the time to peak plasma concentration were observed. The clinical relevance of these findings is unknown.

Metformin Colonis Oral Solution was shown to be bioequivalent to metformin hydrochloride powder for oral solution in sachets at a 1000 mg dose with respect to  $C_{max}$  and AUC in healthy fed subjects.

### Distribution

Plasma protein binding is negligible. Metformin partitions into erythrocytes. The blood peak is lower than the plasma peak and appears at approximately the same time. The red blood cells most likely represent a secondary compartment of distribution. The mean volume of distribution (Vd) ranged between 63-276 l.

### Metabolism

Metformin is excreted unchanged in the urine. No metabolites have been identified in humans.

### Elimination

Renal clearance of metformin is  $>400$  mL/min, indicating that metformin is eliminated by glomerular filtration and tubular secretion. Following an oral dose, the apparent terminal elimination half-life is approximately 6.5 hours.

When renal function is impaired, renal clearance is decreased in proportion to that of creatinine and thus the elimination half-life is prolonged, leading to increased levels of metformin in plasma.

### Characteristics in specific groups of patients

#### Renal impairment

The available data in subjects with moderate renal insufficiency are scarce and no reliable estimation of the systemic exposure to metformin in this subgroup as compared to subjects with normal renal function could be made. Therefore, the dose adaptation should be made upon clinical efficacy/tolerability considerations (see section 4.2).

#### Paediatric population

Single dose study: After single doses of metformin hydrochloride 500 mg, paediatric patients have shown similar pharmacokinetic profile to that observed in healthy adults.

Multiple dose study: Data are restricted to one study. After repeated doses of 500 mg twice daily for 7 days in paediatric patients, the peak plasma concentration ( $C_{max}$ ) and systemic exposure ( $AUC_{0-t}$ ) were reduced by approximately 33% and 40%, respectively compared to diabetic adults who received repeated doses of 500 mg twice daily for 14 days. As the dose is individually titrated based on glycaemic control, this is of limited clinical relevance.

## **5.3 Preclinical safety data**

Non-clinical data reveal no special hazard for humans based on conventional studies on safety, pharmacology, repeated dose toxicity, genotoxicity, carcinogenic potential and toxicity to reproduction.

## **6.1 List of excipients**

Sodium propyl parahydroxybenzoate (E217)

Sodium dihydrogen phosphate dihydrate (E339)

Disodium phosphate anhydrous (E339)

Sucralose (E955)  
Peach flavour (contains propylene glycol (E1520) and ethanol)  
Sodium hydroxide (E524), (for pH adjustment)  
Purified water

## **6.2 Incompatibilities**

Not applicable.

## **6.3 Shelf life**

15 months

After first opening do not store above 25°C and use within 2 months (60 days).

## **6.4 Special precautions for storage**

Do not store above 25°C.

For storage conditions after first opening of the medicinal product, see section 6.3.

## **6.5 Nature and contents of container**

Metformin Colonis 500 mg/5ml Oral Solution is filled into 150 ml or 300 ml type III, amber, glass bottles, fitted with a child-resistant, tamper-evident screw cap.

A graduated 10 ml dosing spoon is also included in the package.

Not all pack sizes may be marketed.

## **6.6 Special precautions for disposal and other handling**

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

## **7 MARKETING AUTHORISATION HOLDER**

Colonis Pharma Limited  
25 Bedford Square

Bloomsbury  
London  
WC1B 3HH  
United Kingdom

**8    MARKETING AUTHORISATION NUMBER(S)**

PL 41344/0019

**9    DATE OF FIRST AUTHORISATION/RENEWAL OF THE  
AUTHORISATION**

17/08/2016

**10   DATE OF REVISION OF THE TEXT**

28/11/2025