

Public Assessment Report

Scientific discussion

**Teicoplanine SUN 200 mg and 400 mg,
powder for solution for injection/infusion
or oral solution
(teicoplanin)**

NL/H/5171/003-004/DC

Date: 18 May 2026

This module reflects the scientific discussion for the approval of Teicoplanine SUN 200 mg and 400 mg, powder for solution for injection/infusion or oral solution. The procedure was finalised on 3 May 2023. For information on changes after this date, please refer to the 'steps taken after finalisation' at the end of this PAR.

List of abbreviations

AE	Adverse Event
ANOVA	Analysis of Variance
ASMF	Active Substance Master File
BE	Bioequivalence
CAPD	Continuous Ambulatory Peritoneal Dialysis
CBG / MEB	College ter Beoordeling van Geneesmiddelen / Medicines Evaluation Board
CEP	Certificate of Suitability to the monographs of the European Pharmacopoeia
CHMP	Committee for Medicinal Products for Human Use
CMD(h)	Coordination group for Mutual recognition and Decentralised procedure for human medicinal products
CMS	Concerned Member State(s)
DCP	Decentralised Procedure
EDMF	European Drug Master File
EDQM	European Directorate for the Quality of Medicines
EEA	European Economic Area
EMA	European Medicines Agency
ERA	Environmental Risk Assessment
GLP	Good Laboratory Practices
GMP	Good Manufacturing Practice
ICH	International Conference of Harmonisation (of Technical Requirements for Pharmaceuticals for Human Use)
LALA	Locally applied, locally acting products
MAH	Marketing Authorisation Holder
MEB	Medicines Evaluation Board
PAR	Public Assessment Report
Ph.Eur.	European Pharmacopoeia
PD	Pharmacodynamics
PK	Pharmacokinetics
PL	Package Leaflet
PSURs	Periodic safety update reports
QC	Quality control
RH	Relative Humidity
RMP	Risk Management Plan
RMS	Reference Member State
SPC	Summary of Product Characteristics
TSE	Transmissible Spongiform Encephalopathy
USP/NF	United States Pharmacopoeia/National Formulary

Note: Not all abbreviations may apply for this PAR.

I. INTRODUCTION

Based on the review of the quality, safety and efficacy data, the Member States have granted a marketing authorisation for Teicoplanine SUN 200 mg and 400 mg, powder for solution for injection/infusion or oral solution, from Sun Pharmaceutical Industries Europe B.V.

The products are indicated in adults and in children from birth for the parenteral treatment of the following infections:

- complicated skin and soft tissue infections
- bone and joint infections
- hospital acquired pneumonia
- community acquired pneumonia
- complicated urinary tract infections
- infective endocarditis
- peritonitis associated with continuous ambulatory peritoneal dialysis (CAPD)
- bacteraemia that occurs in association with any of the indications listed above.

Teicoplanin SUN is also indicated as an alternative oral treatment for *Clostridium difficile* infection associated diarrhoea and colitis.

A comprehensive description of the up-to-date indications and posology is given in the SPC.

II. EXECUTIVE SUMMARY

II.1 About the product

Teicoplanin is an antibacterial products for systemic use, belonging to glycopeptides class and inhibits the growth of susceptible organisms by interfering with cell-wall biosynthesis at a site different from that affected by beta-lactams. Peptidoglycan synthesis is blocked by specific binding to D-alanyl-D-alanine residues.

Pharmacotherapeutic group: J01XA02

II.2 General comments on the application

The marketing authorisation has been granted pursuant to Article 10(1) of Directive 2001/83/EC, which concerns a generic application.

The application is a line-extension (as defined under Regulation 1234/2009, Annex II) of the current marketing authorisation for Teicoplanine SUN 200 mg and 400 mg, powder and solvent for solution for injection/infusion or oral solution which have been registered in the Netherlands via the decentralised procedure NL/H/5171/001-002/DC by Sun Pharmaceutical

Industries Europe B.V. since 11 August 2021 (original products). The current products Teicoplanine SUN differ from the innovator since no solvent is included. Otherwise the applied product and the innovator have the same qualitative and quantitative composition in term of active substance (teicoplanin) as the reference product. The current products are intended to be administered by the same administration route: parenteral and oral administration, respectively.

This application has been assessed with The Netherlands as Reference Member State and Italy and United Kingdom (Northern Ireland) as concerned member states (CMS).

III. QUALITY ASPECTS

III.1 Introduction

Teicoplanine SUN is a powder for solution for injection/infusion or oral solution and is a white-ivory spongy lyophilised powder.

Each 200 mg powder vial contains as active substance 200 mg teicoplanin equivalent to not less than 200,000 IU. After reconstitution, the solution will contain 200 mg teicoplanin in 3.0 ml.

Each 400 mg powder vial contains as active substance 400 mg teicoplanin equivalent to not less than 400,000 IU. After reconstitution, the solution will contain 400 mg teicoplanin in 3.0 ml.

The excipients are: sodium chloride (E551) and sodium hydroxide (E524; for pH adjustment).

The 200 mg powder for solution for injection/infusion or oral solution is packed in in a 10 ml colourless Type I glass vial closed with a bromobutyl rubber stopper and an aluminium flip-off seal. Each vial contains 200 mg teicoplanin.

The 400 mg powder for solution for injection/infusion or oral solution is packed in in a 20 ml colourless Type I glass vial closed with a bromobutyl rubber stopper and an aluminium flip-off seal. Each vial contains 400 mg teicoplanin.

III.2 Drug Substance

The structure of the drug substance has been adequately proven and its physico-chemical properties are sufficiently described. The active substance is teicoplanin, an established active substance described in the European Pharmacopoeia (Ph.Eur.). Teicoplanin is a mixture of glycopeptides produced by certain strains of *Actinoplanes teichomyceticus* sp. Teicoplanin is a white or yellowish, amorphous powder freely soluble in water, sparingly soluble in dimethylformamide and practically insoluble in ethanol (96%).

The CEP procedure is used for the active substance. Under the official Certification Procedures of the EDQM of the Council of Europe, manufacturers or suppliers of substances for pharmaceutical use can apply for a certificate of suitability concerning the control of the chemical purity and microbiological quality of their substance according to the corresponding specific monograph, or the evaluation of reduction of Transmissible Spongiform Encephalopathy (TSE) risk, according to the general monograph, or both. This procedure is meant to ensure that the quality of substances is guaranteed and that these substances comply with the Ph.Eur.

Manufacturing process

The manufacture of the drug substance has been adequately described and satisfactory specifications have been provided for starting materials, reagents and solvents.

Quality control of the drug substance

The drug substance specification includes relevant tests and the limits for impurities and degradation products have been justified. The analytical methods applied are suitably described and validated. The active substance specification is considered adequate to control the quality and meets the requirements of the monograph in the Ph.Eur. Batch analytical data demonstrating compliance with this specification have been provided for three full scale batches.

Stability of the drug substance

Stability data on the active substance have been provided for six batches in accordance with the applicable European guidelines. Based on the data submitted, the stability for the drug substances was confirmed for two years when stored under the stated conditions. This is acceptable.

III.3 Medicinal Product

Pharmaceutical development

The product is an established pharmaceutical form and its development is adequately described in accordance with the relevant European guidelines. The choice of the excipients is justified, and their functions explained.

The development focused mainly on obtaining a stable drug product equivalent to the reference product Targosid manufactured by Sanofi. The following aspects have been taken into consideration: stability of the active substance, physico-chemical and microbiological properties and sterility of the drug product.

Manufacturing process

The manufacturing process has been sufficiently described and critical steps identified. The manufacturing process has been validated according to relevant European/ICH guidelines.

Process validation data on the product have been presented for three batches of both strengths in accordance with the relevant European guidelines.

Control of excipients

The excipients comply with the current version of the Ph.Eur. monograph. These specifications are acceptable.

Microbiological attributes

Because no final sterilisation can be done because of the characteristic of the final product, the manufacture occurs in an area designed for aseptic processes of antibiotic products; the equipment is sterilised according to the validated process. The filters used for sterilisation are validated, and the integrity of the container closure system is tested. Finally, the finished product is tested for bacterial endotoxins and sterility. The bioburden prior to filtration is controlled. The vials are washed, sterilised and depyrogenised with dry heat before use. The stoppers are sterilised by steam sterilisation.

Quality control of the drug product

The finished product specifications are adequate to control the relevant parameters for the dosage form. The specification includes tests for appearance, identification pH, reconstitution time, colour and clarity of solution, water content, content ratio, microbiological assay, leak test, uniformity of dosage units, particulate matter, sterility and bacterial endotoxins. The release and shelf-life tests and limits are not identical: a wider limit is applied at shelf-life for teicoplanin A2 group and teicoplanin A3 group, which is acceptable. Limits in the specification have been justified and are considered appropriate for the adequate quality control of the product.

An adequate risk evaluation report on nitrosamines has been submitted. No risk for the presence of nitrosamines in the drug product was identified.

Satisfactory validation data for the non-compendial analytical methods have been provided. Batch analytical data for three batches per strength from the proposed production site have been provided, demonstrating compliance with the specification.

Stability of the drug product

Stability data on the product have been provided for three batches of each strength stored at 25°C/60% RH (24 months) and 40°C/75% RH (6 months). The stability was tested in accordance with applicable European guidelines. Furthermore, photostability studies were performed in accordance with ICH recommendations. The results showed that the product is stable when exposed to light (when stored in the glass bottle). Based on the data submitted, a shelf life was granted of 36 months. The labelled storage conditions are: "This medicinal product does not require any special temperature storage conditions. Store in the original package."

In-use stability data have been provided demonstrating that the product remains stable for 24 hours following reconstitution or dilution, when stored at 2 to 8°C.

Specific measures concerning the prevention of the transmission of animal spongiform encephalopathies

Scientific data and/or certificates of suitability issued by the EDQM have been provided and compliance with the Note for Guidance on Minimising the Risk of Transmitting Animal

Spongiform Encephalopathy Agents via medicinal products has been satisfactorily demonstrated.

III.4 Discussion on chemical, pharmaceutical and biological aspects

Based on the submitted dossier, the member states consider that Teicoplanine SUN has a proven chemical-pharmaceutical quality. Sufficient controls have been laid down for the active substance and finished product.

No post-approval commitments were made.

IV. NON-CLINICAL ASPECTS

IV.1 Ecotoxicity/environmental risk assessment (ERA)

Since Teicoplanine SUN is intended for generic substitution, this will not lead to an increased exposure to the environment. An environmental risk assessment was therefore not deemed necessary.

IV.2 Discussion on the non-clinical aspects

This product is a line-extension of Teicoplanine SUN 200 mg and 400 mg, powder and solvent for solution for injection/infusion or oral solution which are available on the European market. Reference was made to the preclinical data obtained with the innovator product. A non-clinical overview on the pharmacology, pharmacokinetics and toxicology has been provided, which was based on up-to-date and adequate scientific literature. The overview justifies why there is no need to generate additional non-clinical pharmacology, pharmacokinetics and toxicology data. Therefore, the member states agreed that no further non-clinical studies are required.

V. CLINICAL ASPECTS

V.1 Introduction

Teicoplanin is a well-known active substance with established efficacy and tolerability. A clinical overview has been provided, which is based on scientific literature. The member states agreed that no further clinical studies are required.

V.2 Pharmacokinetics

Teicoplanine SUN 200 mg and 400 mg, powder for solution for injection/infusion or oral solution is a parenteral formulation and therefore fulfils the exemption mentioned in the relevant EU guidelines, Note for guidance on the investigation of bioequivalence

CPMP/EWP/QWP/1401/98 Rev. 1/ Corr **, Appendix II parenteral solutions, which states that a bioequivalence study is not required if the product is administered as an aqueous intravenous solution containing the same active substance in the same concentration as the currently authorised reference medicinal product. The quantitative composition of Teicoplanine SUN is entirely the same as the originator. Therefore, it may be considered as therapeutic equivalent, with the same efficacy/safety profile as known for the active substance of the reference medicinal product. The current product can be used instead of its reference product.

V.3 Risk Management Plan

The MAH has submitted a risk management plan, in accordance with the requirements of Directive 2001/83/EC as amended, describing the pharmacovigilance activities and interventions designed to identify, characterise, prevent or minimise risks relating to Teicoplanine SUN. At the time of approval, the most recent version of the RMP was version 1.2 with sign date off date 11 August 2022.

Table 1. Summary table of safety concerns as approved in the RMP

Important identified risks	None
Important potential risks	None
Missing information	Safety of 24 mg/kg/day loading dose regimen

The member states agreed that routine pharmacovigilance activities and routine risk minimisation measures are sufficient for the risks and areas of missing information.

V.4 Discussion on the clinical aspects

For this authorisation, reference is made to the clinical studies and experience with the innovator product innovator. No new clinical studies were conducted. Considering that both the test and reference formulations are to be administered as an aqueous intravenous solution containing the same active substance, a bioequivalence study was not necessary. Risk management is adequately addressed. This generic medicinal product can be used instead of the reference product.

VI. USER CONSULTATION

The package leaflet (PL) has been evaluated via a user consultation study in accordance with the requirements of Articles 59(3) and 61(1) of Directive 2001/83/EC.

A user consultation with target patient groups on the package leaflet (PL) has been performed based on a bridging report making reference to Teicoplanine SUN 200 mg and 400 mg, powder and solvent for solution for injection/infusion or oral solution, NL/H/5171/001-002/DC. The bridging report submitted by the MAH has been found acceptable; bridging is justified for both content and layout of the leaflet.

VII. OVERALL CONCLUSION, BENEFIT/RISK ASSESSMENT AND RECOMMENDATION

Teicoplanine SUN 200 mg and 400 mg, powder for solution for injection/infusion or oral solution have a proven chemical-pharmaceutical quality and are line-extensions of Teicoplanine SUN 200 mg and 400 mg, powder and solvent for solution for injection/infusion or oral solution. Teicoplanine SUN is a well-known medicinal product with an established favourable efficacy and safety profile.

Since both the reference and current product are intended for parenteral use, no bioequivalence study is deemed necessary. A biowaiver has been granted.

The Board followed the advice of the assessors.

There was no discussion in the CMD(h). Agreement between member states was reached during a written procedure. The member states, based on the data submitted, considered that essential similarity has been demonstrated for Teicoplanine SUN with the reference product, and have therefore granted a marketing authorisation. The decentralised procedure was finalised with a positive outcome on 3 May 2023.

STEPS TAKEN AFTER THE FINALISATION OF THE INITIAL PROCEDURE - SUMMARY

Procedure number	Scope	Product Information affected	Date of end of procedure	Approval/ non approval	Summary/ Justification for refuse
NL/H/5171/003-004/IA/002/G	Submission of a new or updated Ph. Eur. certificate of suitability or deletion of Ph. Eur. certificate of suitability: For an active substance, For a starting material / reagent / intermediate used in the manufacturing process of the active substance, For an excipient - European Pharmacopoeial Certificate of Suitability to the relevant Ph. Eur. Monograph - New certificate from a new manufacturer (replacement or addition)	No	9-10-2024	Partially aproved	N.A.