SUMMARY OF PRODUCT CHARACTERISTICS

1 NAME OF THE MEDICINAL PRODUCT

Octasa 800 mg Modified Release Tablets

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each modified release tablet contains: 800 mg mesalazine.
Excipient with known effect: 152.8 mg lactose monohydrate, see section 4.4
For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Modified-Release Tablet
Red-brown, oblong, modified-release tablet.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

Octasa is indicated in adults, children and adolescents above 6 years for:

*Ulcerative Colitis:*
For the treatment of mild to moderate acute exacerbations. For the maintenance of remission.

*Crohn’s ileo-colic:*  
For the maintenance of remission.

4.2 Posology and method of administration

**Posology**

**Adults**

- *Mild acute disease:* 2.4 g (three tablets) once daily or in divided doses, with concomitant corticosteroid therapy to be taken when clinically indicated.
- *Moderate acute disease:* 2.4 g to 4.8 g (three to six tablets) a day in divided doses,
with concomitant corticosteroid therapy where clinically indicated. 2.4 g may be taken once daily or in divided doses. Above 2.4 g should be taken in divided doses.

- **Maintenance therapy**: 1.6 g to 2.4 g (two to three tablets) taken once daily or in divided doses.
- The maximum adult dose should not exceed six tablets a day and not exceed 3 tablets taken together at any one time.

**Elderly population**

The normal adult dosage may be taken unless liver or renal function is severely impaired (see section 4.3 and 4.4). No studies have been carried out in the elderly population.

**Paediatric population**

There is only limited documentation for an effect in children (age 6-18 years).

**Children 6 years of age and older**

- **Active disease**: To be determined individually, starting with 30-50 mg/kg/day in divided doses. Maximum dose: 75 mg/kg/day in divided doses. The total dose should not exceed 4 g/day.

- **Maintenance treatment**: To be determined individually, starting with 15-30 mg/kg/day in divided doses. The total dose should not exceed 2 g/day.

It is generally recommended that half the adult dose may be given to children up to a body weight of 40 kg; and the normal adult dose to those above 40 kg.

**Method of administration**: Oral.

The tablets must be swallowed whole preferably with some liquid before food intake. They must not be chewed, crushed or broken before swallowing. If one or more doses have been missed, the next dose is to be taken as usual.

### 4.3 Contraindications

- Hypersensitivity to the active substance or to any of the excipients listed in section 6.1
- Known hypersensitivity to salicylates
- Severe liver impairment
- Severe renal impairment (GFR less than 30 mL/min/1.73 m²).

### 4.4 Special warnings and precautions for use

Blood tests (differential blood count, liver function parameters such as ALT or AST; serum creatinine) and urinary status (dip sticks) should be determined prior to and during treatment, at the discretion of the treating physician. As a guideline, follow-up
tests are recommended 14 days after commencement of treatment and then every 4
weeks for the following 12 weeks. If the findings are normal, follow-up tests should
be carried out every three months. If additional signs appear, these tests should be
performed immediately.

Renal impairment
Caution should be exercised in patients with raised serum creatinine or proteinuria.
The possibility of mesalazine-induced nephrotoxicity should be suspected in patients
developing impairment of renal function during treatment. Patients need to remain
well hydrated whilst taking Octasa to reduce the risk of crystalluria and consequential
kidney damage.
Treatment with Octasa should be stopped immediately if there is evidence of renal
impairment and patients should seek immediate medical advice.

Blood dyscrasia
Serious blood dyscrasia have very rarely been reported. Octasa therapy should be
stopped immediately if there is suspicion or evidence of blood dyscrasia (signs of
unexplained bleeding, bruising, purpura, anemia, persistent fever or sore throat), and
patients should seek immediate medical advice.

Hepatic impairment
There have been reports of increased liver enzyme levels in patients taking
preparations containing mesalazine. Caution is recommended if Octasa is
administered to patients with liver impairment. Blood tests (liver function parameters
such as ALT or AST) should be performed prior to and during treatment, at the
discretion of the treating physician. As a guideline, follow-up tests are recommended
14 days after commencement of treatment, then a further two to three tests at intervals
of 4 weeks. If the findings are normal, follow-up tests should be carried out every 3
months. If additional symptoms occur, these tests should be performed immediately.

Cardiac hypersensitivity reactions
Mesalazine-induced cardiac hypersensitivity reactions (myo- and pericarditis) have
rarely been reported with Octasa. In case of previous mesalazine-induced cardiac
hypersensitivity Octasa must not be reintroduced. Caution should be taken in patients
with previous myo- or pericarditis of allergic background regardless of its origin.

Pulmonary disease
Patients with pulmonary disease, in particular asthma, should be very carefully
monitored during treatment with Octasa.
Adverse drug reactions to Sulphasalazine
Patients with a history of adverse drug reactions to sulphasalazine therapy should be kept under close medical supervision. Treatment must be stopped immediately if acute symptoms of intolerance occur such as abdominal cramps, acute abdominal pain, fever, severe headache and rash.

Gastric and duodenal ulcers
In case of existing gastric or duodenal ulcers treatment should begin with caution based on theoretical grounds.

Tablets in stool
A limited number of reports of intact tablets in the stool have been received. What appear to be intact tablets may in some cases represent largely empty shells of the coated tablets. If intact tablets are observed in the stool repeatedly, the patient should consult his/her physician.

Elderly population
Use in the elderly should be handled with caution and the product should only be prescribed to patients having a normal or non-severely impaired liver and renal function, see section 4.3.

Paediatric population
There is only limited documentation for an effect in children (age 6-18 years), see section 4.2.

Intolerance to carbohydrates
With reference to the presence of lactose monohydrate in the formulation, patients with rare hereditary problems of galactose intolerance, the Lapp lactase deficiency or glucose-galactose malabsorption should not take this medicine

4.5 Interaction with other medicinal products and other forms of interaction

*No interaction studies have been performed.*

There is weak evidence that mesalazine might decrease the anticoagulant effect of warfarin.

In patients who are concomitantly treated with azathioprine, 6-mercaptopurine or thioguanine, a possible increase in the myelosuppressive effects of azathioprine, or 6-mercaptopurine or thioguanine should be taken into account. As a result, life-threatening infection can occur. Patients should be closely observed for signs of infection and myelosuppression. Haematological parameters, especially the leucocyte,
thrombocyte, and lymphocyte cell counts should be monitored regularly (weekly), especially at initiation of such combination therapy, see section 4.4. If white blood cells are stable after 1 month, testing every 4 weeks for the following 12 weeks followed by 3 monthly monitoring intervals appears to be justified.

4.6 Fertility, pregnancy and lactation

Pregnancy
There are no adequate data on the use of Octasa in pregnant women. However, data on a limited number (627) of exposed pregnancies indicate no adverse effect of mesalazine on the pregnancy or on the health of the fetus/newborn child. To date no other relevant epidemiologic data are available.

In one single case, after long-term use of a high dose of mesalazine (2-4 g, orally) during pregnancy, renal failure in a neonate was reported.

Animal studies on oral mesalazine do not indicate direct or indirect harmful effects, with respect to pregnancy, embryonic/foetal development, parturition or postnatal development.

Octasa should only be used during pregnancy if the potential benefit outweighs the possible risk.

Breast-feeding
N-acetyl-mesalazine and, to a lesser degree, mesalazine are excreted in breast milk. The clinical significance of this has not been determined. Only limited experience in women during lactation is available to date. Hypersensitivity reactions like diarrhoea in the infant cannot be excluded. Therefore, Octasa should only be used during breast-feeding if the potential benefit outweighs the possible risk. If the infant develops diarrhoea, the breast-feeding should be discontinued.

Fertility
No effects on fertility have been observed.

4.7 Effects on ability to drive and use machines

Octasa has no or negligible influence on the ability to drive and use machines.

4.8 Undesirable effects

a) Summary of the safety profile
Organ specific adverse drug reactions affecting the heart, lungs, liver, kidneys, pancreas, skin and subcutaneous tissue have been reported.
Treatment must be stopped immediately if acute symptoms of intolerance occur such as abdominal cramps, acute abdominal pain, fever, severe headache and rash, see
**b) Tabulated summary of adverse reactions**

Undesirable effects relevant for the labeling reported from eight (8) double-blind and five (5) open clinical studies with 739 patients treated with Octasa 400 mg Modified Release Tablets are listed below.

<table>
<thead>
<tr>
<th>System Organ Class</th>
<th>Common (≥ 1/100 to &lt; 1/10)</th>
<th>Uncommon (≥ 1/1,000 to &lt; 1/100)</th>
<th>Rare (≥ 1/10,000 to &lt; 1/1,000)</th>
<th>Very rare (&lt; 1/10,000)</th>
<th>Frequency not known</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood and lymphatic system disorders</td>
<td>eosinophilia (as part of an allergic reaction)</td>
<td>altered blood counts (aplastic anemia, agranulocytosis, pancytopenia, neutropenia, leucopenia, thrombocytopenia)</td>
<td>hypersensitivity reactions such as allergic exanthema, drug fever, lupus erythematosus syndrome, pancolitis</td>
<td>peripheral neuropathy</td>
<td></td>
</tr>
<tr>
<td>Immune system disorders</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nervous system disorders</td>
<td>paresthesia</td>
<td>headache, dizziness</td>
<td>peripheral neuropathy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardiac disorders</td>
<td></td>
<td>myocarditis, pericarditis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Organ Class</td>
<td>Common (≥ 1/100 to &lt; 1/10)</td>
<td>Uncommon (≥ 1/1,000 to &lt; 1/100)</td>
<td>Rare (≥ 1/10,000 to &lt; 1/1,000)</td>
<td>Very rare (&lt; 1/10,000)</td>
<td>Frequency not known</td>
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</tr>
<tr>
<td>Respiratory, thoracic and mediastinal disorders</td>
<td>allergic and fibrotic lung reactions (including dyspnoea, cough bronchospasm, alveolitis, pulmonary eosinophilia, lung infiltration, pneumonitis), interstitial pneumonia, eosinophilic pneumonia, lung disorder</td>
<td>pleurisy</td>
<td></td>
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<tr>
<td>Gastrointestinal disorders</td>
<td>dyspepsia</td>
<td>abdominal pain, diarrhoea, flatulence, nausea, vomiting</td>
<td>acute pancreatitis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepato-biliary disorders</td>
<td>changes in liver function parameters (increase in transaminases and cholestasis parameters), hepatitis, cholestatic hepatitis</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Skin and subcutaneous tissue disorders</td>
<td>rash, urticaria, pruritus</td>
<td>alopecia</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Musculoskeletal, connective tissue and bone disorders</td>
<td>myalgia, arthralgia</td>
<td>lupus-like syndrome with pericarditis and pleuropericarditis as prominent symptoms as well as rash and arthralgia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Organ Class</td>
<td>Common ( \geq \frac{1}{100} \quad \text{to} \quad &lt; \frac{1}{10} )</td>
<td>Uncommon ( \geq \frac{1}{1,000} \quad \text{to} \quad &lt; \frac{1}{100} )</td>
<td>Rare ( \geq \frac{1}{10,000} \quad \text{to} \quad &lt; \frac{1}{1,000} )</td>
<td>Very rare ( &lt; \frac{1}{10,000} )</td>
<td>Frequency not known</td>
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<tr>
<td>Renal and urinary disorders</td>
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<td></td>
<td></td>
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<td></td>
<td>Impairment of renal function including acute and chronic interstitial nephritis, renal insufficiency, nephrotic syndrome and renal failure which may be reversible on early withdrawal</td>
</tr>
<tr>
<td>Reproductive system and breast disorders</td>
<td></td>
<td></td>
<td></td>
<td>oligospermia (reversible)</td>
<td></td>
</tr>
<tr>
<td>General disorders and administration site conditions</td>
<td>pyrexia, chest pain,</td>
<td></td>
<td></td>
<td></td>
<td>intolerance to mesalazine with C-reactive protein increased and/or exacerbation of symptoms of underlying disease</td>
</tr>
<tr>
<td>Investigations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>blood creatinine increased, weight decreased, creatinine clearance decreased, amylase increased, red blood cell sedimentation rate increased, lipase increased, BUN increased</td>
</tr>
</tbody>
</table>

c) Description of selected adverse reactions
An unknown number of the above mentioned undesirable effects are probably associated to the underlying IBD rather than Octasa/mesalazine medication. This holds true especially for gastrointestinal undesirable effects, arthralgia, and alopecia.
To avoid blood dyscrasia resulting from developing bone marrow depression patients should be monitored with care, see section 4.4.

Under co-administration of mesalazine with immunosuppressive drugs such as azathioprine, or 6-MP, or thioguanine, life threatening infection can occur, see section 4.5.

d) Paediatric population
There is only limited safety experience with the use of Octasa tablets in the paediatric population. It is expected that the target organs of possible adverse reactions in the paediatric population are the same as for adults (heart, lungs, liver, kidneys, pancreas, skin and subcutaneous tissue).

Reporting of suspected adverse reactions
Reporting suspected adverse reactions is an important way to gather more information to continuously monitor the benefit/risk balance of the medicinal product. Any suspected adverse reactions should be reported via yellowcard.mhra.gov.uk.

4.9 Overdose
There are rare data on overdose (e.g. intended suicide with high oral doses of mesalazine), which do not indicate renal or hepatic toxicity. There is no specific antidote and treatment is symptomatic and supportive.
In principle, the signs and symptoms would be expected to be similar to those observed in cases of salicylate intoxication: mixed acidosis-alkalosis, hyperventilation, pulmonary oedema, dehydration as a result of sweating and vomiting, and hypoglycaemia.

Treatment
For mixed acidosis-alkalosis: restoration of the acid-base balance in line with the specific situation and replacement of electrolytes.
For dehydration due to sweating and vomiting: administration of fluids.
For hypoglycemia: glucose administration.
In addition gastric lavage and intravenous infusion of electrolytes to promote diuresis. There is no known antidote.

5. PHARMACOLOGICAL PROPERTIES
5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Intestinal anti-inflammatory agents; ATC code: A07E C02.

Mechanism of action
Octasa contains mesalazine, also known as 5-aminosalicylic acid, which has an anti-inflammatory effect through a mechanism that has not yet been fully clarified. Mesalazine has been shown to inhibit LTB4-stimulated migration of intestinal macrophages and thus may reduce intestinal inflammation by restricting migration of macrophages to inflamed areas. The production of pro-inflammatory leukotrienes (LTB<sub>4</sub> and 5-HETE) in macrophages of the intestinal wall is inhibited. Mesalazine has been shown to activate PPAR-γ receptors which counteract nuclear activation of intestinal inflammatory responses.

Pharmacodynamic effects
Under trial conditions mesalazine inhibited the cyclooxygenase and thus, the release of thromboxane B<sub>2</sub> and prostaglandin E<sub>2</sub>, but the clinical meaning of this effect is still unclear. Mesalazine inhibits the formation of platelet activating factor (PAF). Mesalazine is also an antioxidant; it has been shown to decrease formation of reactive oxygen products and to capture free radicals.

Clinical efficacy and safety
Octasa 800 mg Modified Release Tablets have been evaluated in 140 patients with mild to moderate active ulcerative colitis in one controlled study lasting for 10 weeks comparing safety and efficacy versus placebo. This indication was also investigated in seven controlled and three open clinical trials including 787 patients, of whom 559 received Octasa 400 mg Modified Release Tablets. Three studies were placebo-controlled, one of which also compared the efficacy of Octasa to another proprietary oral mesalazine product. Five studies were performed without comparator. The studies included dose ranging of Octasa. One study compared the efficacy of mesalazine versus sulfasalazine. The studies included dose ranging of Octasa from 1.2 g/day to 4.8 g/day. One study used computerised morphometry to assess the efficacy of Octasa compared with a prednisolone enema. These studies established the safety and efficacy of Octasa for the treatment of mild to moderate acute UC at daily doses of 2.4 – 4.8 g mesalazine.

Maintenance of remission of ulcerative colitis
This indication was studied in five controlled and two open clinical trials involving 677 patients, of whom 406 received Octasa 400 mg Modified Release Tablets. Octasa treatment was compared to sulfasalazine in three studies, to another proprietary oral mesalazine product in one study, and to placebo in one study. The dosage varied from 0.8 - 4.4 g mesalazine per day. These studies established the safety and efficacy of Octasa for the maintenance of remission of UC at daily doses of 1.6 – 2.4 g mesalazine.

Maintenance of remission of Crohn’s ileo-colitis
This indication was studied in one double blind, one retrospective and two open clinical studies involving 336 patients, of whom 159 received Octasa 400 mg Modified Release Tablets. Octasa treatment was compared to sulfasalazine in one study and to placebo or no specific treatment in three studies. Two studies confirmed efficacy in preventing post-operative recurrence of Crohn’s disease. These studies support the safety and efficacy of Octasa in the treatment of quiescent Crohn’s disease of the terminal ileum and colon including post-operative patients at a daily dose of 2.4 g mesalazine.

5.2 Pharmacokinetic properties
Absorption
Octasa tablets are coated with a pH-responsive polymer which enables the release of mesalazine only at a pH above 7, i.e. within the terminal ileum and colon, which are the main sites of inflammation in IBD. After any initial disruption of the coating mesalazine will continue to be released irrespective of the pH. Octasa tablets have been designed to be minimize the absorption of mesalazine from the digestive tract.

After a single dose of 2.4 g of mesalazine (3 Octasa 800 mg GR Tablets) in healthy volunteers under fasting conditions quantifiable amounts (> 2.00 ng/mL) of mesalazine were observed in plasma after 4.5 h (median t lag). The geometric mean C max-value of mesalazine was 387.86 ng/mL with a median t max of 14.0 h, whereas that of N-acetyl mesalazine was 971.09 ng/mL with an identical median t max, i.e. 14.0 h.

Based on the recovery of unchanged mesalazine and the main metabolite N-acetyl mesalazine in collected urine after oral fasted administration approximately 23% of the dose (more than 95% as metabolite) was excreted renally within 60 h.

Following concomitant food intake in the same study, a single dose of 2.4 g of mesalazine resulted in quantifiable amounts of mesalazine after 14.5 h (median t lag). The geometric mean C max-value of mesalazine was 653.56 ng/mL with a median t max of about 30.0 h, whereas that of N-acetyl mesalazine was 1245.46 ng/mL with a median t max of 30.0 h.

Based on the recovery of unchanged mesalazine and the main metabolite N-acetyl mesalazine in collected urine after oral fed administration, approximately 23% of the dose (more than 95% as metabolite) was excreted renally within 60 h.

Following concomitant food intake the C max-values of mesalazine increased 1.69-fold, and the extent of exposure (AUC 0-t last) increased 1.23-fold. Concerning N-acetyl mesalazine after concomitant food intake the C max-values increased 1.28-fold, whereas its extent of exposure remained practically unchanged.

Distribution
About 43% mesalazine and about 78% N-acetyl mesalazine are bound to plasma proteins. Approximately 77% of the administered dose remains in the gut lumen and the mucosal tissue. The mean apparent volume of distribution per kg of body weight (V d w) was 147.73 L/kg (geometric mean: 76.06 L/kg) after a single dose of 2.40 g of mesalazine (3 GR tablets of Octasa 800 mg) in healthy volunteers under fasting conditions. Based upon the absorption of 23.2% of the administered dose, this parameter is equal to 34.27 L/kg (geometric mean: 17.65 L/kg).

Low concentrations of mesalazine and N-acetyl mesalazine have been detected in human breast milk. The clinical significance of this has not been determined.

Biotransformation
Mesalazine is metabolised both by the intestinal mucosa and the liver to the inactive metabolite N-acetyl mesalazine. About 96% of the drug recovered in the urine after oral administration is found as the main metabolite N-acetyl-mesalazine.

Elimination
The elimination of mesalazine is essentially urinary and faecal in the form of mesalazine and its N-acetyl metabolite. The geometric mean of total apparent clearance of mesalazine after administration of 2.40 g of mesalazine (3 GR tablets of Octasa 800 mg) in healthy volunteers...
under fasting conditions was about 318 L/h (geometric mean, CV% = 137.67%, intersubject). The median elimination half-life was 17 h ranging from 10 to 50 h. About 23% of the total dose administered was recovered in the urine within 60 h after fasted administration mainly as N-acetyl mesalazine and as the parent compound (about 1%).

**Linearity/non-linearity**
In a cross-over design with 3 test periods and 3 ascending oral doses of Octasa 400 mg GR Tablets administered 6 hourly over 4 consecutive doses (total daily dose of mesalazine: 3200, 4800, 6400 mg) it was shown that the absorption and elimination kinetics for mesalazine are dose independent for the 3 doses evaluated. For each dose, about ¾ of the dose was available for the therapeutic activity for the colon. Only about ¼ of each dose was absorbed and excreted in the urine, primarily as the metabolite. Based on urine drug excretion, plasma drug Cmax’s and the combined plasma AUC’s, there was a linear dose response for the 3 Octasa tablet doses. The clinical performance of Octasa should be similar for the range of doses evaluated in this study.

**Pharmacokinetic/pharmacodynamic relationship(s)**
No specific studies have been performed.

### 5.3 Preclinical safety data

Preclinical data with mesalazine reveal no special hazard for humans based on conventional studies of safety pharmacology, genotoxicity, carcinogenicity or toxicity to reproduction.

Renal toxicity (renal capillary necrosis and epithelial damage in the proximal convoluted tubule or the whole nephron) has been seen in repeat-dose toxicity studies with high oral doses of mesalazine.

### 6 PHARMACEUTICAL PARTICULARS

#### 6.1 List of excipients

- Lactose monohydrate
- Sodium starch glycolate (Type A)
- Magnesium stearate (vegetable origin)
- Talc E553b
- Povidone E1201
- Methacrylic acid – methyl methacrylate copolymer (1:2)
- Triethyl citrate
- Iron oxides E172
- Macrogol 6000.
6.2 Incompatibilities
Not applicable.

6.3 Shelf life
3 years.

6.4 Special precautions for storage
Do not store above 25 °C. Store in the original package to protect from moisture.

6.5 Nature and contents of container
Octasa 800 mg Modified Release Tablets are available in PVC/aluminium blisters, each containing ten tablets. The blisters are packed in cartons containing either 60, 90 or 180 tablets.

6.6 Special precautions for disposal
Not applicable

7. MARKETING AUTHORISATION HOLDER
Wellingore Hall
Wellingore
Lincolnshire, LN5 0HX
United Kingdom

8 MARKETING AUTHORISATION NUMBER(S)
PL 36633/0001

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION
17/10/2007
10 DATE OF REVISION OF THE TEXT

27/04/2017