



STABILITY DATA SUREFUSER+

Division: Hospital Products | Version: 2022





1. Introduction

Surefuser™+ is an elastomeric infusion pump for single-use. It is prescribed for the controlled infusion of medications (e.g. antibiotics, chemotherapeutics, painkillers) in an ambulatory and home-care setting.

Surefuser+ is the optimal user-friendly choice for patients. It does not require batteries or electricity, which renders it lightweight and discreet. There are no complicated settings or alarms, making it hassle-free.

For more than 15 years, Nipro has perfected the design of Surefuser+. It is a closed system that ensures patient safety and a high-performance treatment.

Surefuser+ complies to ISO-28620.

2. Stability data

This document contains a summary of *in vitro* chemical and physical stability tests of more than 35 different drugs using Surefuser+ elastomeric infusion pump.

The stability of each drug was evaluated in independent certified laboratories according to their Standard Operating Procedures, following a predefined protocol, and under controlled conditions.

The stability of each drug was analyzed in physiological solvents commonly used for infusion, including NaCl 0.9%, glucose 5%, and dextrose 5%.

The concentration of the drug at different points in time was measured using high performance or ultra performance liquid chromatography (UPLC) techniques. The drug was considered stable when the concentration was within a predefined range of the initial concentration (e.g. 95-105%).

Please note that the evaluation of the sterility of drug solutions was not part of the experimental scope.

3. For additional information

We invite you to contact your local Nipro representative.



MEDICATION	MEDICINE GROUP	CONCENTRATION	SOLUTION	STABILITY AT 5°C	STABILITY AT 25°C	STABILITY AT 32°C	STABILITY AT 37°C
ACYCLOVIR (Sodium)	Antiviral drug	5 mg/ml	NaCl 0,9%	-	8 days	-	-
AMIKACIN	Antibiotic	10 mg/ml	NaCl 0,9%	-	3 days	-	-
AMOXICILLIN	Antibiotic	3 mg/ml	NaCl 0,9%	24 hrs (1 day)	Immediate use	-	-
		10 mg/ml	NaCl 0,9%	24 hrs (1 day)	Immediate use	-	-
AMPHOTERICIN	Antimycotic	0,5 mg/ml	Glucose 5%	-	3 days	-	-
AZTREONAM	Antibiotic	5 mg/ml	NaCl 0,9%	14 days	24 hrs (1 day)	-	-
		10 mg/ml	NaCl 0,9%	-	3 days	-	-
		20 mg/ml	NaCl 0,9%	14 days	24 hrs (1 day)	-	-
BENZYLPENICILLIN + SODIUM CITRATE	Antibiotic	15 mg/ml	NaCl 0,9%	21 days	2 days	-	-
		60 mg/ml	NaCl 0,9%	21 days	2 days	-	-
BUMETANIDE	Diuretic	0,016 mg/ml	Glucose 5%	-	24 hrs (1 day)	-	-
		0,16 mg/ml	Glucose 5%	-	24 hrs (1 day)	-	-
CARBOPLATIN	Chemotherapy drug	4,5 mg/ml	Dextrose 5%	-	15 days	-	-
CEFOTAXIME	Antibiotic	10 mg/ml	NaCl 0,9%	7 days	Immediate use	-	-
		16,66 mg/ml	NaCl 0,9%	3 days	Immediate use	-	-
CEFOXITIN	Antibiotic	10 mg/ml	NaCl 0,9%	7 days	1 day	-	-
		60 mg/ml	NaCl 0,9%	7 days	1 day	-	-
CEFTAZIDIME	Antibiotic	5 mg/ml	NaCl 0,9%	7 days	8 hrs	-	-
		20 mg/ml	NaCl 0,9%	-	24 hrs (1 day)	-	-
		40 mg/ml	NaCl 0,9%	7 days	8 hrs	-	-
CEFTRIAXONE	Antibiotic	10 mg/ml	NaCl 0,9%	6 days	24h	-	-
		10 mg/ml	5% Glucose	6 days	24h	-	-
		20 mg/ml	NaCl 0,9%	-	72 hrs	-	-
		24 mg/ml	NaCl 0,9%	14 days	48 hrs	-	-
		25 mg/ml	NaCl 0,9%	18 days	48 hrs	-	-
		50 mg/ml	NaCl 0,9%	6 days	24 hrs	-	-
		50 mg/ml	5% Glucose	6 days	24 hrs	-	-
CEFUROXIM	Antibiotic	20 mg/ml	NaCl 0,9%	-	24 hrs (1 day)	-	-
CEPHAZOLIN	Antibiotic	5 mg/l	NaCl 0,9%	35 days	11 days	-	-
		40 mg/l	NaCl 0,9%	46 days	11 days	-	-
CIPROFLOXACIN	Antibiotic	0,5 mg/ml	NaCl 0,9%	14 days	24 hrs (1 day)	-	-
		2,0 mg/ml	NaCl 0,9%	14 days	24 hrs (1 day)	-	-
CISPLATIN	Chemotherapy drug	0,25 mg/ml	NaCl 0,9%	3 days	6 hrs	-	-
		0,5 mg/ml	NaCl 0,9%	-	7 days	-	-
CLINDAMYCIN PO4	Antibiotic	6 mg/ml	NaCl 0,9%	30 days	-	-	-

MEDICATION	MEDICINE GROUP	CONCENTRATION	SOLUTION	STABILITY AT 5°C	STABILITY AT 25°C	STABILITY AT 32°C	STABILITY AT 37°C
CLOXACILLIN	Antibiotic	28 mg/ml	NaCl 0,9%	9 days	-	-	-
		30 mg/ml	NaCl 0,9%	-	24 hrs (1 day)	-	-
		30 mg/ml	NaCl 0,9%	14 days	-	-	-
		50 mg/ml	NaCl 0,9%	-	24 hrs (1 day)	-	-
		50 mg/ml	NaCl 0,9%	7 days	-	-	-
CYCLOPHOSPHAMIDE	Chemotherapy drug	10 mg/ml	NaCl 0,9%	-	2 days	-	-
DACARBAZINE	Chemotherapy drug	2 mg/ml	NaCl 0,9%	-	24 hrs (1 day)	-	-
DEFEROXAMINE	Iron chelator	5 mg/ml	NaCl 0,9%	-	21 days	7 days	-
		100 mg/ml	NaCl 0,9%	-	10 days	-	-
		100 mg/ml	NaCl 0,9%	28 days	24 hrs (1 day)	-	7 days
		100 mg/ml	NaCl 0,9%	35 days	24 hrs (1 day)	-	24 hrs (1 day)
		200 mg/ml	NaCl 0,9%	-	7 days	-	-
DEXAMETHASONE	Chemotherapy drug	4 mg/ml	5% Glucose	2 days	24hrs (1 day)	-	-
DOCETAXEL	Chemotherapy drug	0,16 mg/ml	NaCl 0,9%	3 days	1 hr	-	-
DOXORUBICIN HCl	Chemotherapy drug	2 mg/ml	NaCl 0,9%	-	14 days	-	-
EPIRUBICIN	Chemotherapy drug	0,5 mg/ml	NaCl 0,9%	-	10 days	-	-
FLUCLOXACILLIN	Antibiotic	5 mg/ml	NaCl 0,9%	22 days	2 days	-	-
		60 mg/ml	NaCl 0,9%	22 days	2 days	-	-
FLUCONAZOLE	Antibiotic	2 mg/ml	NaCl 0,9%	-	3 days	-	-
FOSFOMYCIN	Antibiotic	15 mg/ml	NaCl 0,9%	7 days	7 days	-	-
5-FLUOROURACIL (5-FU)	Chemotherapy drug	5 mg/ml	NaCl 0,9%	-	21 days	-	-
		50 mg/ml	NaCl 0,9%	-	21 days	-	-
		50 mg/ml	NaCl 0,9%	-	28 days	7 days	-
5-FLUOROURACIL (5-FU)	Chemotherapy drug	5 mg/ml	Dextrose 5%	60 days	60 days	7 days	-
		30 mg/ml	Dextrose 5%	60 days	60 days	7 days	-
5-FU + FOLINIC ACID	Chemotherapy drug + acid	42 mg/ml+ 8 mg/ml	NaCl 0,9%	-	3 days	-	-
5-FU + DISODIUM FOLINATE	Chemotherapy drug	11.4 mg/ml + 3.8 mg/ml	NaCl 0,9%	-	7 days	-	-
5-FU + DISODIUM FOLINATE	Chemotherapy drug	11.4 mg/ml + 3.8 mg/ml	NaCl 0,9%	-	14 days	-	-
5-FU + DISODIUM FOLINATE	Chemotherapy drug	11.4 mg/ml + 3.8 mg/ml	5% Glucose	-	7 days	-	-
5-FU + DISODIUM FOLINATE	Chemotherapy drug	11.4 mg/ml + 3.8 mg/ml	5% Glucose	-	14 days	-	-
FUROSEMIDE	Diuretic	0,5 mg/ml	NaCl 0,9%	7 days	4 days	-	-
		10 mg/ml	NaCl 0,9%	7 days	4 days	-	-

MEDICATION	MEDICINE GROUP	CONCENTRATION	SOLUTION	STABILITY AT 5°C	STABILITY AT 25°C	STABILITY AT 32°C	STABILITY AT 37°C
GANCICLOVIR	Antiviral drug	5 mg/ml	NaCl 0,9%	-	4 days	-	-
GENTAMICIN	Antibiotic	2,4 mg/ml	NaCl 0,9%	-	3 days	-	-
HALOPERIDOL	Antipsychotic drug	0.15 mg/ml	NaCl 0,9%	7 days	5 days	-	-
		1mg/ml	NaCl 0,9%	7 days	5 days	-	-
HYOSCINE BUTYLBROMIDE	Anticholinergic medication	2 mg/ml	NaCl 0,9%	7 days	24 hrs (1 day)	-	-
IRON SUCROSE	Minerals, vitamins, and tonic	1 mg/ml	NaCl 0,9%	24 hrs (1 day)	10 days	-	-
		3 mg/ml	NaCl 0,9%	24 hrs (1 day)	10 days	-	-
LEUCOVORIN	Chemotherapy drug	1 mg/ml	NaCl 0,9%	-	3 days	-	-
LINCOMYCIN	Antibiotic	0,3 mg/ml	NaCl 0,9%	60 days	60 days	-	-
		1,2 mg/ml	NaCl 0,9%	60 days	60 days	-	-
MEROPENEM	Antibiotic	5 mg/ml	NaCl 0,9%	3 days	8 hrs	-	-
		10 mg/ml	NaCl 0,9%	3 days	8 hrs	-	-
METHOTREXATE	Chemotherapy drug	5 mg/ml	NaCl 0,9%	-	15 days	-	-
METHYLPREDNI- SOLONE	Corticosteroids	10 mg/ml	NaCl 0,9%	7 days	7 days	-	-
METOCLOPRAMIDE	Antiemetic agent, Peristaltic stimulant	0.2 mg / ml	NaCl 0,9%	48 hrs	7 days		
MITOXANTRONE	Chemotherapy immunosuppressant	0,5 mg/ml	NaCl 0,9%	-	9 days	-	-
MORPHINE	Opiates	1 mg/ml	NaCl 0,9%	-	10 days	-	-
MORPHINE HYDROCHLORIDE	Opiates	1 mg/ml	NaCl 0,9%	-	7 days	-	-
ONDANSETRON	Prevent nausea and vomiting (Antiemetic)	0.03 mg/ml	Saline	14 days	48 hrs (2 days)	-	-
		0.03 mg/ml	5% Glucose	14 days	48 hrs (2 days)	-	-
		0.03 mg/ml	Saline	21 days	7 days	-	-
		0.03 mg/ml	5% Glucose	21 days	7 days	-	-
		0.3 mg/ml	Saline	14 days	48 hrs (2 days)	-	-
		0.3 mg/ml	5% Glucose	14 days	48 hrs (2 days)	-	-
		0.7 mg/ml	Saline	10 days	4 days	-	-
		0.7 mg/ml	5% Glucose	10 days	4 days	-	-
PACLITAXEL	Chemotherapy drug	0,875 mg/ml	NaCl 0,9%	3 days	3 hours	-	-
PANTOPRAZOLE	Proton pump inhibitors	0.38 mg/ml	NaCl 0,9%	13 days	48 hours	-	-
		0.5 mg/ml	NaCl 0,9%	14 days	48 hours	-	-
PIPERACILLIN	Antibiotic	10 mg/ml	NaCl 0,9%	14 days	24 hours (1 day)	-	-
		80 mg/ml	NaCl 0,9%	14 days	24 hours (1 day)	-	-
PIPERACILLIN + TAZOBACTAN	Antibiotic	10 mg/ml+ 1,25 mg/ml	NaCl 0,9%	28 days	48 hrs (2 days)	-	-
		90 mg/ml + 11,25 mg/ml	NaCl 0,9%	7 days	3 days	-	-
		80 mg/ml + 10 mg/ml	NaCl 0,9%	28 days	48 hrs (2days)	-	-

MEDICATION	MEDICINE GROUP	CONCENTRATION	SOLUTION	STABILITY AT 5°C	STABILITY AT 25°C	STABILITY AT 32°C	STABILITY AT 37°C
ROPIVACAINE HYDROCHLORIDE	Anaestheticum	2 mg/ml	NaCl 0,9%	24 hours (1 day)	10 days	-	-
		10 mg/ml	NaCl 0,9%	24 hours (1 day)	10 days	-	-
SALBUTAMOL	ASTMA- COPD	0,06 mg/ml	NaCl 0,9%	-	3 days	-	-
TEICOPLANIN	Antibiotic	1 mg/ml	NaCl 0,9%	7 days	24 hours (1 day)	-	-
		20 mg/ml	NaCl 0,9%	7 days	24 hours (1 day)	-	-
TICARCILLIN (3g) + CLAVULANATE (0,1g) (Timentin)	Antibiotic	5 mg/ml	NaCl 0,9%	17 days	24 hours (1 day)	-	-
		103,3 mg/ml	NaCl 0,9%	17 days	24 hours (1 day)	-	-
TOBRAMYCIN	Antibiotic	0,5 mg/ml	NaCl 0,9%	14 days	24 hours (1 day)	-	-
		2,4 mg/ml	NaCl 0,9%	-	3 days	-	-
		4,8 mg/ml	NaCl 0,9%	14 days	24 hours (1 day)	-	-
TRABECTEDINE	Chemotherapy drug	5,0 µg/ml	NaCl 0,9%	-	24 hours (1 day)	-	-
		13,2 µg/ml	NaCl 0,9%	-	24 hours (1 day)	-	-
VANCOMYCIN	Antibiotic	10 mg/ml	NaCl 0,9%	-	3 days	-	-
		10 mg/ml	NaCl 0,9%	7 days	7 days	-	-
		10 mg/ml	NaCl 0,9%	28 days	18 days	-	-
		20 mg/ml	NaCl 0,9%	7 days	3 days	-	-
		20 mg/ml	NaCl 0,9%	18 days	18 days	-	-
VINBLASTINE	Chemotherapy drug	0,3 mg/ml	NaCl 0,9%	-	9 days	-	-
VINCRISTINE SULFATE	Chemotherapy drug	100 µg/ml	NaCl 0,9%	-	15 days	-	-
VINCRISTINE SULFATE + DOXORUBICIN HCL	Chemotherapy drug	8 µg/ml + 400 µg/ml	NaCl 0,9%	-	2 days	-	-

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From preparation to administration, Nipro Hospital Products has a comprehensive portfolio of disposable medical equipment for hospital and ambulatory use.

Nipro Hospital Products is one of the world's largest manufacturers of high quality needles and infusion products, producing over 11 billion needles annually. With a global network of 6 manufacturing plants, Nipro Hospital Products continues to advance high quality products known for their safety and ease of use.

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