



# **Public Assessment Report**

## **National Procedure**

**Amoxicillin 125 mg / 5 ml Oral Suspension**  
**Amoxicillin 250 mg / 5 ml Oral Suspension**

**Amoxicillin trihydrate**

**PL 20416/0715 - 0716**

**CRESCENT PHARMA LIMITED**

## LAY SUMMARY

### Amoxicillin 125 mg / 5 ml and 250 mg / 5ml Oral Suspension Amoxicillin trihydrate

This is a summary of the Public Assessment Report (PAR) for Amoxicillin 125 mg / 5 ml and 250 mg / 5ml Oral Suspension. It explains how these products were assessed and their authorisation recommended, as well as their conditions of use. It is not intended to provide practical advice on how to use these products.

These products will be referred to as Amoxicillin Oral Suspension in this lay summary for ease of reading.

For practical information about using Amoxicillin Oral Suspension, patients should read the Patient Information Leaflet (PIL) or contact their doctor or pharmacist.

#### **What is Amoxicillin Oral Suspension and what are they used for?**

These applications are the same as Amoxicillin 125 mg/5 mL Oral suspension and Amoxicillin 250 mg/5 mL Oral suspension (PL 20416/0010 and PL 20416/0011) which are already authorised.

Crescent Pharma Limited is the company responsible for the authorised, reference medicinal product and also the medicines described in this PAR. As such, Crescent Pharma Limited has agreed that its scientific data can be used as the basis for the grant of identical licences for these Amoxicillin Oral Suspensions.

Amoxicillin Oral Suspension is used to treat infections caused by bacteria in different parts of the body. It may also be used in combination with other medicines to treat stomach ulcer.

#### **How do Amoxicillin Oral Suspension work?**

Amoxicillin is one of a group of antibiotics called penicillins. It is used to kill bacteria which cause infections in the body.

#### **How are Amoxicillin Oral Suspension used?**

The pharmaceutical form of these medicines is granules for oral suspension and the route of administration is oral (by mouth).

The patient or caregiver should shake the bottle well before each dose, and not dilute the solution further. It is important that Amoxicillin Oral Solution is taken at the right times of day and the doses should be spaced out as evenly as possible.

For children weighing less than 40 kg, all doses are worked out depending on the child's weight in kilograms. The patient's doctor will advise the patient's parents or caregivers how much Amoxicillin Oral Solution to give to their baby or child. The usual dose is 40 mg to 90 mg for each kilogram of body weight a day given in two or three divided doses. The maximum recommended dose is 100 mg for each kilogram of body weight a day.

This suspension is not usually prescribed for adults, elderly patients and children weighing 40 kg or more. Patients or their parents or caregivers should ask their doctor or pharmacist for advice.

If the patient has kidney problems, the recommended dose might be lower than the usual dose.

For further information on how Amoxicillin Oral Suspension are used, refer to the PIL and Summaries of Product Characteristics (SmPCs) available on the Medicines and Healthcare products Regulatory Agency (MHRA) website.

These medicines can only be obtained with a prescription.

The patient should always take the medicine exactly as their doctor/pharmacist has told them. The patient or caregiver should check with their doctor or pharmacist if they are not sure.

**What benefits of Amoxicillin Oral Suspension have been shown in studies?**

Amoxicillin Oral Suspension are considered identical to the previously authorised products with the same benefits and risks. No new studies have been provided for Amoxicillin Oral Suspension; however, reference is made to the studies for Amoxicillin 125 mg/5 mL Oral suspension and Amoxicillin 250 mg/5 mL Oral suspension (PL 20416/0010 and PL 20416/0011).

**What are the possible side effects of Amoxicillin Oral Suspension?**

For the full list of all side effects reported with these medicines, see Section 4 of the PIL or the SmPCs available on the MHRA website.

If a patient gets any side effects, they should talk to their doctor, pharmacist or nurse. This includes any possible side effects not listed in the product information or the PIL that comes with the medicine. Patients can also report suspected side effects themselves, or a report can be made on their behalf by someone else who cares for them, directly via the Yellow Card scheme at <https://yellowcard.mhra.gov.uk> or search for 'MHRA Yellow Card' online. By reporting side effects, patients can help provide more information on the safety of this medicine.

Amoxicillin Oral Suspension are considered to be identical to the previously authorised products with the same benefits and risks.

**Why were Amoxicillin Oral Suspension approved?**

The MHRA decided that the benefits of Amoxicillin Oral Suspension are greater than the risks and recommended that these medicines are approved for use.

**What measures are being taken to ensure the safe and effective use of Amoxicillin Oral Suspension?**

As for all newly authorised medicines, a Risk Management Plan (RMP) has been developed for Amoxicillin Oral Suspension. The RMP details the important risks of Amoxicillin Oral Suspension, how these risks can be minimised, any uncertainties about Amoxicillin Oral Suspension (missing information), and how more information will be obtained about the important risks and uncertainties.

The following safety concerns have been recognised for Amoxicillin Oral Suspension:

<b>Summary of safety concerns</b>	
<b>Important identified risks</b>	<ul style="list-style-type: none"> <li>• Hypersensitivity reactions (anaphylactoid)</li> <li>• Convulsions</li> <li>• Acute generalized exanthematous pustulosis (AGEP)</li> <li>• Hepatic events</li> <li>• Antibiotic-associated colitis</li> <li>• DRESS Syndrome</li> </ul>
<b>Important potential risks</b>	<ul style="list-style-type: none"> <li>• Prolongation of prothrombin time due to concomitant use with oral anticoagulants</li> </ul>
<b>Missing information</b>	<ul style="list-style-type: none"> <li>• Exposure during pregnancy</li> <li>• Exposure through breast milk</li> </ul>

The information included in the SmPC and the PIL is compiled based on the available quality, non-clinical and clinical data, and includes appropriate precautions to be followed by healthcare professionals and patients. Side effects of Amoxicillin Oral Suspension are continuously monitored and reviewed including all reports of suspected side-effects from patients, their carers, and healthcare professionals.

An RMP and a summary of the pharmacovigilance system have been provided with these applications and are satisfactory.

#### **Other information about Amoxicillin Oral Suspension**

Marketing Authorisations were granted in the United Kingdom on 08 February 2023.

The full PAR for Amoxicillin Oral Suspension follows this summary.

This summary was last updated in April 2023.

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## I. INTRODUCTION

Based on the review of the data on quality, safety and efficacy, the Medicines and Healthcare products Regulatory Agency (MHRA) considered that the applications for Amoxicillin 125 mg / 5 ml and 250 mg / 5ml Oral Suspension (PL 20416/0715 - 0716) could be approved.

The products are approved for the following indications in the treatment of infections in adults and children:

- Acute bacterial sinusitis
- Acute otitis media
- Acute streptococcal tonsillitis and pharyngitis
- Acute exacerbations of chronic bronchitis
- Community acquired pneumonia
- Acute cystitis
- Asymptomatic bacteriuria in pregnancy
- Acute pyelonephritis
- Typhoid and paratyphoid fever
- Dental abscess with spreading cellulitis
- Prosthetic joint infections
- Helicobacter pylori eradication
- Lyme disease
- Prophylaxis of endocarditis.

Consideration should be given to official guidance on the appropriate use of antibacterial agents.

For more information on the indications of Amoxicillin 125 mg / 5 ml and 250 mg / 5ml Oral Suspension, see the Summary of Product Characteristics on the MHRA website.

The name of the active substances in these products is amoxicillin trihydrate.

Amoxicillin is a semisynthetic penicillin (beta-lactam antibiotic) that inhibits one or more enzymes (often referred to as penicillin-binding proteins, PBPs) in the biosynthetic pathway of bacterial peptidoglycan, which is an integral structural component of the bacterial cell wall. Inhibition of peptidoglycan synthesis leads to weakening of the cell wall, which is usually followed by cell lysis and death. Amoxicillin is susceptible to degradation by beta-lactamases produced by resistant bacteria and therefore the spectrum of activity of amoxicillin alone does not include organisms which produce these enzymes.

These are national applications approved under Regulation 56 of The Human Medicines Regulation 2012, as amended (previously Article 10c of Directive 2001/83/EC, as amended) as informed consent applications. The applications cross-refer to the reference products Amoxicillin 125 mg/5 mL Oral suspension and Amoxicillin 250 mg/5 mL Oral suspension (PL 20416/0010 and PL 20416/0011).

No new non-clinical or clinical data have been supplied and none are required for these informed consent applications.

Suitable justification has been provided for non-submission of an Environmental Risk Assessment (ERA). As the applications are for identical version(s) of already authorised products, no increase in environmental exposure is anticipated and no ERA is required.

The MHRA has been assured that acceptable standards of Good Manufacturing Practice (GMP) are in place for these products at all sites responsible for the manufacture, assembly and batch release of these products.

A Risk Management Plan (RMP) and a summary of the pharmacovigilance system have been provided with these applications and are satisfactory.

National marketing authorisations were granted in the United Kingdom on 08 February 2023

## **II. EXPERT REPORT**

The applicant cross-refers to the data for Amoxicillin 125 mg / 5 ml and 250 mg / 5ml Oral Suspension (Crescent Pharma Limited), to which these applications are claimed to be identical. This is acceptable.

## **III. ASSESSOR'S COMMENTS ON THE PRODUCT INFORMATION**

### **Summaries of Product Characteristics (SmPCs)**

The SmPCs are in line with that/those for Amoxicillin 125 mg / 5 ml and 250 mg / 5ml Oral Suspension dated August 2019.

### **PATIENT INFORMATION LEAFLET**

Leaflet mock-ups have been provided which has been aligned with that for Amoxicillin 125 mg / 5 ml and 250 mg / 5ml Oral Suspension, dated August 2019.

### **LABEL**

Label mock-ups have been provided.

## **IV. QUALITY ASPECTS**

### **IV.1 Drug Substance**

#### **Drug substance specification(s)**

The source(s) of the active substance are in line with the cross-reference products. The proposed drug substance specification is consistent with the details registered for the cross-reference products.

### **IV.2. Drug Product**

#### **Name**

The product has been named in line with current requirements.

#### **Strength, pharmaceutical form, route of administration, container and pack sizes**

Amoxicillin 125 mg / 5 ml and 250 mg / 5ml Oral Suspension are available in HDPE bottles with PP/HDPE child resistant caps with EPE induction seal liner in pack sizes of 100 mL.

The appearance of the products is identical to that of the cross-reference products.

The proposed shelf life of the product of the product is 3 years with the storage conditions to 'Store in a cool, dry place, Use within one week of preparation'.

The shelf-life expiry date for the reconstituted product shall not be more than 7 days from the date of its reconstitution when stored in a cool place.

The proposed packaging, shelf life and storage conditions are consistent with the details

registered for the reference product.

**Legal status**

Prescription only medicine (POM).

**Manufacturers**

The proposed manufacturing site(s) are consistent with the details registered for the cross-reference products and evidence of Good Manufacturing Practice (GMP) compliance has been provided.

**Qualitative and quantitative compositions**

The composition of the proposed products are consistent with the details registered for the cross-reference products.

**Manufacturing process & control of critical steps**

The proposed manufacturing processes and process controls are consistent with the details registered for the reference products and the maximum batch size is stated.

**Finished product release/shelf life specifications**

The finished product specifications at release and shelf-life are in line with the details registered for the cross-reference products.

**TSE Compliance**

No excipients of animal or human origin are used in the final products.

These products do not contain or consist of genetically modified organisms (GMO).

**V. NON-CLINICAL ASPECTS**

As these applications are submitted under Regulation 56 of The Human Medicines Regulation 2012, as amended, (as informed consent applications) no new non-clinical data have been supplied and none are required.

**VI. CLINICAL ASPECTS**

As these applications are submitted under Regulation 56 of The Human Medicines Regulation 2012, as amended, (as an informed consent applications) no new clinical data have been supplied and none are required.

**VII. RISK MANAGEMENT PLAN (RMP)**

The applicant has submitted an RMP, in accordance with the requirements of Regulation 182 of The Human Medicines Regulation 2012, as amended. The applicant proposes only routine pharmacovigilance and routine risk minimisation measures for all safety concerns. This is acceptable.

**VIII. USER CONSULTATION**

A full colour mock-up of the Patient Information Leaflet (PIL) has been provided with the application, in accordance with legal requirements.

No user consultation report was submitted for these applications. As the licences are duplicates of the reference products, Crescent Pharma Limited, the company responsible for both the reference and application products has committed to completing user consultation for the Patient Information Leaflets at the next regulatory opportunity. This is acceptable.

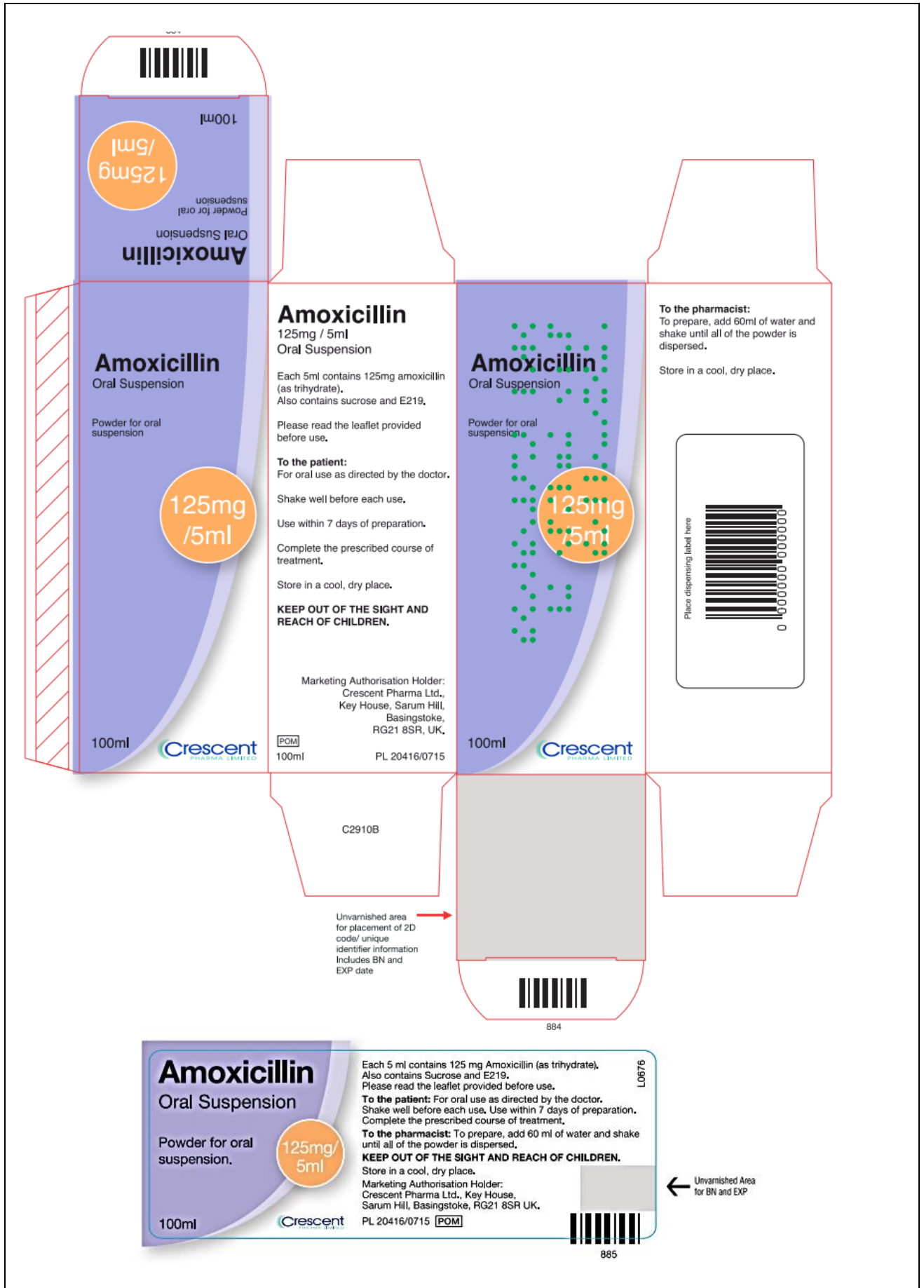
## **IX. OVERALL CONCLUSION, BENEFIT/RISK AND RECOMMENDATION**

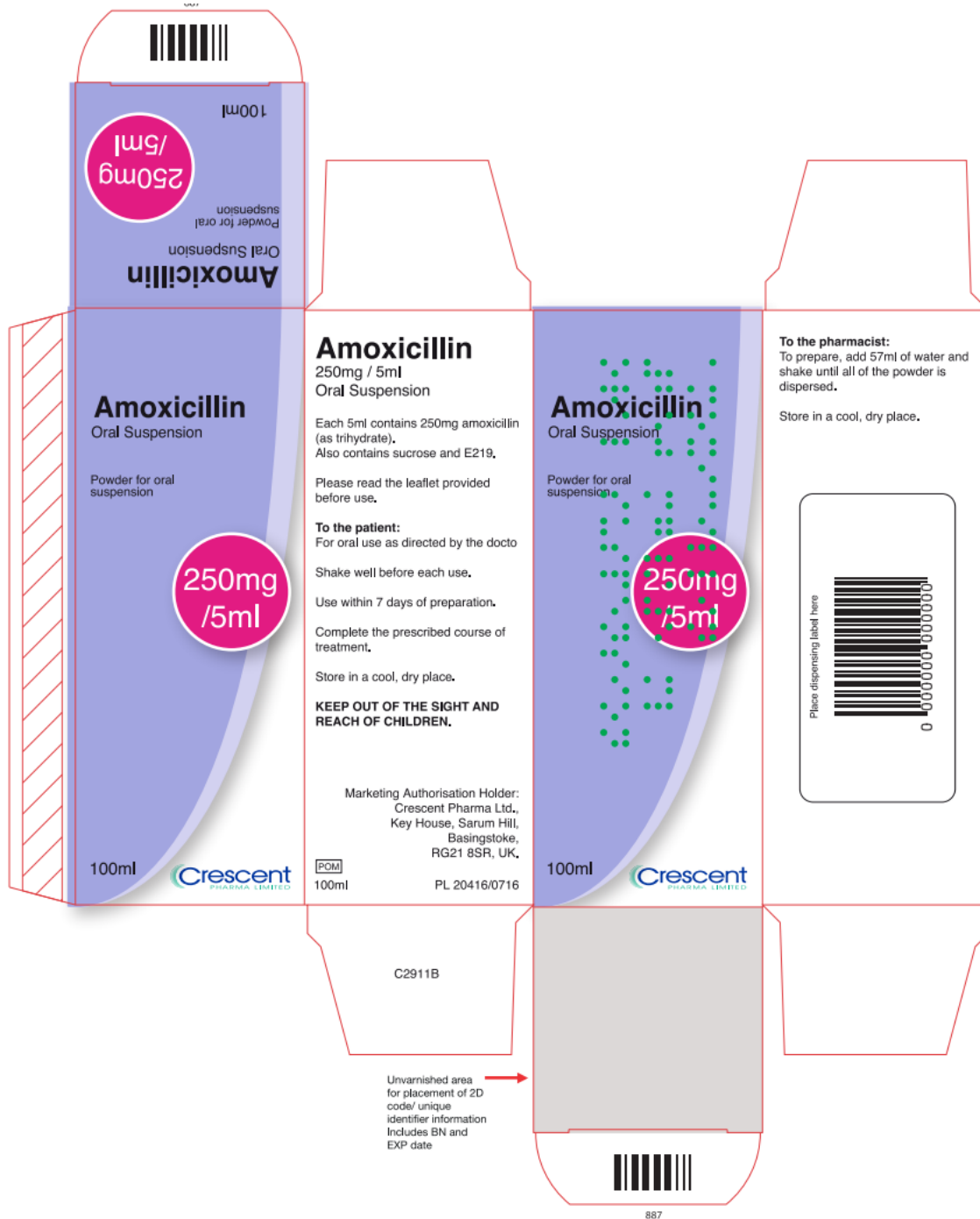
The quality of the products is acceptable, and no new non-clinical or clinical safety concerns have been identified. The applicant's products are identical to the cross-reference products. The benefit/risk balance is, therefore, considered to be the same as for the cross-reference products and positive.

The Summaries of Product Characteristics (SmPCs), Patient Information Leaflets (PILs) and labelling are satisfactory, in line with current guidelines and consistent with the cross-reference products.

In accordance with legal requirements, the current approved UK versions of the SmPCs and PILs for these products are available on the MHRA website.

Representative copies of the labels at the time of licensing are provided on the following pages.





**TABLE OF CONTENT OF THE PAR UPDATE**

Steps taken after the initial procedure with an influence on the Public Assessment Report (non-safety variations of clinical significance).

Please note that only non-safety variations of clinical significance are recorded below and in the annexes to this PAR. The assessment of safety variations where significant changes are made are recorded on the MHRA website or European Medicines Agency (EMA) website. Minor changes to the marketing authorisation are recorded in the current SmPC and/or PIL available on the MHRA website.

<b>Application type</b>	<b>Scope</b>	<b>Product information affected</b>	<b>Date of grant</b>	<b>Outcome</b>	<b>Assessment report attached Y/N</b>