

**ANNEX I**  
**SUMMARY OF PRODUCT CHARACTERISTICS**

## 1. NAME OF THE MEDICINAL PRODUCT

GoResp Digihaler 160 microgram/4.5 microgram inhalation powder

## 2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each delivered dose (the dose that leaves the mouthpiece) contains 160 micrograms of budesonide and 4.5 micrograms of formoterol fumarate dihydrate.

This is equivalent to a metered dose of 200 micrograms budesonide and 6 micrograms of formoterol fumarate dihydrate.

### Excipient with known effect

Each dose contains approximately 5 milligrams of lactose (as monohydrate).

For the full list of excipients, see section 6.1.

## 3. PHARMACEUTICAL FORM

Inhalation powder

White powder.

## 4. CLINICAL PARTICULARS

### 4.1 Therapeutic indications

GoResp Digihaler is indicated in adults 18 years of age and older only.

#### Asthma

GoResp Digihaler is indicated in the regular treatment of asthma, where use of a combination (inhaled corticosteroid and long-acting  $\beta_2$  adrenoceptor agonist) is appropriate:

- in patients not adequately controlled with inhaled corticosteroids and “as needed” inhaled short-acting  $\beta_2$  adrenoceptor agonists.

or

- in patients already adequately controlled on both inhaled corticosteroids and long-acting  $\beta_2$  adrenoceptor agonists.

#### Chronic Obstructive Pulmonary Disease (COPD)

Symptomatic treatment of patients with COPD with forced expiratory volume in 1 second ( $FEV_1$ ) < 70% predicted normal (post bronchodilator) and a history of repeated exacerbations, who have significant symptoms despite regular therapy with long-acting bronchodilators.

## 4.2 Posology and method of administration

### Posology

#### Asthma

This medicinal product is not intended for the initial management of asthma.

Budesonide/formoterol fumarate dihydrate is not an appropriate treatment for adult patients with only mild asthma.

The dose of this medicinal product is individual and should be adjusted to the severity of the disease. This should be considered not only when treatment with combination medicinal products is initiated but also when the maintenance dose is adjusted. If an individual patient requires a combination of doses other than those available in the combination inhaler, appropriate doses of  $\beta_2$  adrenoceptor agonists and/or corticosteroids by individual inhalers should be prescribed.

Once asthma symptoms are controlled, consideration may be given to gradually reducing the dose of budesonide/formoterol fumarate dihydrate. Patients should be reassessed regularly by their physician/healthcare provider so that the dose of this medicinal product remains optimal. The dose should be titrated to the lowest dose at which effective control of symptoms is maintained.

When it is appropriate to titrate down to a lower strength than is available for GoResp Digihaler, a change to an alternative fixed-dose combination of budesonide and formoterol fumarate dihydrate containing a lower dose of the inhaled corticosteroid is required. When long-term control of symptoms is maintained with the lowest recommended dose, then the next step could include a test of inhaled corticosteroid alone.

In usual practice when control of symptoms is achieved with the twice daily dose regimen with a lower strength product, titration to a lower effective dose could include once daily dosing when, in the opinion of the physician, a long-acting bronchodilator is required to maintain control rather than treatment with an inhaled corticosteroid alone.

For GoResp Digihaler there are two treatment approaches: maintenance therapy, and maintenance and reliever therapy.

#### *Maintenance therapy*

GoResp Digihaler is taken as regular maintenance treatment with a separate rapid-acting bronchodilator as rescue.

Patients should be advised to have their separate rapid-acting bronchodilator available for rescue use at all times.

The recommended dose for adults (18 years of age and older) is 1-2 inhalations twice daily. Some patients may require up to a maximum of 4 inhalations twice daily.

Increasing use of a separate rapid-acting bronchodilator indicates a worsening of the underlying condition and warrants a reassessment of the asthma therapy.

#### *Maintenance and reliever therapy*

GoResp Digihaler is taken as regular maintenance treatment and as needed in response to symptoms. Patients take a daily maintenance dose of GoResp Digihaler and in addition take this medicinal product as needed in response to symptoms. Patients should be advised to always have GoResp Digihaler available for rescue use.

For patients taking GoResp Digihaler as reliever, preventative use of this medicinal product for allergen- or exercise-induced bronchoconstriction should be discussed between physician and patient; the recommended use should take into consideration the frequency of need. In case of frequent need of bronchodilation without corresponding need for an increased dose of inhaled corticosteroids, an alternative reliever should be used.

Budesonide/formoterol fumarate dihydrate maintenance and reliever therapy should especially be considered for patients with:

- inadequate asthma control and in frequent need of a reliever inhaler.
- asthma exacerbations in the past requiring medical intervention.

Close monitoring for dose-related adverse reactions is needed in patients who frequently take high numbers of this medicinal product as-needed inhalations.

The recommended maintenance dose for adults (18 years of age and older) is 2 inhalations per day, given either as one inhalation in the morning and evening or as 2 inhalations in either the morning or evening. For some patients a maintenance dose of 2 inhalations twice daily may be appropriate. Patients should take 1 additional inhalation as needed in response to symptoms. If symptoms persist after a few minutes, an additional inhalation should be taken. Not more than 6 inhalations should be taken on any single occasion.

A total daily dose of more than 8 inhalations is not normally needed; however, a total daily dose of up to 12 inhalations could be used for a limited period. Patients using more than 8 inhalations daily should be strongly recommended to seek medical advice. They should be reassessed and their maintenance therapy should be reconsidered.

### COPD

The recommended dose for adults (18 years of age and older) is 2 inhalations twice daily.

### Special populations

#### *Elderly patients*

There are no dose adjustments required for elderly patients.

#### *Renal impairment*

There are no data available for use of a fixed-dose combination of budesonide and formoterol fumarate dihydrate in patients with renal impairment. However, the impact of renal impairment on pharmacokinetics of budesonide and formoterol is unlikely (see section 5.2).

#### *Hepatic impairment*

There are no data available for use of a fixed-dose combination of budesonide and formoterol fumarate dihydrate in patients with hepatic impairment. As budesonide and formoterol are primarily eliminated via hepatic metabolism, an increased exposure can be expected in patients with severe liver cirrhosis. Therefore, patients with hepatic disease should be closely monitored (see section 5.2).

### Paediatric population

The safety and efficacy of this medicinal product in children aged 12 years and younger and adolescents aged 13 to 17 years has not yet been established. Currently available data are described in sections 4.8, 5.1 and 5.2 but no recommendation on a posology can be made.

This medicinal product is not recommended for use in children and adolescents under the age of 18 years.

## Method of administration

For inhalation use only.

Digihaler is a breath actuated, inspiratory flow-driven inhaler, with integrated electronics. The active substances are delivered into the airways when the patient inhales through the mouthpiece. The integrated electronics do not impact the metering or dosing functionality of the inhaler. Moderate and severe asthmatic patients were shown to be able to generate sufficient inspiratory flow rate to deliver the therapeutic dose (see section 5.1).

This medicinal product should be used correctly in order to achieve effective treatment. As such, the patients should be advised to read the package leaflet carefully and follow the instructions for use as detailed in the leaflet. The use of GoResp Digihaler follows three steps: “Open”, “Breathe” and “Close” which are outlined below.

**“Open”:** Hold the Digihaler with the mouthpiece cover at the bottom and open the mouthpiece cover by folding it down until it is fully opened when one click is heard.

**“Breathe”:** Place the mouthpiece between the teeth with the lips closed around the mouthpiece, do not bite the mouthpiece of the inhaler. Breathe in forcefully and deeply through the mouthpiece. Remove the Digihaler from mouth and hold the breath for 10 seconds or as long as comfortable for the patients.

**“Close”:** Breathe out gently and close the mouthpiece cover.

It is important to advise patients to close the mouthpiece cover after taking an inhalation.

It is also important to advise patients not to shake the inhaler before use and not to breathe out through the inhaler and not to block the air vents when they are preparing the “Breathe” step.

Patients should also be advised to rinse their mouth with water after inhaling (see section 4.4).

The patient may notice a taste when using this medicinal product due to the lactose excipient.

Patients should be advised to not place the inhaler in water.

### Information for patients using the Digihaler App

The Digihaler can be paired with the Digihaler App by scanning the Quick Response code (QR code), located on the top of the inhaler, from the Digihaler App. The Digihaler App allows patients to review and monitor inhaler usage data and set up treatment reminders.

The inhaler does not need to be connected to the Digihaler App for administration of the medicinal product to the patient.

The integrated electronics on the inhaler and the App do not control or interfere with the delivery of the medicinal product.

The App is not intended to serve as a substitute for the advice of a physician or healthcare professional. Patients should be informed to not modify their prescribed treatment based on information from the App but to always consult with their physician or healthcare professional.

For detailed instructions on how to use the digital inhaler with the App, see the Instructions For Use (IFU) provided in the App.

## **4.3 Contraindications**

Hypersensitivity to the active substances or the excipient listed in section 6.1.

#### **4.4 Special warnings and precautions for use**

##### Dosing advice

Patients should be reassessed regularly by their physician/healthcare provider so that the dose of GoResp Digihaler remains optimal. The dose should be titrated to the lowest dose at which effective control of symptoms is maintained. Once asthma symptoms are controlled, consideration may be given to gradually reducing the dose of this treatment. When it is appropriate to titrate down to a lower strength than is available for GoResp Digihaler, a change to an alternative fixed-dose combination of budesonide and formoterol fumarate dihydrate containing a lower dose of the inhaled corticosteroid is required.

Regular review of patients as treatment is stepped down is important.

Patients should be advised to have their rescue inhaler available at all times, either GoResp Digihaler (for asthma patients using this medicinal product as maintenance and reliever therapy) or a separate rapid-acting bronchodilator (for asthma patients using this medicinal product as maintenance therapy only).

It is recommended that the dose is tapered when the treatment is discontinued and should not be stopped abruptly. Complete withdrawal of inhaled corticosteroids should not be considered unless it is temporarily required to confirm diagnosis of asthma.

Patients should be reminded to take their medicinal product maintenance dose as prescribed, even when asymptomatic. The prophylactic use of this medicinal product, e.g. before exercise, has not been studied. The reliever inhalations of GoResp Digihaler should be taken in response to symptoms but are not intended for regular prophylactic use, e.g. before exercise.

##### Deterioration of disease

This medicinal product should not be used to treat acute asthma symptoms for which a fast- and short-acting bronchodilator is required.

Patients should not be initiated on this medicinal product during an exacerbation, or if they have significantly worsening or acutely deteriorating asthma.

Serious asthma-related adverse reactions and exacerbations may occur during treatment (see section 4.8). Patients should be asked to continue treatment but to seek medical advice if asthma symptoms remain uncontrolled or worsen after initiation with this medicinal product.

If patients find the treatment ineffective, or exceed the highest recommended dose, medical attention must be sought (see section 4.2). Sudden and progressive deterioration in control of asthma or COPD is potentially life-threatening and the patient should undergo urgent medical assessment. In this situation, consideration should be given to the need for increased therapy with corticosteroids, e.g. a course of oral corticosteroids, or antibiotic treatment if an infection is present.

##### Systemic effects

Systemic effects may occur with any inhaled corticosteroid, particularly at high doses prescribed for long periods. These effects are much less likely to occur with inhalation treatment than with oral corticosteroids.

Possible systemic effects include Cushing's syndrome, Cushingoid features, adrenal suppression, growth retardation in children and adolescents, decrease in bone mineral density, cataract and

glaucoma, as well as a range of psychological or behavioural effects including psychomotor hyperactivity, sleep disorders, anxiety, depression or aggression (particularly in children) (see section 4.8).

#### Visual disturbance

Visual disturbances have been reported with systemic and topical corticosteroid use (see section 4.8). If a patient presents with symptoms such as blurred vision or other visual disturbances, the patient should be considered for referral to an ophthalmologist for evaluation of possible causes which may include cataract, glaucoma or rare diseases such as central serous chorioretinopathy (CSCR) which have been reported after use of systemic and topical corticosteroids. It is important, therefore, that the patient is reviewed regularly and the dose of inhaled corticosteroid is reduced to the lowest dose at which effective control of asthma is maintained.

#### Effects on bone density

Potential effects on bone density should be considered, particularly in patients on high doses for prolonged periods that have co-existing risk factors for osteoporosis (see section 4.8).

Long-term studies with inhaled budesonide in adults at daily doses of 800 micrograms (metered dose) have not shown any significant effects on bone mineral density. No information regarding the effect of a budesonide/formoterol fumarate dihydrate fixed-dose combination at higher doses is available.

#### Adrenal function

Treatment with supplementary systemic steroids or inhaled budesonide should not be stopped abruptly.

The prolonged treatment with high doses of inhaled corticosteroids, particularly higher than recommended doses, may also result in clinically significant adrenal suppression (see section 4.8). Therefore additional systemic corticosteroid cover should be considered during periods of stress such as severe infections or elective surgery. Rapid reduction in the dose of steroids can induce acute adrenal crisis. Symptoms and signs which might be seen in acute adrenal crisis may be somewhat vague but may include anorexia, abdominal pain, weight loss, tiredness, headache, nausea, vomiting, decreased level of consciousness, seizures, hypotension and hypoglycaemia.

#### Paradoxical bronchospasm

Paradoxical bronchospasm may occur, with an immediate increase in wheezing and shortness of breath, after dosing. If the patient experiences paradoxical bronchospasm, treatment with this medicinal product should be discontinued immediately, the patient should be assessed and an alternative therapy instituted, if necessary. Paradoxical bronchospasm responds to a rapid-acting inhaled bronchodilator and should be treated straightaway (see section 4.8).

#### Transfer from oral therapy

If there is any reason to suppose that adrenal function is impaired from previous systemic steroid therapy, care should be taken when transferring patients to a budesonide/formoterol fumarate fixed-dose combination therapy.

The benefits of inhaled budesonide therapy would normally minimise the need for oral steroids, but patients transferring from oral steroids may remain at risk of impaired adrenal reserve for a considerable time. Recovery may take a considerable amount of time after cessation of oral steroid therapy and hence oral steroid-dependent patients transferred to inhaled budesonide may remain at risk from impaired adrenal function for some considerable time. In such circumstances hypothalamic pituitary adrenocortical (HPA) axis function should be monitored regularly.

During transfer from oral therapy to a budesonide/formoterol fumarate fixed-dose combination therapy, a generally lower systemic steroid action will be experienced which may result in the appearance of allergic or arthritic symptoms such as rhinitis, eczema and muscle and joint pain. Specific treatment should be initiated for these conditions. A general insufficient glucocorticosteroid effect should be suspected if, in rare cases, symptoms such as tiredness, headache, nausea and vomiting should occur. In these cases a temporary increase in the dose of oral glucocorticosteroids is sometimes necessary.

### Oral infections

Candida infection in the oropharynx is due to active substance (budesonide) deposition. To minimise the risk of oropharyngeal candida infection, the patient should be instructed to rinse their mouth out with water after inhaling the dose. If oropharyngeal thrush occurs, patients should also rinse their mouth with water after the as-needed inhalations. Oropharyngeal Candida infection usually responds to topical anti-fungal treatment without the need to discontinue the inhaled corticosteroid (see sections 4.2 and 4.8).

### COPD population

There are no clinical study data on GoResp Digihaler available in COPD patients with a pre-bronchodilator FEV<sub>1</sub> > 50% predicted normal and with a post-bronchodilator FEV<sub>1</sub> < 70% predicted normal (see section 5.1).

### *Pneumonia*

An increase in the incidence of pneumonia, including pneumonia requiring hospitalisation, has been observed in patients with COPD receiving inhaled corticosteroids (see section 4.8). There is some evidence of an increased risk of pneumonia with increasing steroid dose but this has not been demonstrated conclusively across all studies.

There is no conclusive clinical evidence for intra-class differences in the magnitude of the pneumonia risk among inhaled corticosteroid products.

Physicians should remain vigilant for the possible development of pneumonia in patients with COPD as the clinical features of such infections overlap with the symptoms of COPD exacerbations. Risk factors for pneumonia in patients with COPD include current smoking, older age, low body mass index (BMI) and severe COPD.

### Interaction with other medicinal products

Concomitant treatment with itraconazole, ritonavir or other potent CYP3A4 inhibitors should be avoided (see section 4.5). If this is not possible, the time interval between administrations of the interacting medicinal products should be as long as possible. In patients using potent CYP3A4 inhibitors, a budesonide/formoterol fumarate dihydrate fixed-dose combination is not recommended.

### Caution with special diseases

A fixed-dose combination of budesonide and formoterol fumarate dihydrate should be administered with caution in patients with thyrotoxicosis, pheochromocytoma, diabetes mellitus, untreated hypokalaemia, hypertrophic obstructive cardiomyopathy, idiopathic subvalvular aortic stenosis, severe hypertension, aneurysm or other severe cardiovascular disorders, such as ischaemic heart disease, tachyarrhythmias or severe heart failure.

Caution should be observed when treating patients with prolongation of the QTc-interval. Formoterol itself may induce prolongation of the QTc-interval (see section 4.8).



The need for, and dose of inhaled corticosteroids should be re-evaluated in patients with active or quiescent pulmonary tuberculosis, fungal and viral infections in the airways.

Additional blood glucose controls should be considered in diabetic patients.

#### $\beta_2$ adrenoceptor agonists

Potentially serious hypokalaemia may result from high doses of  $\beta_2$  adrenoceptor agonists. Concomitant treatment of  $\beta_2$  adrenoceptor agonists with medicinal products which can induce hypokalaemia or potentiate a hypokalaemic effect, e.g. xanthine-derivatives, steroids and diuretics, may add to a possible hypokalaemic effect of the  $\beta_2$  adrenoceptor agonist (see section 4.5).

Treatment with  $\beta_2$  adrenoceptor agonists may result in an increase in blood levels of insulin, free fatty acids, glycerol and ketone bodies.

Particular caution is recommended in unstable asthma with variable use of rescue bronchodilators, in acute severe asthma as the associated risk may be augmented by hypoxia and in other conditions when the likelihood for hypokalaemia is increased. It is recommended that serum potassium levels are monitored during these circumstances.

#### Excipients with known effect

This medicinal product contains lactose. Patients with rare hereditary problems of galactose intolerance, total lactase deficiency or glucose-galactose malabsorption should not take this medicinal product.

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

#### Pharmacokinetic interactions

Potent inhibitors of CYP3A4 (e.g. ketoconazole, itraconazole, voriconazole, posaconazole, clarithromycin, telithromycin, nefazodone and HIV protease inhibitors) are likely to markedly increase plasma levels of budesonide and concomitant use should be avoided. If this is not possible, the time interval between administration of the inhibitor and budesonide should be as long as possible (see section 4.4). In patients using potent CYP3A4 inhibitors, a fixed-dose combination of budesonide and formoterol fumarate dihydrate maintenance and reliever therapy is not recommended.

The potent CYP3A4 inhibitor ketoconazole, 200 mg once daily, increased plasma levels of concomitantly orally administered budesonide (single dose 3 mg) on average six-fold. When ketoconazole was administered 12 hours after budesonide the concentration was on average increased only three-fold showing that separation of the administration times can reduce the increase in plasma levels. Limited data about this interaction for high-dose inhaled budesonide indicates that marked increases in plasma levels (on average four fold) may occur if itraconazole, 200 mg once daily, is administered concomitantly with inhaled budesonide (single dose of 1000 micrograms).

Co-treatment with CYP3A inhibitors, including cobicistat-containing products, is expected to increase the risk of systemic adverse reactions. The combination should be avoided unless the benefit outweighs the increased risk of systemic corticosteroid adverse reactions, in which case patients should be monitored for systemic corticosteroid adverse reactions.

#### Pharmacodynamic interactions

$\beta$  adrenergic blockers can weaken or inhibit the effect of formoterol. A fixed-dose combination therapy of budesonide and formoterol fumarate dihydrate should therefore not be given together with  $\beta$  adrenergic blockers (including eye drops) unless there are compelling reasons.

Concomitant treatment with quinidine, disopyramide, procainamide, phenothiazines, antihistamines (terfenadine) and tricyclic antidepressants can prolong the QTc-interval and increase the risk of ventricular arrhythmias.

In addition L-Dopa, L-thyroxine, oxytocin and alcohol can impair cardiac tolerance towards  $\beta_2$  sympathomimetics.

Concomitant treatment with monoamine oxidase inhibitors including medicinal products with similar properties such as furazolidone and procarbazine may precipitate hypertensive reactions.

There is an elevated risk of arrhythmias in patients receiving concomitant anaesthesia with halogenated hydrocarbons.

Concomitant use of other  $\beta$  adrenergic medicinal products and anticholinergic medicinal products can have a potentially additive bronchodilating effect.

Hypokalaemia may increase the disposition towards arrhythmias in patients who are treated with digitalis glycosides.

Hypokalaemia may result from  $\beta_2$ -agonist therapy and may be potentiated by concomitant treatment with xanthine derivatives, corticosteroids and diuretics (see section 4.4).

Budesonide and formoterol have not been observed to interact with any other medicinal products used in the treatment of asthma.

#### Paediatric population

Interaction studies have only been performed in adults.

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

#### Pregnancy

For a fixed-dose combination therapy of budesonide and formoterol fumarate dihydrate or the concomitant treatment with formoterol and budesonide, no clinical data on exposed pregnancies are available. Data from an embryo-fetal development study in rats, showed no evidence of any additional effect from the combination.

There are no adequate data from the use of formoterol in pregnant women. In animal studies formoterol has caused adverse reactions in reproduction studies at very high systemic exposure levels (see section 5.3).

Data on approximately 2 000 exposed pregnancies indicate no increased teratogenic risk associated with the use of inhaled budesonide. In animal studies glucocorticosteroids have been shown to induce malformations (see section 5.3). This is not likely to be relevant for humans given recommended doses.

Animal studies have also identified an involvement of excess prenatal glucocorticoids in increased risks for intrauterine growth retardation, adult cardiovascular disease and permanent changes in glucocorticoid receptor density, neurotransmitter turnover and behaviour at exposures below the teratogenic dose range.

During pregnancy, a fixed-dose combination therapy of budesonide and formoterol fumarate dihydrate should only be used when the benefits outweigh the potential risks. The lowest effective dose of budesonide needed to maintain adequate asthma control should be used.

## Breast-feeding

Budesonide/metabolites are excreted in human milk. However, at therapeutic doses no effects on the breastfed newborns/infants of treated women are anticipated.

It is unknown whether formoterol/metabolites are excreted in human milk. In rats, small amounts of formoterol have been detected in maternal milk.

Administration of a fixed-dose combination therapy of budesonide and formoterol fumarate dihydrate to women who are breast-feeding should only be considered if the expected benefit of therapy for the woman is greater than any possible risk to the breastfed newborn/infant.

## Fertility

There is no data available on the potential effect of budesonide on fertility.

Animal reproduction studies with formoterol have shown a somewhat reduced fertility in male rats at high systemic exposure (see section 5.3).

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

This medicinal product has no or negligible influence on the ability to drive and use machines.

### **4.8 Undesirable effects**

#### Summary of the safety profile

Since this medicinal product contains both budesonide and formoterol, the same pattern of adverse reactions as reported for these substances may occur. No increased incidence of adverse reactions has been seen following concurrent administration of the two compounds. Common adverse reactions mainly attributed to  $\beta_2$  adrenoceptor agonist therapy are tremor and palpitations. Common adverse reactions mainly attributed to corticosteroid therapy are candida infections in the oropharynx, pneumonia, mild irritation in the throat, coughing, and dysphonia including hoarseness. A common adverse reaction that can be contributed to both budesonide and formoterol is headache.

#### Tabulated list of adverse reactions

Adverse reactions, which have been associated with budesonide or formoterol, are given below and listed by system organ class and frequency (see table 1). Frequencies are defined as: very common ( $\geq 1/10$ ), common ( $\geq 1/100$  to  $< 1/10$ ), uncommon ( $\geq 1/1\ 000$  to  $< 1/100$ ), rare ( $\geq 1/10\ 000$  to  $< 1/1\ 000$ ), very rare ( $< 1/10\ 000$ ) and not known (cannot be estimated from the available data).

**Table 1 Adverse reactions**

<b>System organ class</b>	<b>Frequency</b>	<b>Adverse reaction</b>
Infections and infestations	Common	Candida infections in the oropharynx <sup>1,2</sup> , pneumonia (in COPD patients) <sup>1,2</sup>
Immune system disorders	Rare	Immediate and delayed hypersensitivity reactions, e.g. exanthema, urticaria, pruritus, dermatitis, angioedema and anaphylactic reaction
Endocrine disorders	Very rare	Cushing's syndrome <sup>1,2</sup> , adrenal suppression <sup>1,2</sup> , growth retardation <sup>1,2</sup> , decrease in bone mineral density <sup>1,2</sup>
Metabolism and nutrition disorders	Rare	Hypokalaemia <sup>1,3</sup>
	Very rare	Hyperglycaemia <sup>1,3</sup>

Psychiatric disorders	Uncommon	Aggression <sup>1,2</sup> , psychomotor hyperactivity <sup>1,2</sup> , anxiety <sup>1,2</sup> , sleep disorders <sup>1,2</sup>
	Very rare	Depression <sup>1,2</sup> , behavioural changes (predominantly in children) <sup>1,2</sup>
Nervous system disorders	Common	Headache, tremor <sup>3</sup>
	Uncommon	Dizziness <sup>3</sup>
	Very rare	Taste disturbances <sup>3</sup>
Eye disorders	Uncommon	Vision blurred <sup>1,2</sup>
	Very rare	Cataract <sup>1,2</sup> , glaucoma <sup>1,2</sup>
Cardiac disorders	Common	Palpitations <sup>3</sup>
	Uncommon	Tachycardia <sup>3</sup>
	Rare	Cardiac arrhythmias <sup>3</sup> , e.g. atrial fibrillation, supraventricular tachycardia, extrasystoles
	Very rare	Angina pectoris <sup>3</sup> , prolongation of QTc-interval <sup>1,3</sup>
Vascular disorders	Very rare	Variations in blood pressure <sup>3</sup>
Respiratory, thoracic and mediastinal disorders	Common	Mild irritation in the throat <sup>2</sup> , coughing <sup>2</sup> , dysphonia including hoarseness <sup>2</sup>
	Rare	Bronchospasm
	Very rare	Paradoxical bronchospasm <sup>1</sup>
Gastrointestinal disorders	Uncommon	Nausea
Skin and subcutaneous tissue disorders	Uncommon	Bruises <sup>2</sup>
Musculoskeletal and connective tissue disorders	Uncommon	Muscle cramps

<sup>1</sup>See section 4.4 for more information

<sup>2</sup>Adverse reaction mainly attributed to budesonide

<sup>3</sup>Adverse reaction mainly attributed to formoterol

### Description of selected adverse reactions

#### *Systemic effects*

Systemic effects of inhaled corticosteroids may occur, particularly at high doses prescribed for long periods. These effects are much less likely to occur than with oral corticosteroids. Possible systemic effects include Cushing's syndrome, Cushingoid features, adrenal suppression, growth retardation in children and adolescents, decrease in bone mineral density, cataract and glaucoma. Increased susceptibility to infections and impairment of the ability to adapt to stress may also occur. Effects are dependent on dose, exposure time, concomitant and previous steroid exposure and individual sensitivity (see section 4.4).

### 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 national reporting system listed in [Appendix V](#).

## **4.9 Overdose**

An overdose of formoterol would likely lead to effects that are typical for  $\beta_2$  adrenoceptor agonists: tremor, headache, palpitations. Symptoms reported from isolated cases are tachycardia, hyperglycaemia, hypokalaemia, prolonged QTc-interval, arrhythmia, nausea and vomiting. Supportive and symptomatic treatment may be indicated. A dose of 90 micrograms administered during three hours in patients with acute bronchial obstruction raised no safety concerns.

Acute overdose with budesonide, even in excessive doses, is not expected to be a clinical problem. When used chronically in excessive doses, systemic glucocorticosteroid effects, such as hypercorticism and adrenal suppression, may appear.

If treatment has to be withdrawn due to overdose of the formoterol component of the medicinal product, provision of appropriate inhaled corticosteroid therapy must be considered.

## **5. PHARMACOLOGICAL PROPERTIES**

### **5.1 Pharmacodynamic properties**

Pharmacotherapeutic group: Drugs for obstructive airway diseases, adrenergics in combination with corticosteroids or other drugs, excl. anticholinergics, ATC code: R03AK07

#### Mechanism of action and pharmacodynamic effects

This medicinal product contains formoterol and budesonide, which have different modes of action and show additive effects in terms of reduction of asthma exacerbations. The specific properties of budesonide and formoterol allow the combination to be used either as maintenance and reliever therapy, or as maintenance treatment of asthma.

#### *Budesonide*

Budesonide is a glucocorticosteroid which when inhaled has a dose-dependent anti-inflammatory action in the airways, resulting in reduced symptoms and fewer asthma exacerbations. Inhaled budesonide has less severe adverse reactions than systemic corticosteroids. The exact mechanism responsible for the anti-inflammatory effect of glucocorticosteroids is unknown.

#### *Formoterol*

Formoterol is a selective  $\beta_2$  adrenoceptor agonist that when inhaled results in rapid and long-acting relaxation of bronchial smooth muscle in patients with reversible airways obstruction. The bronchodilating effect is dose-dependent, with an onset of effect within 1-3 minutes. The duration of effect is at least 12 hours after a single dose.

#### Clinical efficacy and safety

#### *Asthma*

##### *Budesonide/formoterol maintenance therapy*

Clinical studies in adults have shown that the addition of formoterol to budesonide improved asthma symptoms and lung function, and reduced exacerbations.

In two 12-week studies the effect on lung function of budesonide/formoterol was equal to that of the free combination of budesonide and formoterol, and exceeded that of budesonide alone. All treatment arms used a short-acting  $\beta_2$  adrenoceptor agonist as needed. There was no sign of attenuation of the anti-asthmatic effect over time.

Two 12-week paediatric studies have been performed in which 265 children aged 6-11 years were treated with a maintenance dose of budesonide/formoterol (2 inhalations of 80 micrograms

/4.5 micrograms/inhalation twice daily), and a short acting  $\beta_2$  adrenoceptor agonist as needed. In both studies, lung function was improved and the treatment was well tolerated compared to the corresponding dose of budesonide alone (see section 4.2).

#### *Budesonide/formoterol maintenance and reliever therapy*

A total of 12 076 asthma patients were included in 5 double-blind clinical studies (4 447 were randomised to budesonide/formoterol maintenance and reliever therapy) for 6 or 12 months. Patients were required to be symptomatic despite use of inhaled glucocorticosteroids.

Budesonide/formoterol maintenance and reliever therapy provided statistically significant and clinically meaningful reductions in severe exacerbations for all comparisons in all 5 studies. This included a comparison with budesonide/formoterol at a higher maintenance dose with terbutaline as reliever (study 735) and budesonide/formoterol at the same maintenance dose with either formoterol or terbutaline as reliever (study 734) (see table 2). In study 735, lung function, symptom control, and reliever use were similar in all treatment groups. In study 734, symptoms and reliever use were reduced and lung function improved, compared with both comparator treatments. In the 5 studies combined, patients receiving budesonide/formoterol maintenance and reliever therapy used, on average, no reliever inhalations on 57% of treatment days. There was no sign of development of tolerance over time.

**Table 2 Overview of severe exacerbations in clinical studies**

Study No. Duration	Treatment groups	N	Severe exacerbations <sup>a</sup>	
			Events	Events/ patient-year
Study 735 6 months	<b>Budesonide/formoterol fumarate dihydrate 160/4.5 <math>\mu</math>g twice daily + as needed</b>	<b>1103</b>	<b>125</b>	<b>0.23<sup>b</sup></b>
	Budesonide/formoterol fumarate dihydrate 320/9 $\mu$ g twice daily + terbutaline 0.4 mg as needed	1099	173	0.32
	Salmeterol/fluticasone 2 x 25/125 $\mu$ g twice daily + terbutaline 0.4 mg as needed	1119	208	0.38
Study 734 12 months	<b>Budesonide/formoterol fumarate dihydrate 160/4.5 <math>\mu</math>g twice daily + as needed</b>	<b>1107</b>	<b>194</b>	<b>0.19<sup>b</sup></b>
	Budesonide/formoterol fumarate dihydrate 160/4.5 $\mu$ g twice daily + formoterol 4.5 $\mu$ g as needed	1137	296	0.29
	Budesonide/formoterol fumarate dihydrate 160/4.5 $\mu$ g twice daily + terbutaline 0.4 mg as needed	1138	377	0.37

<sup>a</sup> Hospitalisation/emergency room treatment or treatment with oral steroids

<sup>b</sup> Reduction in exacerbation rate is statistically significant (p value < 0.01) for both comparisons

In 2 other studies with patients seeking medical attention due to acute asthma symptoms, budesonide/formoterol provided rapid and effective relief of bronchoconstriction similar to salbutamol and formoterol.

#### COPD

In two 12-month studies, the effect on lung function and the rate of exacerbation (defined as courses of oral steroids and/or course of antibiotics and/or hospitalisations) in patients with severe COPD was evaluated. Median FEV<sub>1</sub> at inclusion in the trials was 36% of predicted normal. The mean number of exacerbations per year (as defined above) was significantly reduced with budesonide/formoterol as compared with treatment with formoterol alone or placebo (mean rate 1.4 compared with 1.8-1.9 in the placebo/formoterol group). The mean number of days on oral corticosteroids/patient during the 12 months was slightly reduced in the budesonide/formoterol group (7-8 days/patient/year compared with 11-12 and 9-12 days in the placebo and formoterol groups, respectively). For changes in lung-function parameters, such as FEV<sub>1</sub>, budesonide/formoterol was not superior to treatment with formoterol alone.

## Peak inspiratory flow rate through the Digihaler device

A randomised, open-label placebo study was performed in children and adolescents with asthma (aged 6-17 years), adults with asthma (aged 18-45 years), adults with chronic obstructive pulmonary disease (COPD – aged > 50 years) and healthy volunteers (aged 18-45 years) to evaluate the peak inspiratory flow rate (PIFR) and other related inhalation parameters following inhalation from the inhaler device (containing placebo) compared with inhalation from an already marketed multi-dose dry powder inhaler device (containing placebo). The impact of enhanced training in dry powder inhaler inhalation technique on inhalation speed and volume was also assessed in these subject groups. The data from the study indicated that regardless of age and underlying disease severity, children, adolescents and adults with asthma as well as patients with COPD were able to achieve inspiratory flow rates through the device that were similar to those generated through the marketed multi-dose dry powder inhaler device (see section 4.2). The mean PIFR achieved by patients with asthma or COPD was over 60L/min, a flow rate at which both devices studied are known to deliver comparable amounts of active substance to the lungs. Very few patients had PIFRs below 40L/min; when PIFRs were less than 40L/min there appeared to be no clustering by age or disease severity.

## **5.2 Pharmacokinetic properties**

### Absorption

The fixed-dose combination of budesonide and formoterol, and the corresponding monoproducts have been shown to be bioequivalent with regard to systemic exposure of budesonide and formoterol, respectively. In spite of this, a small increase in cortisol suppression was seen after administration of fixed-dose combination compared to the monoproducts. The difference is considered not to have an impact on clinical safety.

There was no evidence of pharmacokinetic interactions between budesonide and formoterol.

Pharmacokinetic parameters for the respective substances were comparable after the administration of budesonide and formoterol as monoproducts or as the fixed-dose combination. For budesonide, area under the curve (AUC) was slightly higher, rate of absorption more rapid and maximal plasma concentration higher after administration of the fixed combination. For formoterol, maximal plasma concentration was similar after administration of the fixed combination. Inhaled budesonide is rapidly absorbed and the maximum plasma concentration is reached within 30 minutes after inhalation. In studies, mean lung deposition of budesonide after inhalation via the powder inhaler ranged from 32% to 44% of the delivered dose. The systemic bioavailability is approximately 49% of the delivered dose. In children 6-16 years of age the lung deposition falls in the same range as in adults for the same given dose (see section 4.2). The resulting plasma concentrations were not determined.

Inhaled formoterol is rapidly absorbed and the maximum plasma concentration is reached within 10 minutes after inhalation. In studies the mean lung deposition of formoterol after inhalation via the powder inhaler ranged from 28% to 49% of the delivered dose. The systemic bioavailability is about 61% of the delivered dose.

### Distribution and biotransformation

Plasma protein binding is approximately 50% for formoterol and 90% for budesonide. Volume of distribution is about 4 L/kg for formoterol and 3 L/kg for budesonide. Formoterol is inactivated via conjugation reactions (active O-demethylated and deformedylated metabolites are formed, but they are seen mainly as inactivated conjugates). Budesonide undergoes an extensive degree (approximately 90%) of biotransformation on first passage through the liver to metabolites of low glucocorticosteroid activity. The glucocorticosteroid activity of the major metabolites, 6-beta-hydroxy-budesonide and 16-alfa-hydroxy-prednisolone, is less than 1% of that of budesonide. There are no indications of any metabolic interactions or any displacement reactions between formoterol and budesonide.

## Elimination

The major part of a dose of formoterol is transformed by liver metabolism followed by renal elimination. After inhalation, 8% to 13% of the delivered dose of formoterol is excreted unmetabolised in the urine. Formoterol has a high systemic clearance (approximately 1.4 L/min) and the terminal elimination half-life averages 17 hours.

Budesonide is eliminated via metabolism mainly catalysed by the enzyme CYP3A4. The metabolites of budesonide are eliminated in urine as such or in conjugated form. Only negligible amounts of unchanged budesonide have been detected in the urine. Budesonide has a high systemic clearance (approximately 1.2 L/min) and the plasma elimination half-life after intravenous dosing averages 4 hours.

## Pharmacokinetic/pharmacodynamic relationship(s)

The pharmacokinetics of budesonide or formoterol in children and patients with renal failure are unknown.

The exposure of budesonide and formoterol may be increased in patients with liver disease.

## GoResp Digihaler pharmacokinetic profile

In pharmacokinetic studies with and without a charcoal blockage, GoResp Digihaler was evaluated by comparing it with an alternative authorised fixed-dose combination inhaled product containing the same active substances, budesonide and formoterol and has been shown to be equivalent in both systemic exposure (safety) and pulmonary deposition (efficacy).

## Linearity/non-linearity

Systemic exposure for both budesonide and formoterol correlates in a linear fashion to administered dose.

### **5.3 Preclinical safety data**

The toxicity observed in animal studies with budesonide and formoterol, given in combination or separately, were effects associated with exaggerated pharmacological activity.

In animal reproduction studies, corticosteroids such as budesonide have been shown to induce malformations (cleft palate, skeletal malformations). However, these animal experimental results do not seem to be relevant in humans at the recommended doses. Animal reproduction studies with formoterol have shown a somewhat reduced fertility in male rats at high systemic exposure and implantation losses as well as decreased early postnatal survival and birth weight at considerably higher systemic exposures than those reached during clinical use. However, these animal experimental results do not seem to be relevant in humans.

## **6. PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients**

Lactose monohydrate (may contain milk proteins).

### **6.2 Incompatibilities**

Not applicable.



### **6.3 Shelf life**

3 years

After opening the foil wrap: 6 months.

### **6.4 Special precautions for storage**

Do not store above 25 °C.

Keep the mouthpiece cover closed after removal of the foil wrap.

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

The inhaler is white with integrated electronics at the top and a semi-transparent wine red mouthpiece cover. The medicinal product/mucosal contact parts of the inhaler are made of acrylonitrile butadiene styrene (ABS), polyethylene (PE), and polypropylene (PP).

Each inhaler contains 180 doses and is foil-wrapped.

Pack sizes of 1, 2 or 3 inhalers.

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**

Teva Pharma B.V.  
Swensweg 5  
2031 GA Haarlem  
The Netherlands

## **8. MARKETING AUTHORISATION NUMBER(S)**

EU/1/19/1403/001

EU/1/19/1403/002

EU/1/19/1403/003

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

Date of first authorisation: 03 April 2020

Date of latest renewal:

## **10. DATE OF REVISION OF THE TEXT**

Detailed information on this medicinal product is available on the website of the European Medicines Agency <https://www.ema.europa.eu>

## 1. NAME OF THE MEDICINAL PRODUCT

GoResp Digihaler 320 microgram/9 microgram inhalation powder

## 2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each delivered dose (the dose that leaves the mouthpiece) contains 320 micrograms of budesonide and 9 micrograms of formoterol fumarate dihydrate.

This is equivalent to a metered dose of 400 micrograms budesonide and 12 micrograms of formoterol fumarate dihydrate.

### Excipient with known effect

Each dose contains approximately 10 milligrams of lactose (as monohydrate).

For the full list of excipients, see section 6.1.

## 3. PHARMACEUTICAL FORM

Inhalation powder

White powder.

## 4. CLINICAL PARTICULARS

### 4.1 Therapeutic indications

GoResp Digihaler is indicated in adults 18 years of age and older only.

#### Asthma

GoResp Digihaler is indicated in the regular treatment of asthma, where use of a combination (inhaled corticosteroid and long-acting  $\beta_2$  adrenoceptor agonist) is appropriate:

- in patients not adequately controlled with inhaled corticosteroids and “as needed” inhaled short-acting  $\beta_2$  adrenoceptor agonists.

or

- in patients already adequately controlled on both inhaled corticosteroids and long-acting  $\beta_2$  adrenoceptor agonists.

#### Chronic Obstructive Pulmonary Disease (COPD)

Symptomatic treatment of patients with COPD with forced expiratory volume in 1 second ( $FEV_1$ ) < 70% predicted normal (post bronchodilator) and a history of repeated exacerbations, who have significant symptoms despite regular therapy with long-acting bronchodilators.

### 4.2 Posology and method of administration

#### Posology

#### Asthma

This medicinal product is not intended for the initial management of asthma.

Budesonide/formoterol fumarate dihydrate is not an appropriate treatment for adult patients with only mild asthma.

The dose of this medicinal product is individual and should be adjusted to the severity of the disease. This should be considered not only when treatment with combination medicinal products is initiated but also when the maintenance dose is adjusted. If an individual patient requires a combination of doses other than those available in the combination inhaler, appropriate doses of  $\beta_2$  adrenoceptor agonists and/or corticosteroids by individual inhalers should be prescribed.

Once asthma symptoms are controlled, consideration may be given to gradually reducing the dose of budesonide/formoterol fumarate dihydrate. Patients should be reassessed regularly by their physician/healthcare provider so that the dose of this medicinal product remains optimal. The dose should be titrated to the lowest dose at which effective control of symptoms is maintained.

When it is appropriate to titrate down to a lower strength than is available for GoResp Digihaler, a change to an alternative fixed-dose combination of budesonide and formoterol fumarate dihydrate containing a lower dose of the inhaled corticosteroid is required. When long-term control of symptoms is maintained with the lowest recommended dose, then the next step could include a test of inhaled corticosteroid alone.

In usual practice when control of symptoms is achieved with the twice daily dose regimen with a lower strength product, titration to a lower effective dose could include once daily dosing when, in the opinion of the physician, a long-acting bronchodilator is required to maintain control rather than treatment with an inhaled corticosteroid alone.

Patients should be advised to have their separate rapid-acting bronchodilator available for rescue use at all times.

The recommended dose for adults (18 years of age and older) is 1 inhalation twice daily. Some patients may require up to a maximum of 2 inhalations twice daily.

Increasing use of a separate rapid-acting bronchodilator indicates a worsening of the underlying condition and warrants a reassessment of the asthma therapy.

GoResp Digihaler 320 micrograms/9 micrograms should be used as maintenance therapy only. A lower strength of GoResp Digihaler is available for the maintenance and reliever therapy regimen.

### COPD

The recommended dose for adults (18 years of age and older) is 1 inhalation twice daily.

### Special populations

#### *Elderly patients*

There are no dose adjustments required for elderly patients.

#### *Renal impairment*

There are no data available for use of a fixed-dose combination of budesonide and formoterol fumarate dihydrate in patients with renal impairment. However, the impact of renal impairment on pharmacokinetics of budesonide and formoterol is unlikely (see section 5.2).

#### *Hepatic impairment*

There are no data available for use of a fixed-dose combination of budesonide and formoterol fumarate dihydrate in patients with hepatic impairment. As budesonide and formoterol are primarily eliminated via hepatic metabolism, an increased exposure can be expected in patients with severe liver cirrhosis. Therefore, patients with hepatic disease should be closely monitored (see section 5.2).

### Paediatric population

The safety and efficacy of this medicinal product in children aged 12 years and younger and adolescents aged 13 to 17 years has not yet been established. Currently available data are described in sections 4.8, 5.1 and 5.2 but no recommendation on a posology can be made.

This medicinal product is not recommended for use in children and adolescents under the age of 18 years.

### Method of administration

For inhalation use only.

Digihaler is a breath actuated, inspiratory flow-driven inhaler, with integrated electronics. The active substances are delivered into the airways when the patient inhales through the mouthpiece. The integrated electronics do not impact the metering or dosing functionality of the inhaler. Moderate and severe asthmatic patients were shown to be able to generate sufficient inspiratory flow rate to deliver the therapeutic dose (see section 5.1).

This medicinal product should be used correctly in order to achieve effective treatment. As such, the patients should be advised to read the package leaflet carefully and follow the instructions for use as detailed in the leaflet.

The use of GoResp Digihaler follows three steps: “Open”, “Breathe” and “Close” which are outlined below.

**“Open”:** Hold the Digihaler with the mouthpiece cover at the bottom and open the mouthpiece cover by folding it down until it is fully opened when one click is heard.

**“Breathe”:** Place the mouthpiece between the teeth with the lips closed around the mouthpiece, do not bite the mouthpiece of the inhaler. Breathe in forcefully and deeply through the mouthpiece. Remove the Digihaler from mouth and hold the breath for 10 seconds or as long as comfortable for the patients.

**“Close”:** Breathe out gently and close the mouthpiece cover.

It is important to advise patients to close the mouthpiece cover after taking an inhalation.

It is also important to advise patients not to shake the inhaler before use and not to breathe out through the inhaler and not to block the air vents when they are preparing the “Breathe” step.

Patients should also be advised to rinse their mouth with water after inhaling (see section 4.4).

The patient may notice a taste when using this medicinal product due to the lactose excipient.

Patients should be advised to not place the inhaler in water.

### Information for patients using the Digihaler App

The Digihaler can be paired with the Digihaler App by scanning the Quick Response code (QR code), located on the top of the inhaler, from the Digihaler App. The Digihaler App allows patients to review and monitor inhaler usage data and set up treatment reminders.

The inhaler does not need to be connected to the Digihaler App for administration of the medicinal product to the patient.

The integrated electronics on the inhaler and the App do not control or interfere with the delivery of the medicinal product.

The App is not intended to serve as a substitute for the advice of a physician or healthcare professional. Patients should be informed to not modify their prescribed treatment based on information from the App but to always consult with their physician or healthcare professional.

For detailed instructions on how to use the digital inhaler with the App, see the Instructions For Use (IFU) provided in the App.

### **4.3 Contraindications**

Hypersensitivity to the active substances or the excipient listed in section 6.1.

### **4.4 Special warnings and precautions for use**

#### Dosing advice

Patients should be reassessed regularly by their physician/healthcare provider so that the dose of GoResp Digihaler remains optimal. The dose should be titrated to the lowest dose at which effective control of symptoms is maintained. Once asthma symptoms are controlled, consideration may be given to gradually reducing the dose of this treatment. When it is appropriate to titrate down to a lower strength than is available for GoResp Digihaler, a change to an alternative fixed-dose combination of budesonide and formoterol fumarate dihydrate containing a lower dose of the inhaled corticosteroid is required.

Regular review of patients as treatment is stepped down is important.

Patients should be advised to have their rescue inhaler available at all times.

It is recommended that the dose is tapered when the treatment is discontinued and should not be stopped abruptly.

Patients should be reminded to take their medicinal product maintenance dose as prescribed, even when asymptomatic. The prophylactic use of this medicinal product, e.g. before exercise, has not been studied. The reliever inhalations of GoResp Digihaler should be taken in response to symptoms but are not intended for regular prophylactic use, e.g. before exercise.

#### Deterioration of disease

This medicinal product should not be used to treat acute asthma symptoms for which a fast- and short-acting bronchodilator is required.

Patients should not be initiated on this medicinal product during an exacerbation, or if they have significantly worsening or acutely deteriorating asthma.

Serious asthma-related adverse reactions and exacerbations may occur during treatment (see section 4.8). Patients should be asked to continue treatment but to seek medical advice if asthma symptoms remain uncontrolled or worsen after initiation with this medicinal product.

If patients find the treatment ineffective, or exceed the highest recommended dose, medical attention must be sought (see section 4.2). Sudden and progressive deterioration in control of asthma or COPD is potentially life-threatening and the patient should undergo urgent medical assessment. In this situation, consideration should be given to the need for increased therapy with corticosteroids, e.g. a course of oral corticosteroids, or antibiotic treatment if an infection is present.

### Systemic effects

Systemic effects may occur with any inhaled corticosteroid, particularly at high doses prescribed for long periods. These effects are much less likely to occur with inhalation treatment than with oral corticosteroids.

Possible systemic effects include Cushing's syndrome, Cushingoid features, adrenal suppression, growth retardation in children and adolescents, decrease in bone mineral density, cataract and glaucoma, as well as a range of psychological or behavioural effects including psychomotor hyperactivity, sleep disorders, anxiety, depression or aggression (particularly in children) (see section 4.8).

### Visual disturbance

Visual disturbances have been reported with systemic and topical corticosteroid use (see section 4.8). If a patient presents with symptoms such as blurred vision or other visual disturbances, the patient should be considered for referral to an ophthalmologist for evaluation of possible causes which may include cataract, glaucoma or rare diseases such as central serous chorioretinopathy (CSCR) which have been reported after use of systemic and topical corticosteroids. It is important, therefore, that the patient is reviewed regularly and the dose of inhaled corticosteroid is reduced to the lowest dose at which effective control of asthma is maintained.

### Effects on bone density

Potential effects on bone density should be considered, particularly in patients on high doses for prolonged periods that have co-existing risk factors for osteoporosis (see section 4.8).

Long-term studies with inhaled budesonide in adults at daily doses of 800 micrograms (metered dose) have not shown any significant effects on bone mineral density. No information regarding the effect of a budesonide/formoterol fumarate dihydrate fixed-dose combination at higher doses is available.

### Adrenal function

Treatment with supplementary systemic steroids or inhaled budesonide should not be stopped abruptly.

The prolonged treatment with high doses of inhaled corticosteroids, particularly higher than recommended doses, may also result in clinically significant adrenal suppression (see section 4.8). Therefore additional systemic corticosteroid cover should be considered during periods of stress such as severe infections or elective surgery. Rapid reduction in the dose of steroids can induce acute adrenal crisis. Symptoms and signs which might be seen in acute adrenal crisis may be somewhat vague but may include anorexia, abdominal pain, weight loss, tiredness, headache, nausea, vomiting, decreased level of consciousness, seizures, hypotension and hypoglycaemia.

### Paradoxical bronchospasm

Paradoxical bronchospasm may occur, with an immediate increase in wheezing and shortness of breath, after dosing. If the patient experiences paradoxical bronchospasm, treatment with this medicinal product should be discontinued immediately, the patient should be assessed and an alternative therapy instituted, if necessary. Paradoxical bronchospasm responds to a rapid-acting inhaled bronchodilator and should be treated straightaway (see section 4.8).

### Transfer from oral therapy

If there is any reason to suppose that adrenal function is impaired from previous systemic steroid therapy, care should be taken when transferring patients to a budesonide/formoterol fumarate fixed-dose combination therapy.

The benefits of inhaled budesonide therapy would normally minimise the need for oral steroids, but patients transferring from oral steroids may remain at risk of impaired adrenal reserve for a considerable time. Recovery may take a considerable amount of time after cessation of oral steroid therapy and hence oral steroid-dependent patients transferred to inhaled budesonide may remain at risk from impaired adrenal function for some considerable time. In such circumstances hypothalamic pituitary adrenocortical (HPA) axis function should be monitored regularly.

During transfer from oral therapy to a budesonide/formoterol fumarate fixed-dose combination therapy, a generally lower systemic steroid action will be experienced which may result in the appearance of allergic or arthritic symptoms such as rhinitis, eczema and muscle and joint pain. Specific treatment should be initiated for these conditions. A general insufficient glucocorticosteroid effect should be suspected if, in rare cases, symptoms such as tiredness, headache, nausea and vomiting should occur. In these cases a temporary increase in the dose of oral glucocorticosteroids is sometimes necessary.

#### Oral infections

Candida infection in the oropharynx is due to active substance (budesonide) deposition. To minimise the risk of oropharyngeal candida infection, the patient should be instructed to rinse their mouth out with water after inhaling the dose. If oropharyngeal thrush occurs, patients should also rinse their mouth with water after the as-needed inhalations. Oropharyngeal Candida infection usually responds to topical anti-fungal treatment without the need to discontinue the inhaled corticosteroid (see sections 4.2 and 4.8).

#### COPD population

There are no clinical study data on GoResp Digihaler available in COPD patients with a pre-bronchodilator FEV<sub>1</sub> >50% predicted normal and with a post-bronchodilator FEV<sub>1</sub> <70% predicted normal (see section 5.1).

#### *Pneumonia*

An increase in the incidence of pneumonia, including pneumonia requiring hospitalisation, has been observed in patients with COPD receiving inhaled corticosteroids (see section 4.8). There is some evidence of an increased risk of pneumonia with increasing steroid dose but this has not been demonstrated conclusively across all studies.

There is no conclusive clinical evidence for intra-class differences in the magnitude of the pneumonia risk among inhaled corticosteroid products.

Physicians should remain vigilant for the possible development of pneumonia in patients with COPD as the clinical features of such infections overlap with the symptoms of COPD exacerbations. Risk factors for pneumonia in patients with COPD include current smoking, older age, low body mass index (BMI) and severe COPD.

#### Interaction with other medicinal products

Concomitant treatment with itraconazole, ritonavir or other potent CYP3A4 inhibitors should be avoided (see section 4.5). If this is not possible, the time interval between administrations of the interacting medicinal products should be as long as possible. In patients using potent CYP3A4 inhibitors, a budesonide/formoterol fumarate dihydrate fixed-dose combination is not recommended.

#### Caution with special diseases

A fixed-dose combination of budesonide and formoterol fumarate dihydrate should be administered with caution in patients with thyrotoxicosis, phaeochromocytoma, diabetes mellitus, untreated hypokalaemia, hypertrophic obstructive cardiomyopathy, idiopathic subvalvular aortic stenosis, severe hypertension, aneurysm or other severe cardiovascular disorders, such as ischaemic heart disease, tachyarrhythmias or severe heart failure.

Caution should be observed when treating patients with prolongation of the QTc-interval. Formoterol itself may induce prolongation of the QTc-interval (see section 4.8).

The need for, and dose of inhaled corticosteroids should be re-evaluated in patients with active or quiescent pulmonary tuberculosis, fungal and viral infections in the airways.

Additional blood glucose controls should be considered in diabetic patients.

### $\beta_2$ adrenoceptor agonists

Potentially serious hypokalaemia may result from high doses of  $\beta_2$  adrenoceptor agonists. Concomitant treatment of  $\beta_2$  adrenoceptor agonists with medicinal products which can induce hypokalaemia or potentiate a hypokalaemic effect, e.g. xanthine-derivatives, steroids and diuretics, may add to a possible hypokalaemic effect of the  $\beta_2$  adrenoceptor agonist (see section 4.5).

Treatment with  $\beta_2$  adrenoceptor agonists may result in an increase in blood levels of insulin, free fatty acids, glycerol and ketone bodies.

Particular caution is recommended in unstable asthma with variable use of rescue bronchodilators, in acute severe asthma as the associated risk may be augmented by hypoxia and in other conditions when the likelihood for hypokalaemia is increased. It is recommended that serum potassium levels are monitored during these circumstances.

### Excipients with known effect

This medicinal product contains lactose. Patients with rare hereditary problems of galactose intolerance, total lactase deficiency or glucose-galactose malabsorption should not take this medicinal product.

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

### Pharmacokinetic interactions

Potent inhibitors of CYP3A4 (e.g. ketoconazole, itraconazole, voriconazole, posaconazole, clarithromycin, telithromycin, nefazodone and HIV protease inhibitors) are likely to markedly increase plasma levels of budesonide and concomitant use should be avoided. If this is not possible, the time interval between administration of the inhibitor and budesonide should be as long as possible (see section 4.4).

The potent CYP3A4 inhibitor ketoconazole, 200 mg once daily, increased plasma levels of concomitantly orally administered budesonide (single dose 3 mg) on average six-fold. When ketoconazole was administered 12 hours after budesonide the concentration was on average increased only three-fold showing that separation of the administration times can reduce the increase in plasma levels. Limited data about this interaction for high-dose inhaled budesonide indicates that marked increases in plasma levels (on average four fold) may occur if itraconazole, 200 mg once daily, is administered concomitantly with inhaled budesonide (single dose of 1000 micrograms).

Co-treatment with CYP3A inhibitors, including cobicistat-containing products, is expected to increase the risk of systemic adverse reactions. The combination should be avoided unless the benefit



outweighs the increased risk of systemic corticosteroid adverse reactions, in which case patients should be monitored for systemic corticosteroid adverse reactions.

#### Pharmacodynamic interactions

$\beta$  adrenergic blockers can weaken or inhibit the effect of formoterol. A fixed-dose combination therapy of budesonide and formoterol fumarate dihydrate should therefore not be given together with  $\beta$  adrenergic blockers (including eye drops) unless there are compelling reasons.

Concomitant treatment with quinidine, disopyramide, procainamide, phenothiazines, antihistamines (terfenadine) and tricyclic antidepressants can prolong the QTc-interval and increase the risk of ventricular arrhythmias.

In addition L-Dopa, L-thyroxine, oxytocin and alcohol can impair cardiac tolerance towards  $\beta_2$  sympathomimetics.

Concomitant treatment with monoamine oxidase inhibitors including medicinal products with similar properties such as furazolidone and procarbazine may precipitate hypertensive reactions.

There is an elevated risk of arrhythmias in patients receiving concomitant anaesthesia with halogenated hydrocarbons.

Concomitant use of other  $\beta$  adrenergic medicinal products and anticholinergic medicinal products can have a potentially additive bronchodilating effect.

Hypokalaemia may increase the disposition towards arrhythmias in patients who are treated with digitalis glycosides.

Hypokalaemia may result from  $\beta_2$ -agonist therapy and may be potentiated by concomitant treatment with xanthine derivatives, corticosteroids and diuretics (see section 4.4).

Budesonide and formoterol have not been observed to interact with any other medicinal products used in the treatment of asthma.

#### Paediatric population

Interaction studies have only been performed in adults.

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

#### Pregnancy

For a fixed-dose combination therapy of budesonide and formoterol fumarate dihydrate or the concomitant treatment with formoterol and budesonide, no clinical data on exposed pregnancies are available. Data from an embryo-fetal development study in rats, showed no evidence of any additional effect from the combination.

There are no adequate data from the use of formoterol in pregnant women. In animal studies formoterol has caused adverse reactions in reproduction studies at very high systemic exposure levels (see section 5.3).

Data on approximately 2 000 exposed pregnancies indicate no increased teratogenic risk associated with the use of inhaled budesonide. In animal studies glucocorticosteroids have been shown to induce malformations (see section 5.3). This is not likely to be relevant for humans given recommended doses.

Animal studies have also identified an involvement of excess prenatal glucocorticoids in increased risks for intrauterine growth retardation, adult cardiovascular disease and permanent changes in glucocorticoid receptor density, neurotransmitter turnover and behaviour at exposures below the teratogenic dose range.

During pregnancy, a fixed-dose combination therapy of budesonide and formoterol fumarate dihydrate should only be used when the benefits outweigh the potential risks. The lowest effective dose of budesonide needed to maintain adequate asthma control should be used.

#### Breast-feeding

Budesonide/metabolites are excreted in human milk. However, at therapeutic doses no effects on the breastfed newborns/infants of treated women are anticipated. It is unknown whether formoterol/metabolites are excreted in human milk. In rats, small amounts of formoterol have been detected in maternal milk. Administration of a fixed-dose combination therapy of budesonide and formoterol fumarate dihydrate to women who are breast-feeding should only be considered if the expected benefit of therapy for the woman is greater than any possible risk to the breastfed newborn/infant.

#### Fertility

There is no data available on the potential effect of budesonide on fertility. Animal reproduction studies with formoterol have shown a somewhat reduced fertility in male rats at high systemic exposure (see section 5.3).

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

This medicinal product has no or negligible influence on the ability to drive and use machines.

### **4.8 Undesirable effects**

#### Summary of the safety profile

Since this medicinal product contains both budesonide and formoterol, the same pattern of adverse reactions as reported for these substances may occur. No increased incidence of adverse reactions has been seen following concurrent administration of the two compounds. Common adverse reactions mainly attributed to  $\beta_2$  adrenoceptor agonist therapy are tremor and palpitations. Common adverse reactions mainly attributed to corticosteroid therapy are candida infections in the oropharynx, pneumonia, mild irritation in the throat, coughing, and dysphonia including hoarseness. A common adverse reaction that can be contributed to both budesonide and formoterol is headache.

#### Tabulated list of adverse reactions

Adverse reactions, which have been associated with budesonide or formoterol, are given below and listed by system organ class and frequency (see table 1). Frequencies are defined as: very common ( $\geq 1/10$ ), common ( $\geq 1/100$  to  $< 1/10$ ), uncommon ( $\geq 1/1\ 000$  to  $< 1/100$ ), rare ( $\geq 1/10\ 000$  to  $< 1/1\ 000$ ), very rare ( $< 1/10\ 000$ ) and not known (cannot be estimated from the available data).

**Table 1 Adverse reactions**

<b>System organ class</b>	<b>Frequency</b>	<b>Adverse reaction</b>
Infections and infestations	Common	Candida infections in the oropharynx <sup>1,2</sup> , pneumonia (in COPD patients) <sup>1,2</sup>
Immune system disorders	Rare	Immediate and delayed hypersensitivity reactions, e.g. exanthema, urticaria, pruritus, dermatitis, angioedema and anaphylactic reaction

Endocrine disorders	Very rare	Cushing's syndrome <sup>1,2</sup> , adrenal suppression <sup>1,2</sup> , growth retardation <sup>1,2</sup> , decrease in bone mineral density <sup>1,2</sup>
Metabolism and nutrition disorders	Rare	Hypokalaemia <sup>1,3</sup>
	Very rare	Hyperglycaemia <sup>1,3</sup>
Psychiatric disorders	Uncommon	Aggression <sup>1,2</sup> , psychomotor hyperactivity <sup>1,2</sup> , anxiety <sup>1,2</sup> , sleep disorders <sup>1,2</sup>
	Very rare	Depression <sup>1,2</sup> , behavioural changes (predominantly in children) <sup>1,2</sup>
Nervous system disorders	Common	Headache, tremor <sup>3</sup>
	Uncommon	Dizziness <sup>3</sup>
	Very rare	Taste disturbances <sup>3</sup>
Eye disorders	Uncommon	Vision blurred <sup>1,2</sup>
	Very rare	Cataract <sup>1,2</sup> , glaucoma <sup>1,2</sup>
Cardiac disorders	Common	Palpitations <sup>3</sup>
	Uncommon	Tachycardia <sup>3</sup>
	Rare	Cardiac arrhythmias <sup>3</sup> , e.g. atrial fibrillation, supraventricular tachycardia, extrasystoles
	Very rare	Angina pectoris <sup>3</sup> , prolongation of QTc-interval <sup>1,3</sup>
Vascular disorders	Very rare	Variations in blood pressure <sup>3</sup>
Respiratory, thoracic and mediastinal disorders	Common	Mild irritation in the throat <sup>2</sup> , coughing <sup>2</sup> , dysphonia including hoarseness <sup>2</sup>
	Rare	Bronchospasm
	Very rare	Paradoxical bronchospasm <sup>1</sup>
Gastrointestinal disorders	Uncommon	Nausea
Skin and subcutaneous tissue disorders	Uncommon	Bruises <sup>2</sup>
Musculoskeletal and connective tissue disorders	Uncommon	Muscle cramps

<sup>1</sup>See section 4.4 for more information

<sup>2</sup>Adverse reaction mainly attributed to budesonide

<sup>3</sup>Adverse reaction mainly attributed to formoterol

### Description of selected adverse reactions

#### *Systemic effects*

Systemic effects of inhaled corticosteroids may occur, particularly at high doses prescribed for long periods. These effects are much less likely to occur than with oral corticosteroids. Possible systemic effects include Cushing's syndrome, Cushingoid features, adrenal suppression, growth retardation in children and adolescents, decrease in bone mineral density, cataract and glaucoma. Increased susceptibility to infections and impairment of the ability to adapt to stress may also occur. Effects are dependent on dose, exposure time, concomitant and previous steroid exposure and individual sensitivity (see section 4.4).

### 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 national reporting system listed in Appendix V.

#### **4.9 Overdose**

An overdose of formoterol would likely lead to effects that are typical for  $\beta_2$  adrenoceptor agonists: tremor, headache, palpitations. Symptoms reported from isolated cases are tachycardia, hyperglycaemia, hypokalaemia, prolonged QTc-interval, arrhythmia, nausea and vomiting. Supportive and symptomatic treatment may be indicated. A dose of 90 micrograms administered during three hours in patients with acute bronchial obstruction raised no safety concerns.

Acute overdose with budesonide, even in excessive doses, is not expected to be a clinical problem. When used chronically in excessive doses, systemic glucocorticosteroid effects, such as hypercorticism and adrenal suppression, may appear.

If treatment has to be withdrawn due to overdose of the formoterol component of the medicinal product, provision of appropriate inhaled corticosteroid therapy must be considered.

### **5. PHARMACOLOGICAL PROPERTIES**

#### **5.1 Pharmacodynamic properties**

Pharmacotherapeutic group: Drugs for obstructive airway diseases, adrenergics in combination with corticosteroids or other drugs, excl. anticholinergics, ATC code: R03AK07

##### Mechanism of action and pharmacodynamic effects

This medicinal product contains formoterol and budesonide, which have different modes of action and show additive effects in terms of reduction of asthma exacerbations.

##### *Budesonide*

Budesonide is a glucocorticosteroid which when inhaled has a dose-dependent anti-inflammatory action in the airways, resulting in reduced symptoms and fewer asthma exacerbations. Inhaled budesonide has less severe adverse reactions than systemic corticosteroids. The exact mechanism responsible for the anti-inflammatory effect of glucocorticosteroids is unknown.

##### *Formoterol*

Formoterol is a selective  $\beta_2$  adrenoceptor agonist that when inhaled results in rapid and long-acting relaxation of bronchial smooth muscle in patients with reversible airways obstruction. The bronchodilating effect is dose-dependent, with an onset of effect within 1-3 minutes. The duration of effect is at least 12 hours after a single dose.

##### Clinical efficacy and safety

##### *Asthma*

##### *Budesonide/formoterol maintenance therapy*

Clinical studies in adults have shown that the addition of formoterol to budesonide improved asthma symptoms and lung function, and reduced exacerbations.

In two 12-week studies the effect on lung function of budesonide/formoterol was equal to that of the free combination of budesonide and formoterol, and exceeded that of budesonide alone. All treatment arms used a short-acting  $\beta_2$  adrenoceptor agonist as needed. There was no sign of attenuation of the anti-asthmatic effect over time.

Two 12-week paediatric studies have been performed in which 265 children aged 6-11 years were treated with a maintenance dose of budesonide/formoterol (2 inhalations of 80 micrograms/4.5 micrograms/inhalation twice daily), and a short acting  $\beta_2$  adrenoceptor agonist as needed. In both studies, lung function was improved and the treatment was well tolerated compared to the corresponding dose of budesonide alone (see section 4.2).

### COPD

In two 12-month studies, the effect on lung function and the rate of exacerbation (defined as courses of oral steroids and/or course of antibiotics and/or hospitalisations) in patients with severe COPD was evaluated. Median FEV<sub>1</sub> at inclusion in the trials was 36% of predicted normal. The mean number of exacerbations per year (as defined above) was significantly reduced with budesonide/formoterol as compared with treatment with formoterol alone or placebo (mean rate 1.4 compared with 1.8-1.9 in the placebo/formoterol group). The mean number of days on oral corticosteroids/patient during the 12 months was slightly reduced in the budesonide/formoterol group (7-8 days/patient/year compared with 11-12 and 9-12 days in the placebo and formoterol groups, respectively). For changes in lung-function parameters, such as FEV<sub>1</sub>, budesonide/formoterol was not superior to treatment with formoterol alone.

### Peak inspiratory flow rate through the Digihaler device

A randomised, open-label placebo study was performed in children and adolescents with asthma (aged 6-17 years), adults with asthma (aged 18-45 years), adults with chronic obstructive pulmonary disease (COPD – aged > 50 years) and healthy volunteers (aged 18-45 years) to evaluate the peak inspiratory flow rate (PIFR) and other related inhalation parameters following inhalation from the inhaler device (containing placebo) compared with inhalation from an already marketed multi-dose dry powder inhaler device (containing placebo). The impact of enhanced training in dry powder inhaler inhalation technique on inhalation speed and volume was also assessed in these subject groups. The data from the study indicated that regardless of age and underlying disease severity, children, adolescents and adults with asthma as well as patients with COPD were able to achieve inspiratory flow rates through the device that were similar to those generated through the marketed multi-dose dry powder inhaler device (see section 4.2). The mean PIFR achieved by patients with asthma or COPD was over 60L/min, a flow rate at which both devices studied are known to deliver comparable amounts of active substance to the lungs. Very few patients had PIFRs below 40L/min; when PIFRs were less than 40L/min there appeared to be no clustering by age or disease severity.

## **5.2 Pharmacokinetic properties**

### Absorption

The fixed-dose combination of budesonide and formoterol, and the corresponding monoproducts have been shown to be bioequivalent with regard to systemic exposure of budesonide and formoterol, respectively. In spite of this, a small increase in cortisol suppression was seen after administration of fixed-dose combination compared to the monoproducts. The difference is considered not to have an impact on clinical safety.

There was no evidence of pharmacokinetic interactions between budesonide and formoterol.

Pharmacokinetic parameters for the respective substances were comparable after the administration of budesonide and formoterol as monoproducts or as the fixed-dose combination. For budesonide, area under the curve (AUC) was slightly higher, rate of absorption more rapid and maximal plasma concentration higher after administration of the fixed combination. For formoterol, maximal plasma concentration was similar after administration of the fixed combination. Inhaled budesonide is rapidly absorbed and the maximum plasma concentration is reached within 30 minutes after inhalation. In studies, mean lung deposition of budesonide after inhalation via the powder inhaler ranged from 32% to 44% of the delivered dose. The systemic bioavailability is approximately 49% of the delivered dose.

In children 6-16 years of age the lung deposition falls in the same range as in adults for the same given dose (see section 4.2). The resulting plasma concentrations were not determined.

Inhaled formoterol is rapidly absorbed and the maximum plasma concentration is reached within 10 minutes after inhalation. In studies the mean lung deposition of formoterol after inhalation via the powder inhaler ranged from 28% to 49% of the delivered dose. The systemic bioavailability is about 61% of the delivered dose.

#### Distribution and biotransformation

Plasma protein binding is approximately 50% for formoterol and 90% for budesonide. Volume of distribution is about 4 L/kg for formoterol and 3 L/kg for budesonide. Formoterol is inactivated via conjugation reactions (active O-demethylated and deformedylated metabolites are formed, but they are seen mainly as inactivated conjugates). Budesonide undergoes an extensive degree (approximately 90%) of biotransformation on first passage through the liver to metabolites of low glucocorticosteroid activity. The glucocorticosteroid activity of the major metabolites, 6-beta-hydroxy-budesonide and 16-alfa-hydroxy-prednisolone, is less than 1% of that of budesonide. There are no indications of any metabolic interactions or any displacement reactions between formoterol and budesonide.

#### Elimination

The major part of a dose of formoterol is transformed by liver metabolism followed by renal elimination. After inhalation, 8% to 13% of the delivered dose of formoterol is excreted unmetabolised in the urine. Formoterol has a high systemic clearance (approximately 1.4 L/min) and the terminal elimination half-life averages 17 hours.

Budesonide is eliminated via metabolism mainly catalysed by the enzyme CYP3A4. The metabolites of budesonide are eliminated in urine as such or in conjugated form. Only negligible amounts of unchanged budesonide have been detected in the urine. Budesonide has a high systemic clearance (approximately 1.2 L/min) and the plasma elimination half-life after intravenous dosing averages 4 hours.

#### Pharmacokinetic/pharmacodynamic relationship(s)

The pharmacokinetics of budesonide or formoterol in children and patients with renal failure are unknown.

The exposure of budesonide and formoterol may be increased in patients with liver disease.

#### GoResp Digihaler pharmacokinetic profile

In pharmacokinetic studies with and without a charcoal blockage, GoResp Digihaler was evaluated by comparing it with an alternative authorised fixed-dose combination inhaled product containing the same active substances, budesonide and formoterol and has been shown to be equivalent in both systemic exposure (safety) and pulmonary deposition (efficacy).

#### Linearity/non-linearity

Systemic exposure for both budesonide and formoterol correlates in a linear fashion to administered dose.

### **5.3 Preclinical safety data**

The toxicity observed in animal studies with budesonide and formoterol, given in combination or separately, were effects associated with exaggerated pharmacological activity.

In animal reproduction studies, corticosteroids such as budesonide have been shown to induce malformations (cleft palate, skeletal malformations). However, these animal experimental results do not seem to be relevant in humans at the recommended doses. Animal reproduction studies with formoterol have shown a somewhat reduced fertility in male rats at high systemic exposure and implantation losses as well as decreased early postnatal survival and birth weight at considerably higher systemic exposures than those reached during clinical use. However, these animal experimental results do not seem to be relevant in humans.

## **6. PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients**

Lactose monohydrate (may contain milk proteins).

### **6.2 Incompatibilities**

Not applicable.

### **6.3 Shelf life**

3 years

After opening the foil wrap: 6 months.

### **6.4 Special precautions for storage**

Do not store above 25 °C.

Keep the mouthpiece cover closed after removal of the foil wrap.

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

The inhaler is white with integrated electronics at the top and a semi-transparent wine red mouthpiece cover. The medicinal product/mucosal contact parts of the inhaler are made of acrylonitrile butadiene styrene (ABS), polyethylene (PE), and polypropylene (PP).

Each inhaler contains 90 doses and is foil-wrapped.

Pack sizes of 1, 2 or 3 inhalers.

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**

Teva Pharma B.V.  
Swensweg 5  
2031 GA Haarlem  
The Netherlands

**8. MARKETING AUTHORISATION NUMBER(S)**

EU/1/19/1403/004

EU/1/19/1403/005

EU/1/19/1403/006

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

Date of first authorisation: 03 April 2020

Date of latest renewal:

**10. DATE OF REVISION OF THE TEXT**

Detailed information on this medicinal product is available on the website of the European Medicines Agency <https://www.ema.europa.eu>



## **ANNEX II**

- A. MANUFACTURER(S) RESPONSIBLE FOR BATCH RELEASE**
- B. CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE**
- C. OTHER CONDITIONS AND REQUIREMENTS OF THE MARKETING AUTHORISATION**
- D. CONDITIONS OR RESTRICTIONS WITH REGARD TO THE SAFE AND EFFECTIVE USE OF THE MEDICINAL PRODUCT**

## **A. MANUFACTURERS RESPONSIBLE FOR BATCH RELEASE**

Name and address of the manufacturers responsible for batch release

Norton (Waterford) Limited  
Unit 27/35, 14/15 and 301, IDA Industrial Park  
Cork Road  
Waterford X91 WK68  
Ireland

Teva Operations Poland Sp. z o.o.  
Mogilska 80 Str.  
31-546 Kraków  
Poland

The printed package leaflet of the medicinal product must state the name and address of the manufacturer responsible for the release of the concerned batch.

## **B. CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE**

Medicinal products subject to medical prescription.

## **C. OTHER CONDITIONS AND REQUIREMENTS OF THE MARKETING AUTHORISATION**

- **Periodic safety update reports (PSURs)**

The requirements for submission of PSURs for this medicinal product are set out in the list of Union reference dates (EURD list) provided for under Article 107c(7) of Directive 2001/83/EC and any subsequent updates published on the European medicines web-portal.

## **D. CONDITIONS OR RESTRICTIONS WITH REGARD TO THE SAFE AND EFFECTIVE USE OF THE MEDICINAL PRODUCT**

- **Risk management plan (RMP)**

The marketing authorisation holder (MAH) shall perform the required pharmacovigilance activities and interventions detailed in the agreed RMP presented in Module 1.8.2 of the marketing authorisation and any agreed subsequent updates of the RMP.

An updated RMP should be submitted:

- At the request of the European Medicines Agency;
- Whenever the risk management system is modified, especially as the result of new information being received that may lead to a significant change to the benefit/risk profile or as the result of an important (pharmacovigilance or risk minimisation) milestone being reached.

**ANNEX III**  
**LABELLING AND PACKAGE LEAFLET**

## **A. LABELLING**

## **PARTICULARS TO APPEAR ON THE OUTER PACKAGING**

### **OUTER CARTON**

#### **1. NAME OF THE MEDICINAL PRODUCT**

GoResp Digihaler 160 microgram/4.5 microgram inhalation powder  
budesonide/formoterol fumarate dihydrate

#### **2. STATEMENT OF ACTIVE SUBSTANCE(S)**

Each delivered dose contains 160 micrograms of budesonide and 4.5 micrograms of formoterol fumarate dihydrate.

This is equivalent to a metered dose of 200 micrograms of budesonide and 6 micrograms of formoterol fumarate dihydrate.

This delivered dose is equivalent to a metered dose of 200 micrograms of budesonide and 6 micrograms of formoterol fumarate dihydrate.

#### **3. LIST OF EXCIPIENTS**

Contains lactose. See leaflet for further information.

#### **4. PHARMACEUTICAL FORM AND CONTENTS**

Inhalation powder

1 inhaler containing 180 doses.

2 inhalers each containing 180 doses.

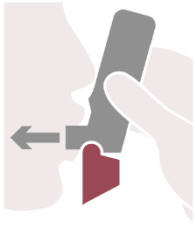
3 inhalers each containing 180 doses.

#### **5. METHOD AND ROUTE(S) OF ADMINISTRATION**

##### **1. OPEN**



## 2. BREATHE



## 3. CLOSE



REPEAT



If you are to take a second inhalation, always close the wine red mouthpiece cover before the next inhalation.

Close the mouthpiece cover between inhalations for data to transfer to your app. Every time the mouthpiece cover is opened and a click is heard, your inhaler is ready to use.

Read the enclosed leaflet carefully before you start using this medicine because it contains important information to you.

Read the package leaflet before use.  
Inhalation use.

<b>6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN</b>
--

Keep out of the sight and reach of children.

<b>7. OTHER SPECIAL WARNING(S), IF NECESSARY</b>
--

**Not for use in children and adolescents.**

**For use in adults 18 years of age and older only.**  
**Not for use in children or adolescents under 18 years of age.**

**8. EXPIRY DATE**

EXP

Use the product within 6 months of removing from foil wrapping.

**9. SPECIAL STORAGE CONDITIONS**

Do not store above 25 °C.

Keep the mouthpiece cover closed after the removal of foil wrap.

**10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE****11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER**

Teva Pharma B.V.  
Swensweg 5  
2031 GA Haarlem  
The Netherlands

**12. MARKETING AUTHORISATION NUMBER(S)**

EU/1/19/1403/001  
EU/1/19/1403/002  
EU/1/19/1403/003

**13. BATCH NUMBER**

Lot

**14. GENERAL CLASSIFICATION FOR SUPPLY****15. INSTRUCTIONS ON USE****16. INFORMATION IN BRAILLE**

GoResp Digihaler 160 mcg/4.5 mcg

**17. UNIQUE IDENTIFIER – 2D BARCODE**

2D barcode carrying the unique identifier included.

**18. UNIQUE IDENTIFIER – HUMAN READABLE DATA**

PC  
SN  
NN



**MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS**  
**FOIL**

**1. NAME OF THE MEDICINAL PRODUCT AND ROUTE(S) OF ADMINISTRATION**

GoResp Digihaler 160 microgram/4.5 microgram inhalation powder  
budesonide/formoterol fumarate dihydrate  
Inhalation use

**2. METHOD OF ADMINISTRATION**

**3. EXPIRY DATE**

EXP

**4. BATCH NUMBER**

Lot

**5. CONTENTS BY WEIGHT, BY VOLUME OR BY UNIT**

Contains 1 inhaler.

**6. OTHER**

Keep the mouthpiece cover closed and use within 6 months of removing from foil wrapping.

Teva Pharma B.V.

**MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS**

**INHALER**

**1. NAME OF THE MEDICINAL PRODUCT AND ROUTE(S) OF ADMINISTRATION**

GoResp Digihaler 160 mcg/4.5 mcg inhalation powder  
budesonide/formoterol fumarate dihydrate  
Inhalation use

**2. METHOD OF ADMINISTRATION**

**3. EXPIRY DATE**

EXP

**4. BATCH NUMBER**

Lot

**5. CONTENTS BY WEIGHT, BY VOLUME OR BY UNIT**

180 doses

**6. OTHER**

Start

Teva Pharma B.V.

## **PARTICULARS TO APPEAR ON THE OUTER PACKAGING**

### **OUTER CARTON**

#### **1. NAME OF THE MEDICINAL PRODUCT**

GoResp Digihaler 320 microgram/9 microgram inhalation powder  
budesonide/formoterol fumarate dihydrate

#### **2. STATEMENT OF ACTIVE SUBSTANCE(S)**

Each delivered dose contains 320 micrograms of budesonide and 9 micrograms of formoterol fumarate dihydrate.

This is equivalent to a metered dose of 400 micrograms of budesonide and 12 micrograms of formoterol fumarate dihydrate.

This delivered dose is equivalent to a metered dose of 400 micrograms of budesonide and 12 micrograms of formoterol fumarate dihydrate.

#### **3. LIST OF EXCIPIENTS**

Contains lactose. See leaflet for further information.

#### **4. PHARMACEUTICAL FORM AND CONTENTS**

Inhalation powder

1 inhaler containing 90 doses.

2 inhalers each containing 90 doses.

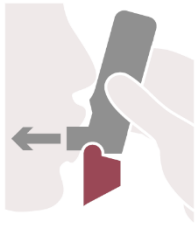
3 inhalers each containing 90 doses.

#### **5. METHOD AND ROUTE(S) OF ADMINISTRATION**

##### **1. OPEN**



## 2. BREATHE



## 3. CLOSE



REPEAT



If you are to take a second inhalation, always close the wine red mouthpiece cover before the next inhalation.

Close the mouthpiece cover between inhalations for data to transfer to your app. Every time the mouthpiece cover is opened and a click is heard, your inhaler is ready to use.

Read the enclosed leaflet carefully before you start using this medicine because it contains important information to you.

Read the package leaflet before use.  
Inhalation use.

<b>6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN</b>
--

Keep out of the sight and reach of children.

<b>7. OTHER SPECIAL WARNING(S), IF NECESSARY</b>
--

**Not for use in children and adolescents.**

**For use in adults 18 years of age and older only.  
Not for use in children or adolescents under 18 years of age.**

**8. EXPIRY DATE**

EXP

Use the product within 6 months of removing from foil wrapping.

**9. SPECIAL STORAGE CONDITIONS**

Do not store above 25 °C.

Keep the mouthpiece cover closed after the removal of foil wrap.

**10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE****11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER**

Teva Pharma B.V.  
Swensweg 5  
2031 GA Haarlem  
The Netherlands

**12. MARKETING AUTHORISATION NUMBER(S)**

EU/1/19/1403/004  
EU/1/19/1403/005  
EU/1/19/1403/006

**13. BATCH NUMBER**

Lot

**14. GENERAL CLASSIFICATION FOR SUPPLY****15. INSTRUCTIONS ON USE****16. INFORMATION IN BRAILLE**

GoResp Digihaler 320 mcg/9 mcg

**17. UNIQUE IDENTIFIER – 2D BARCODE**

2D barcode carrying the unique identifier included.

**18. UNIQUE IDENTIFIER – HUMAN READABLE DATA**

PC  
SN  
NN

**MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS**  
**FOIL**

**1. NAME OF THE MEDICINAL PRODUCT AND ROUTE(S) OF ADMINISTRATION**

GoResp Digihaler 320 microgram/9 microgram inhalation powder  
budesonide/formoterol fumarate dihydrate  
Inhalation use

**2. METHOD OF ADMINISTRATION**

**3. EXPIRY DATE**

EXP

**4. BATCH NUMBER**

Lot

**5. CONTENTS BY WEIGHT, BY VOLUME OR BY UNIT**

Contains 1 inhaler.

**6. OTHER**

Keep the mouthpiece cover closed and use within 6 months of removing from foil wrapping.

Teva Pharma B.V.

**MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS**

**INHALER**

**1. NAME OF THE MEDICINAL PRODUCT AND ROUTE(S) OF ADMINISTRATION**

GoResp Digihaler 320 mcg/9 mcg inhalation powder  
budesonide/formoterol fumarate dihydrate  
Inhalation use

**2. METHOD OF ADMINISTRATION**

**3. EXPIRY DATE**

EXP

**4. BATCH NUMBER**

Lot

**5. CONTENTS BY WEIGHT, BY VOLUME OR BY UNIT**

90 doses

**6. OTHER**

Start

Teva Pharma B.V.



**B. PACKAGE LEAFLET**

## Package leaflet: Information for the patient

### GoResp Digihaler 160 microgram/4.5 microgram inhalation powder budesonide/formoterol fumarate dihydrate

**Read all of this leaflet carefully before you start using this medicine because it contains important information for you.**

- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor, pharmacist or nurse.
- This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. See section 4.

#### What is in this leaflet

1. What GoResp Digihaler is and what it is used for
2. What you need to know before you use GoResp Digihaler
3. How to use GoResp Digihaler
4. Possible side effects
5. How to store GoResp Digihaler
6. Contents of the pack and other information

#### 1. What GoResp Digihaler is and what it is used for

GoResp Digihaler contains two different active substances: budesonide and formoterol fumarate dihydrate.

- Budesonide belongs to a group of medicines called ‘corticosteroids’ also known as ‘steroids’. It works by reducing and preventing swelling and inflammation in your lungs and helps you to breathe more easily.
- Formoterol fumarate dihydrate belongs to a group of medicines called ‘long-acting  $\beta_2$  adrenoceptor agonists’ or ‘bronchodilators’. It works by relaxing the muscles in your airways. This will help to open the airways and help you to breathe more easily.

**GoResp Digihaler is indicated for use in adults 18 years of age and older only.**

**GoResp Digihaler is NOT indicated for use in children 12 years of age and younger or adolescents 13 to 17 years of age.**

Your doctor has prescribed this medicine to treat asthma or chronic obstructive pulmonary disease (COPD).

#### Asthma

GoResp Digihaler can be prescribed for asthma in two different ways.

**a) You may be prescribed two asthma inhalers: GoResp Digihaler together with a separate ‘reliever inhaler’ such as salbutamol.**

- Use GoResp Digihaler every day. This helps to prevent asthma symptoms such as breathlessness and wheezing from occurring.
- Use the ‘reliever inhaler’ when you get asthma symptoms, to make it easier to breathe again.

**b) You may be prescribed GoResp Digihaler as your only asthma inhaler.**

- Use GoResp Digihaler every day. This helps to prevent asthma symptoms such as breathlessness and wheezing from occurring.
- Use GoResp Digihaler when you need to take extra inhalations or puffs for relief of asthma symptoms, to make it easier to breathe again and if agreed with the doctor also to prevent

asthma symptoms from happening (for example, when exercising or on exposure to allergens). You do not need a separate inhaler for this.

### **Chronic obstructive pulmonary disease (COPD)**

COPD is a long-term lung disease of the airways in the lungs, which is often caused by cigarette smoking. Symptoms include shortness of breath, cough, chest discomfort and coughing up mucus. GoResp Digihaler can also be used to treat the symptoms of severe COPD in adults.

## **2. What you need to know before you use GoResp Digihaler**

### **Do not use GoResp Digihaler**

- if you are allergic to budesonide, formoterol fumarate dihydrate, or the other ingredient of this medicine (listed in section 6).

### **Warnings and precautions**

Talk to your doctor, pharmacist or nurse before using GoResp Digihaler if

- you are diabetic.
- you have a lung infection.
- you have high blood pressure or you have ever had a heart problem (including an uneven heartbeat, a very fast pulse, narrowing of the arteries or heart failure).
- you have problems with your thyroid or adrenal glands.
- you have low levels of potassium in your blood.
- you have severe liver problems.
- you regularly drink alcohol.

If you have been taking steroid tablets for your asthma or COPD, your doctor may reduce the number of tablets that you take, once you start to use GoResp Digihaler. If you have been taking steroid tablets for a long time, your doctor may want you to have regular blood tests. When reducing steroid tablets, you may feel generally unwell even though your chest symptoms may be improving. You might experience symptoms such as a stuffy or runny nose, weakness or joint or muscle pain and rash (eczema). If any of these symptoms bother you, or if symptoms such as headache, tiredness, nausea (feeling sick) or vomiting (being sick) occur, please contact your doctor **immediately**. You may need to take other medicines if you develop allergic or arthritic symptoms. You should speak to your doctor if you are concerned as to whether you should continue to use GoResp Digihaler.

Your doctor may consider adding steroid tablets to your usual treatment if you have an illness such as a chest infection or before an operation.

Contact your doctor if you experience blurred vision or other visual disturbances.

### **Children and adolescents**

**Do not give this medicine to children or adolescents under the age of 18 years.**

### **Other medicines and GoResp Digihaler**

Tell your doctor or pharmacist if you are taking, have recently taken or might take any other medicines.

In particular, tell your doctor or pharmacist if you are taking any of the following medicines:

- $\beta$  blockers (such as atenolol or propranolol for high blood pressure or a heart condition), including eyedrops (such as timolol for glaucoma).
- Oxytocin which is given to pregnant women to induce labour.
- Medicines for a fast or uneven heartbeat (such as quinidine, disopyramide, procainamide and terfenadine).
- Medicines like digoxin, often used to treat heart failure.

- Diuretics, also known as ‘water tablets’ (such as furosemide). These are used to treat high blood pressure.
- Steroid tablets that you take by mouth (such as prednisolone).
- Xanthine medicines (such as theophylline or aminophylline). These are often used to treat asthma.
- Other bronchodilators (such as salbutamol).
- Tricyclic antidepressants (such as amitriptyline) and the antidepressant nefazodone.
- Antidepressant medicines such as monoamine oxidase inhibitors and those with similar properties (such as the antibiotic furazolidone and the chemotherapy medicine procarbazine).
- Antipsychotic phenothiazine medicines (such as chlorpromazine and prochlorperazine).
- Medicines called ‘HIV protease inhibitors’ (such as ritonavir) to treat HIV infection.
- Medicines to treat infections (such as ketoconazole, itraconazole, voriconazole, posaconazole, clarithromycin and telithromycin).
- Medicines for Parkinson’s disease (such as levodopa).
- Medicines for thyroid problems (such as levothyroxine).

Some medicines may increase the effects of GoResp Digihaler and your doctor may wish to monitor you carefully if you are taking these medicines (including some medicines for HIV: ritonavir, cobicistat).

If any of the above applies to you, or if you are not sure, talk to your doctor, pharmacist or nurse before using GoResp Digihaler.

Also tell your doctor, pharmacist or nurse if you are going to have a general anaesthetic for an operation or for dental work to help lower any risk of interaction with the anesthetic you receive.

### **Pregnancy and breast-feeding**

- If you are pregnant or breast-feeding, think you may be pregnant or are planning to have a baby, ask your doctor, pharmacist or nurse for advice before using GoResp Digihaler. Do NOT use this medicine unless your doctor tells you to.
- If you get pregnant while using GoResp Digihaler, do NOT stop using GoResp Digihaler but talk to your doctor **immediately**.

### **Driving and using machines**

GoResp Digihaler is not likely to affect your ability to drive or to use tools or machines.

### **GoResp Digihaler contains lactose**

Lactose is a type of sugar found in milk. If you have been told by your doctor that you have an intolerance to some sugars, talk to your doctor before using this medicine.

## **3. How to use GoResp Digihaler**

Always use this medicine exactly as your doctor or pharmacist has told you. Check with your doctor, pharmacist or nurse if you are not sure.

- It is important to use GoResp Digihaler every day, even if you have no asthma or COPD symptoms at the time.
- If you are using GoResp Digihaler for asthma, your doctor will want to regularly check your symptoms.

### **Asthma**

GoResp Digihaler can be prescribed for asthma in two different ways. The amount of GoResp Digihaler to use and when to use it depends on how it has been prescribed for you.

- If you have been prescribed GoResp Digihaler and a separate reliever inhaler, read the section called **(A) Using GoResp Digihaler and a separate ‘reliever inhaler’**.
- If you have been prescribed GoResp Digihaler as your only inhaler, read the section called **(B) Using GoResp Digihaler as your only asthma inhaler**.

### **(A) Using GoResp Digihaler and a separate ‘reliever inhaler’**

**Use your GoResp Digihaler every day.** This helps to prevent asthma symptoms from occurring.

#### **Recommended dose:**

Adults (18 years of age and older)

1 or 2 inhalations (actuations), twice a day, taken in the morning and in the evening.

Your doctor may increase this to 4 inhalations, twice a day.

If your symptoms are well controlled, your doctor may ask you to take your medicine once a day.

Your doctor will help you to manage your asthma and will adjust the dose of this medicine to the lowest dose that controls your asthma. If your doctor feels that you need a lower dose than is available from your GoResp Digihaler, your doctor may prescribe an alternative inhaler containing the same active substances as your GoResp Digihaler but with a lower dose of the corticosteroid. If your symptoms are well controlled, your doctor may ask you to take your medicine once a day. However, do not adjust the number of inhalations your doctor has prescribed without talking to your doctor first.

#### **Use your separate ‘reliever inhaler’ to treat asthma symptoms when they happen.**

Always keep your ‘reliever inhaler’ with you and use it to relieve sudden attacks of breathlessness and wheezing. Do not use GoResp Digihaler to treat these asthma symptoms.

### **(B) Using GoResp Digihaler as your only asthma inhaler**

Only use GoResp Digihaler in this way if your doctor has told you to.

**Use your GoResp Digihaler every day.** This helps to prevent asthma symptoms from occurring.

#### **Recommended dose:**

Adults (18 years of age and older)

1 inhalation in the morning **and** 1 inhalation in the evening

or

2 inhalations in the morning

or

2 inhalations in the evening.

Your doctor may increase this to 2 inhalations twice a day.

Also use GoResp Digihaler as a ‘reliever inhaler’ to treat asthma symptoms when they happen and to prevent asthma symptoms from happening (for example, when exercising or on exposure to allergens).

- If you get asthma symptoms, take 1 inhalation and wait a few minutes.
- If you do not feel better, take another inhalation.
- Do not take more than 6 inhalations at a single time.

Always keep your GoResp Digihaler with you and use it to relieve sudden attacks of breathlessness and wheezing.

A total daily dose of more than 8 inhalations is not normally needed. However, your doctor may allow you to take up to 12 inhalations a day for a limited period.

If you regularly need to use 8 or more inhalations a day, make an appointment to see your doctor. They may need to change your treatment.

Do NOT use more than 12 inhalations in total in 24 hours.

If you are doing exercise and you get asthma symptoms, use GoResp Digihaler as described here. However, do not use GoResp Digihaler just before exercise to stop asthma symptoms from happening. It is important that you discuss with your doctor the use of GoResp Digihaler to prevent asthma symptoms from happening; how often you exercise or how often you are exposed to allergens could impact the treatment that is prescribed to you.

### **Chronic Obstructive Pulmonary Disease (COPD)**

#### **Recommended dose:**

Adults (18 years of age and older):

2 inhalations twice a day, taken in the morning and in the evening.

Your doctor may also prescribe another bronchodilator medicine, for example an anticholinergic (such as tiotropium or ipratropium bromide) for your COPD disease.

### **Preparing your new GoResp Digihaler**

Before using your new GoResp Digihaler **for the first time**, you need to prepare it for use as follows:

- Open the foil pouch by tearing at the notch at the top of the foil pouch and take out the inhaler
- Check the dose indicator to see that there are 180 inhalations in the inhaler.
- Write the date you opened the foil pouch on the label of the inhaler.
- Do not shake your inhaler before use.

GoResp Digihaler contains integrated electronics, which record and store information on your inhaler usage. This information can then be transmitted to the Digihaler Mobile App (App).

**GoResp Digihaler does not need to be connected to the App in order for you to take your medicine. The integrated electronics do not control or interfere with the delivery of the medicine through the inhaler.**

GoResp Digihaler contains a Quick Response (QR) code on top of the inhaler. Scanning this QR code with a smartphone or another suitable device will allow you to download the App. Please read the Instructions For Use (IFU) provided within the App for more information on how to pair your inhaler with the App and on how to use the App.

**The App is not intended to substitute the advice of your doctor or nurse. Do not modify your prescribed treatment based on information from the App but always consult with your doctor before making changes to your healthcare treatment.**

### **How to take an inhalation**

Every time you need to take an inhalation, follow the instructions below.

1. **Hold your inhaler** with the semi-transparent wine red mouthpiece cover at the bottom.



2. Open the mouthpiece cover by folding it down until one loud click is heard. Your medicine is actively metered. Your inhaler is now ready for use.



3. Breathe out gently (as far as is comfortable). Do not breathe out through your inhaler.
4. Place the mouthpiece between your teeth. Do not bite the mouthpiece. Close your lips around the mouthpiece. Take care not to block the air vents.

Breathe in through your mouth as deeply and as hard as you can.



5. Remove your inhaler from your mouth. You may notice a taste when you take your inhalation.
6. Hold your breath for 10 seconds or as long as you comfortably can.
7. **Then breathe out gently** (do not breathe out through the inhaler). **Close the mouthpiece cover.**



If you are to take a second inhalation, repeat steps 1 to 7.



Rinse your mouth with water after every dose, and spit it out.

Do not try to take your inhaler apart, remove or twist the mouthpiece cover, it is fixed to your inhaler and must not be taken off. Do not use your Digihaler if it has been damaged or if the mouthpiece has come apart from your Digihaler. Do not open and close the mouthpiece cover unless you are about to use your inhaler.

### **Cleaning your Digihaler**

Keep your Digihaler dry and clean.

If necessary, you may wipe the mouthpiece of your Digihaler after use with a dry cloth or tissue.

Do not immerse your inhaler in water.

### **When to start using a new Digihaler**

- The dose indicator tells you how many doses (inhalations) are left in your inhaler, starting with 180 inhalations when it is full and ending with 0 (zero) inhalations when it is empty.



- The dose indicator, on the rear of the device, shows the number of inhalations remaining as even numbers. The spaces between the even numbers represent the odd number of remaining inhalations.
- For inhalations remaining from 20 downwards to '8', '6', '4', '2' the numbers are displayed in red on a white background. When the numbers become red in the window, you should consult your doctor and obtain a new inhaler.



Note:

- The mouthpiece will still ‘click’ even when your Digihaler is empty.
- If you open and close the mouthpiece without taking an inhalation the dose indicator will still register it as a count. This dose will be securely held inside the inhaler for when the next inhalation is due. It is impossible to accidentally take extra medicine or a double dose in one inhalation.
- Keep the mouthpiece closed all the time unless you are about to use your inhaler.

### **Important information about your asthma or COPD symptoms**

If you feel you are getting breathless or wheezy while using GoResp Digihaler, you should continue to use GoResp Digihaler but go to see your doctor as soon as possible, as you may need additional treatment.

Contact your doctor **immediately** if:

- Your breathing is getting worse or you often wake up at night with breathlessness and wheezing.
- Your chest starts to feel tight in the morning or your chest tightness lasts longer than usual.

These signs could mean that your asthma or COPD is not being properly controlled and you may need different or additional treatment **immediately**.

Once your asthma is well controlled your doctor may consider it appropriate to gradually reduce the dose of GoResp Digihaler.

### **If you use more GoResp Digihaler than you should**

It is important that you take your dose as advised by your doctor. You should not exceed your prescribed dose without seeking medical advice.

If you use more GoResp Digihaler than you should, contact your doctor, pharmacist or nurse for advice.

The most common symptoms that may occur after when you use more GoResp Digihaler than you should are trembling, headache or a rapid heartbeat.

### **If you forget to use GoResp Digihaler**

If you forget to take a dose, take it as soon as you remember. However do **not** take a double dose to make up for a forgotten dose. If it is nearly time for your next dose just take your next dose at the usual time.

If you become wheezy or breathless, or develop any other symptoms of an asthma attack, **use your ‘reliever inhaler’**, then seek medical advice.

### **If you stop using GoResp Digihaler**

Do not stop using your inhaler without telling your doctor first.

If you have any further questions on the use of this medicine, ask your doctor, pharmacist or nurse.

## **4. Possible side effects**

Like all medicines, this medicine can cause side effects, although not everybody gets them.

### **Serious side effects**

**If any of the following happen to you, stop using GoResp Digihaler and talk to your doctor immediately:**

**Rare** (may affect up to 1 in 1,000 people)

- Swelling of your face, particularly around your mouth (tongue and/or throat and/or difficulty to swallow) or hives together with difficulties to breathe (angioedema) and/or sudden feeling of faintness. This may mean that you are having an allergic reaction, which may also include rash and itching.
- Bronchospasm (tightening of the muscles in the airways which causes wheezing and shortness of breath). If the wheezing comes on suddenly after using this medicine stop using it and talk to your doctor **immediately** (see below).

**Very rare** (may affect up to 1 in 10,000 people)

- Sudden, unexpected and acute wheezing and/or shortness of breath immediately after using your inhaler (also referred to as ‘paradoxical bronchospasm’). If either of these symptoms occur, **stop using GoResp Digihaler straightaway** and use your ‘reliever inhaler’ if you have one. Contact your doctor **immediately** as you may need to have your treatment changed.

### **Other side effects**

**Common** (may affect up to 1 in 10 people)

- Palpitations (awareness of your heart beating), trembling or shaking. If these effects occur, they are usually mild and usually disappear as you continue to use GoResp Digihaler.
- Thrush (a fungal infection) in the mouth. This is less likely to occur if you rinse your mouth out with water after using your medicine.
- Mild sore throat, coughing and a hoarse voice.
- Headache.
- Pneumonia (infection to the lung) in COPD patients.

Tell your doctor if you have any of the following while taking GoResp Digihaler they could be symptoms of a lung infection:

- Fever or chills.
- Increased mucus production, change in mucus colour.
- Increased cough or increased breathing difficulties.

**Uncommon** (may affect up to 1 in 100 people)

- Feeling restless, nervous, agitated, anxious or angry.
- Disturbed sleep.
- Feeling dizzy.
- Nausea (feeling sick).
- Fast heartbeat.
- Bruising of the skin.
- Muscle cramps.
- Blurred vision.

**Rare** (may affect up to 1 in 1,000 people)

- Low levels of potassium in your blood.
- Uneven heartbeat.

**Very rare** (may affect up to 1 in 10,000 people)

- Depression.
- Changes in behaviour, especially in children.
- Chest pain or tightness in the chest (angina pectoris).
- Disturbance of the heart’s electrical system which does not cause symptoms (prolongation of the QTc-interval).
- An increase in the amount of sugar (glucose) in your blood, when you have a blood test.
- Taste changes, such as an unpleasant taste in the mouth.

- Changes in your blood pressure.

Inhaled corticosteroids can affect the normal production of steroid hormones in your body, particularly if you use high doses for a long time. The effects include:

- Changes in bone mineral density (thinning of the bones).
- Cataract (clouding of the lens in the eye).
- Glaucoma (increased pressure in the eye).
- A slowing of the rate of growth of children and adolescents.
- An effect on the adrenal gland (a small gland next to the kidney). Symptoms of adrenal gland suppression could be tiredness, weakness, stomach problems including nausea, vomiting, pain and diarrhoea, darkening of the skin and weight loss.

These effects happen very rarely and are much less likely to happen with inhaled corticosteroids than with corticosteroid tablets.

### Reporting of side effects

If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via [the national reporting system](#) listed in [Appendix V](#). By reporting side effects you can help provide more information on the safety of this medicine.

## 5. How to store GoResp Digihaler

- Keep this medicine out of the sight and reach of children.
- Do not use this medicine after the expiry date which is stated on the carton or on the label of your inhaler after EXP. The expiry date refers to the last day of that month.
- Do not store above 25 °C. **Keep the mouthpiece cover closed after removal of the foil wrapping.**
- **Use within 6 months of removing from the foil wrapping.** Use the label on the inhaler to write down the date you open the foil pouch.
- Do not throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines you no longer use. These measures will help protect the environment.

## 6. Contents of the pack and other information

### What GoResp Digihaler contains

- The active substances are budesonide and formoterol fumarate dihydrate. Each delivered (inhaled) dose contains 160 micrograms of budesonide and 4.5 micrograms of formoterol fumarate dihydrate. This is equivalent to a metered dose of 200 micrograms of budesonide and 6 micrograms of formoterol fumarate dihydrate.
- The other ingredient is lactose monohydrate, which may contain milk proteins (see section 2 under 'GoResp Digihaler contains lactose').

### What GoResp Digihaler looks like and contents of the pack

GoResp Digihaler is an inhalation powder.

Each GoResp Digihaler inhaler contains 180 inhalations and has a white body (with integrated electronics) and a semi-transparent wine red mouthpiece cover. A QR code is located on the top of the inhaler, to enable linking to the Digihaler App.

Packs of 1, 2, and 3 inhalers.

Not all pack sizes may be marketed.

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**This leaflet was last revised in .**

**Other sources of information**

Detailed information on this medicine is available on the European Medicines Agency web site:

<https://www.ema.europa.eu>.

## Package leaflet: Information for the patient

### GoResp Digihaler 320 microgram/9 microgram, inhalation powder budesonide/formoterol fumarate dihydrate

**Read all of this leaflet carefully before you start using this medicine because it contains important information for you.**

- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor, pharmacist or nurse.
- This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. See section 4.

#### What is in this leaflet

1. What GoResp Digihaler is and what it is used for
2. What you need to know before you use GoResp Digihaler..
3. How to use GoResp Digihaler..
4. Possible side effects
5. How to store GoResp Digihaler..
6. Contents of the pack and other information

#### 1. What GoResp Digihaler is and what it is used for

GoResp Digihaler contains two different active substances: budesonide and formoterol fumarate dihydrate.

- Budesonide belongs to a group of medicines called ‘corticosteroids’ also known as ‘steroids’. It works by reducing and preventing swelling and inflammation in your lungs and helps you to breathe more easily.
- Formoterol fumarate dihydrate belongs to a group of medicines called ‘long-acting  $\beta_2$  adrenoceptor agonists’ or ‘bronchodilators’. It works by relaxing the muscles in your airways. This will help to open the airways and help you to breathe more easily.

**GoResp Digihaler is indicated for use in adults 18 years of age and older only.**

**GoResp Digihaler is NOT indicated for use in children, 12 years of age and younger or adolescents, 13 to 17 years of age.**

Your doctor has prescribed this medicine to treat asthma or chronic obstructive pulmonary disease (COPD).

#### Asthma

When used for asthma, your doctor will prescribe GoResp Digihaler together with a separate ‘reliever inhaler’ such as salbutamol.

- Use GoResp Digihaler every day. This helps to prevent asthma symptoms such as breathlessness and wheezing from occurring.
- Use the ‘reliever inhaler’ when you get asthma symptoms, to make it easier to breathe again.

Do not use GoResp Digihaler 320/9 micrograms as a ‘reliever inhaler’.

#### Chronic obstructive pulmonary disease (COPD)

COPD is a long-term lung disease of the airways in the lungs, which is often caused by cigarette smoking. Symptoms include shortness of breath, cough, chest discomfort and coughing up mucus. GoResp Digihaler can also be used to treat the symptoms of severe COPD in adults.

## 2. What you need to know before you use GoResp Digihaler

### Do not use GoResp Digihaler

- if you are allergic to budesonide, formoterol fumarate dihydrate, or the other ingredient of this medicine (listed in section 6).

### Warnings and precautions

Talk to your doctor, pharmacist or nurse before using GoResp Digihaler if

- you are diabetic.
- you have a lung infection.
- you have high blood pressure or you have ever had a heart problem (including an uneven heartbeat, a very fast pulse, narrowing of the arteries or heart failure).
- you have problems with your thyroid or adrenal glands.
- you have low levels of potassium in your blood.
- you have severe liver problems.
- you regularly drink alcohol.

If you have been taking steroid tablets for your asthma or COPD, your doctor may reduce the number of tablets that you take, once you start to use GoResp Digihaler. If you have been taking steroid tablets for a long time, your doctor may want you to have regular blood tests. When reducing steroid tablets, you may feel generally unwell even though your chest symptoms may be improving. You might experience symptoms such as a stuffy or runny nose, weakness or joint or muscle pain and rash (eczema). If any of these symptoms bother you, or if symptoms such as headache, tiredness, nausea (feeling sick) or vomiting (being sick) occur, please contact your doctor **immediately**. You may need to take other medicines if you develop allergic or arthritic symptoms. You should speak to your doctor if you are concerned as to whether you should continue to use GoResp Digihaler.

Your doctor may consider adding steroid tablets to your usual treatment if you have an illness such as a chest infection or before an operation.

Contact your doctor if you experience blurred vision or other visual disturbances.

### Children and adolescents

**Do not give this medicine to children or adolescents under the age of 18 years.**

### Other medicines and GoResp Digihaler

Tell your doctor or pharmacist if you are taking, have recently taken or might take any other medicines.

In particular, tell your doctor or pharmacist if you are taking any of the following medicines:

- $\beta$  blockers (such as atenolol or propranolol for high blood pressure or a heart condition), including eyedrops (such as timolol for glaucoma).
- Oxytocin which is given to pregnant women to induce labour.
- Medicines for a fast or uneven heartbeat (such as quinidine, disopyramide, procainamide and terfenadine).
- Medicines like digoxin, often used to treat heart failure.
- Diuretics, also known as 'water tablets' (such as furosemide). These are used to treat high blood pressure.
- Steroid tablets that you take by mouth (such as prednisolone).
- Xanthine medicines (such as theophylline or aminophylline). These are often used to treat asthma.

- Other bronchodilators (such as salbutamol).
- Tricyclic antidepressants (such as amitriptyline) and the antidepressant nefazodone.
- Antidepressant medicines such as monoamine oxidase inhibitors and those with similar properties (such as the antibiotic furazolidone and the chemotherapy medicine procarbazine).
- Antipsychotic phenothiazine medicines (such as chlorpromazine and prochlorperazine).
- Medicines called 'HIV protease inhibitors' (such as ritonavir) to treat HIV infection.
- Medicines to treat infections (such as ketoconazole, itraconazole, voriconazole, posaconazole, clarithromycin and telithromycin).
- Medicines for Parkinson's disease (such as levodopa).
- Medicines for thyroid problems (such as levothyroxine).

Some medicines may increase the effects of GoResp Digihaler and your doctor may wish to monitor you carefully if you are taking these medicines (including some medicines for HIV: ritonavir, cobicistat).

If any of the above applies to you, or if you are not sure, talk to your doctor, pharmacist or nurse before using GoResp Digihaler.

Also tell your doctor, pharmacist or nurse if you are going to have a general anaesthetic for an operation or for dental work to help lower any risk of interaction with the anesthetic you receive.

### **Pregnancy and breast-feeding**

- If you are pregnant or breast-feeding, think you may be pregnant or are planning to have a baby, ask your doctor, pharmacist or nurse for advice before using GoResp Digihaler. Do NOT use this medicine unless your doctor tells you to.
- If you get pregnant while using GoResp Digihaler, do NOT stop using GoResp Digihaler but talk to your doctor **immediately**.

### **Driving and using machines**

GoResp Digihaler is not likely to affect your ability to drive or to use tools or machines.

### **GoResp Digihaler contains lactose**

Lactose is a type of sugar found in milk. If you have been told by your doctor that you have an intolerance to some sugars, talk to your doctor before using this medicine.

## **3. How to use GoResp Digihaler**

Always use this medicine exactly as your doctor or pharmacist has told you. Check with your doctor, pharmacist, or nurse if you are not sure.

- It is important to use GoResp Digihaler every day, even if you have no asthma or COPD symptoms at the time.
- If you are using GoResp Digihaler for asthma, your doctor will want to regularly check your symptoms.

### **Asthma**

**Use your GoResp Digihaler every day.** This helps to prevent asthma symptoms from occurring.

#### **Recommended dose:**

Adults (18 years of age and older)

1 inhalation (actuation), twice a day, taken in the morning and in the evening.

Your doctor may increase this to 2 inhalations, twice a day.

If your symptoms are well controlled, your doctor may ask you to take your medicine once a day.



Your doctor will help you to manage your asthma and will adjust the dose of this medicine to the lowest dose that controls your asthma. If your doctor feels that you need a lower dose than is available from your GoResp Digihaler, your doctor may prescribe an alternative inhaler containing the same active substances as your GoResp Digihaler but with a lower dose of the corticosteroid. If your symptoms are well controlled, your doctor may ask you to take your medicine once a day. However, do not adjust the number of inhalations your doctor has prescribed without talking to your doctor first.

**Use your separate ‘reliever inhaler’ to treat asthma symptoms when they happen.**

Always keep your ‘reliever inhaler’ with you and use it to relieve sudden attacks of breathlessness and wheezing. Do not use GoResp Digihaler to treat these asthma symptoms. It is important that you discuss with your doctor the use of GoResp Digihaler to prevent asthma symptoms from happening; how often you exercise or how often you are exposed to allergens could impact the treatment that is prescribed to you.

## **Chronic Obstructive Pulmonary Disease (COPD)**

### **Recommended dose:**

Adults (18 years of age and older):

1 inhalation twice a day, taken in the morning and in the evening.

Your doctor may also prescribe another bronchodilator medicine for example an anticholinergic (such as tiotropium or ipratropium bromide) for your COPD disease.

### **Preparing your new GoResp Digihaler**

Before using your new GoResp Digihaler **for the first time**, you need to prepare it for use as follows:

- Open the foil pouch by tearing at the notch at the top of the foil pouch and take out the inhaler
- Check the dose indicator to see that there are 90 inhalations in the inhaler.
- Write the date you opened the foil pouch on the label of the inhaler.
- Do not shake your inhaler before use.

GoResp Digihaler contains integrated electronics, which record and store information on your inhaler usage. This information can then be transmitted to the Digihaler Mobile App (App).

**GoResp Digihaler does not need to be connected to the App in order for you to take your medicine. The integrated electronics do not control or interfere with the delivery of the medicine through the inhaler.**

GoResp Digihaler contains a Quick Response (QR) code on top of the inhaler. Scanning this QR code with a smartphone or another suitable device will allow you to download the App. Please read the Instructions For Use (IFU) provided within the App for more information on how to pair your inhaler with the App and on how to use the App.

**The App is not intended to substitute the advice of your doctor or nurse. Do not modify your prescribed treatment based on information from the App but always consult with your doctor before making changes to your healthcare treatment.**

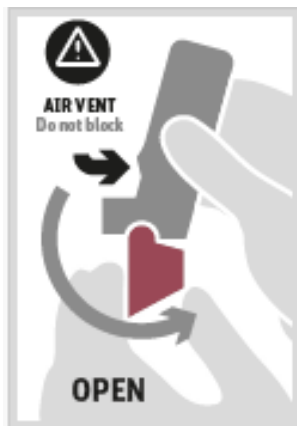
### **How to take an inhalation**

Every time you need to take an inhalation, follow the instructions below.

1. **Hold your inhaler** with the semi-transparent wine red mouthpiece cover at the bottom.



2. Open the mouthpiece cover by folding it down until one loud click is heard. Your medicine is actively metered. Your inhaler is now ready for use.



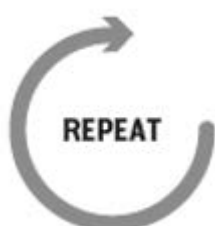
3. Breathe out gently (as far as is comfortable). Do not breathe out through your inhaler.
4. Place the mouthpiece between your teeth. Do not bite the mouthpiece. Close your lips around the mouthpiece. Take care not to block the air vents.  
Breathe in through your mouth as deeply and as hard as you can.



5. Remove your inhaler from your mouth. You may notice a taste when you take your inhalation.
6. Hold your breath for 10 seconds or as long as you comfortably can.
7. **Then breathe out gently** (do not breathe out through the inhaler). **Close the mouthpiece cover.**



If you are to take a second inhalation, repeat steps 1 to 7.



Rinse your mouth with water after every dose and spit it out.

Do not try to take your inhaler apart, remove or twist the mouthpiece cover, it is fixed to your inhaler and must not be taken off. Do not use your Digihaler if it has been damaged or if the mouthpiece has come apart from your Digihaler. Do not open and close the mouthpiece cover unless you are about to use your inhaler.

### **Cleaning your Digihaler**

Keep your Digihaler dry and clean.

If necessary, you may wipe the mouthpiece of your Digihaler after use with a dry cloth or tissue.

Do not immerse your inhaler in water.

### **When to start using a new Digihaler**

- The dose indicator tells you how many doses (inhalations) are left in your inhaler, starting with 90 inhalations when it is full and ending with 0 (zero) inhalations when it is empty.



- The dose indicator, on the rear of the device, shows the number of inhalations remaining as even numbers. The spaces between the even numbers represent the odd number of remaining inhalations.

- For inhalations remaining from 20 downwards to ‘8’, ‘6’, ‘4’, ‘2’ the numbers are displayed in red on a white background. When the numbers become red in the window, you should consult your doctor and obtain a new inhaler.

Note:

- The mouthpiece will still ‘click’ even when your Digihaler is empty.
- If you open and close the mouthpiece without taking an inhalation, the dose indicator will still register it as a count. This dose will be securely held inside the inhaler for when the next inhalation is due. It is impossible to accidentally take extra medicine or a double dose in one inhalation.
- Keep the mouthpiece closed all the time unless you are about to use your inhaler.

### **Important information about your asthma or COPD symptoms**

If you feel you are getting breathless or wheezy while using GoResp Digihaler, you should continue to use GoResp Digihaler but go to see your doctor as soon as possible, as you may need additional treatment.

Contact your doctor **immediately** if:

- Your breathing is getting worse or you often wake up at night with breathlessness and wheezing.
- Your chest starts to feel tight in the morning or your chest tightness lasts longer than usual.

These signs could mean that your asthma or COPD is not being properly controlled and you may need different or additional treatment **immediately**.

Once your asthma is well controlled your doctor may consider it appropriate to gradually reduce the dose of GoResp Digihaler.

### **If you use more GoResp Digihaler than you should**

It is important that you take your dose as advised by your doctor. You should not exceed your prescribed dose without seeking medical advice.

If you use more GoResp Digihaler than you should, contact your doctor, pharmacist or nurse for advice.

The most common symptoms that may occur after when you use more GoResp Digihaler than you should are trembling, headache or a rapid heartbeat.

### **If you forget to use GoResp Digihaler**

If you forget to take a dose, take it as soon as you remember. However, do **not** take a double dose to make up for a forgotten dose. If it is nearly time for your next dose just take your next dose at the usual time.

If you become wheezy or breathless, or develop any other symptoms of an asthma attack, **use your ‘reliever inhaler’**, then seek medical advice.

### **If you stop using GoResp Digihaler**

Do not stop using your inhaler without telling your doctor first.

If you have any further questions on the use of this medicine, ask your doctor, pharmacist or nurse.

## **4. Possible side effects**

Like all medicines, this medicine can cause side effects, although not everybody gets them.

## **Serious side effects**

**If any of the following happen to you, stop using GoResp Digihaler and talk to your doctor immediately:**

**Rare** (may affect up to 1 in 1,000 people)

- Swelling of your face, particularly around your mouth (tongue and/or throat and/or difficulty to swallow) or hives together with difficulties to breathe (angioedema) and/or sudden feeling of faintness. This may mean that you are having an allergic reaction, which may also include rash and itching.
- Bronchospasm (tightening of the muscles in the airways which causes wheezing and shortness of breath). If the wheezing comes on suddenly after using this medicine stop using it and talk to your doctor **immediately** (see below).

**Very rare** (may affect up to 1 in 10,000 people)

- Sudden, unexpected and acute wheezing and/or shortness of breath immediately after using your inhaler (also referred to as 'paradoxical bronchospasm'. If either of these symptoms occur, **stop using GoResp Digihaler straightaway** and use your 'reliever inhaler' if you have one. Contact your doctor **immediately** as you may need to have your treatment changed.

## **Other side effects**

**Common** (may affect up to 1 in 10 people)

- Palpitations (awareness of your heart beating), trembling or shaking. If these effects occur, they are usually mild and usually disappear as you continue to use GoResp Digihaler.
- Thrush (a fungal infection) in the mouth. This is less likely to occur if you rinse your mouth out with water after using your medicine.
- Mild sore throat, coughing and a hoarse voice.
- Headache.
- Pneumonia (infection to the lung) in COPD patients.

Tell your doctor if you have any of the following while taking GoResp Digihaler they could be symptoms of a lung infection:

- Fever or chills.
- Increased mucus production, change in mucus colour.
- Increased cough or increased breathing difficulties.

**Uncommon** (may affect up to 1 in 100 people)

- Feeling restless, nervous, agitated, anxious or angry.
- Disturbed sleep.
- Feeling dizzy.
- Nausea (feeling sick).
- Fast heartbeat.
- Bruising of the skin.
- Muscle cramps.
- Blurred vision.

**Rare** (may affect up to 1 in 1,000 people)

- Low levels of potassium in your blood.
- Uneven heartbeat.

**Very rare** (may affect up to 1 in 10,000 people)

- Depression.
- Changes in behaviour, especially in children.
- Chest pain or tightness in the chest (angina pectoris).

- Disturbance of the heart's electrical system which does not cause symptoms (prolongation of the QTc-interval).
- An increase in the amount of sugar (glucose) in your blood, when you have a blood test.
- Taste changes, such as an unpleasant taste in the mouth.
- Changes in your blood pressure.

Inhaled corticosteroids can affect the normal production of steroid hormones in your body, particularly if you use high doses for a long time. The effects include:

- Changes in bone mineral density (thinning of the bones).
- Cataract (clouding of the lens in the eye).
- Glaucoma (increased pressure in the eye).
- A slowing of the rate of growth of children and adolescents.
- An effect on the adrenal gland (a small gland next to the kidney). Symptoms of adrenal gland suppression could be tiredness, weakness, stomach problems, including nausea, vomiting, pain and diarrhoea, darkening of the skin and weight loss.

These effects happen very rarely and are much less likely to happen with inhaled corticosteroids than with corticosteroid tablets.

### Reporting of side effects

If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via [the national reporting system](#) listed in [Appendix V](#). By reporting side effects you can help provide more information on the safety of this medicine.

## 5. How to store GoResp Digihaler

- Keep this medicine out of the sight and reach of children.
- Do not use this medicine after the expiry date which is stated on the carton or on the label of your inhaler after EXP. The expiry date refers to the last day of that month.
- Do not store above 25 °C. **Keep the mouthpiece cover closed after removal of the foil wrapping.**
- **Use within 6 months of removing from the foil wrapping.** Use the label on the inhaler to write down the date you open the foil pouch.
- Do not throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines you no longer use. These measures will help protect the environment.

## 6. Contents of the pack and other information

### What GoResp Digihaler contains

- The active substances are budesonide and formoterol fumarate dihydrate. Each delivered (inhaled) dose contains 320 micrograms of budesonide and 9 micrograms of formoterol fumarate dihydrate. This is equivalent to a metered dose of 400 micrograms of budesonide and 12 micrograms of formoterol fumarate dihydrate.
- The other ingredient is lactose monohydrate, which may contain milk proteins (see section 2 under 'GoResp Digihaler contains lactose').

### What GoResp Digihaler looks like and contents of the pack

GoResp Digihaler is an inhalation powder.

Each GoResp Digihaler inhaler contains 90 inhalations and has a white body (with integrated electronics) and a semi-transparent wine red mouthpiece cover. A QR code is located on the top of the inhaler, to enable linking to the Digihaler App.

Packs of 1, 2, and 3 inhalers. Not all pack sizes may be marketed.

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**This leaflet was last revised in.**

**Other sources of information**

Detailed information on this medicine is available on the European Medicines Agency web site:  
<https://www.ema.europa.eu>.