

Tensyra™ N-10

(Octoxinol 10, Ph.Eur.)

PRODUCT IN FOCUS



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INTRODUCTION

Tensyra™ N-10 (Octoxinol 10; tert-octyl phenyl ethoxylate) is a non-ionic surfactant known for its excellent solubilizing and membrane-permeabilizing properties. It features a hydrophilic polyethylene oxide chain paired with a lipophilic aromatic hydrocarbon group. It readily breaks down biological membranes to lyse cells, solubilize proteins, and permeabilize cell membranes for assays.

Developed for high-performance applications, Tensyra™ N-10 is heavy metals free and meets the stringent requirements of ICH Q3D ensuring superior safety, compliance, and reliability.

Manufacture

The manufacturing process involves the controlled reaction of 4-(2,4,4-trimethylpentan-2-yl)phenol with ethylene oxide under basic conditions, maintained at specified time and temperature to achieve the desired product quality.

Applications

Tensyra™ N-10 is a widely used non-ionic surfactant and detergent, valued for its versatility across pharmaceutical, industrial, and laboratory applications. Some of the key applications are as follows;

- It is used in downstream processing (DSP) for biologic products as it facilitates the inactivation of lipid-enveloped viruses (such as HIV, HBV, and HCV) in biopharmaceutical manufacturing.
- In Pharmaceutical applications it is used as solubilizer & emulsifier to improve solubility of poorly water-soluble APIs, as formulation aid in liquid and semisolid formulations and supports consistent drug delivery and stability.
- Aids cell lysis for the extraction of proteins or organelles, while also permeabilizing the membranes of live cells.
- Acts as an excipient in pharmaceutical formulations to stabilize nanoparticles and colloids.

Synonyms	α -[4-(1,1,3,3-Tetramethylbutyl)phenyl]- ω -hydroxydeca (oxyethylene)
CAS no.	9036-19-5 & 9002-93-1
EINECS no.	618-344-0
Molecular formula	$(C_2H_4O)_n C_{14}H_{22}O$
Structure	

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SPECIFICATIONS – PH. EUR.

Test	Unit	Specification
Appearance	-	Almost clear, almost colorless to slightly yellowish liquid
Solubility	-	Should be miscible with water, ethanol (96 %) and vegetable oils
Identification (By IR-spectrum)	-	Should conform to the structure
Identification (By Cloud point)	-	Should pass the test
Acidity or alkalinity	-	Should pass the test
Cloud point	°C	63.0 – 70.0
Dioxane (By GC)	ppm	NMT 10.0
Ethylene oxide (By GC)	ppm	NMT 1.0
Hydroxyl value	-	85 - 101
Total Ash	%	Max. 0.4
Water (By Karl Fischer)	%	Max. 0.5
Microbial Enumeration Test		
Total aerobic microbial count (TAMC)	cfu /ml	NMT 100
Total yeast and mould count (TYMC)	cfu /ml	NMT 100
Bacterial Endotoxins Test	IU/ml	NMT 100

**Statements for Elemental Impurities (ICHQ3D) , Residual Solvents (ICH Q3C), Nitrosamines, Allergen can be provided upon request.*

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PACKING

2.5L Amber colored glass bottles or customized in accordance with global compliance standards

STORAGE

Store in a cool, well-ventilated place, out of direct sunlight

REACH status

Not registered

ExSyn offers Tensyra™ N-10, (Octoxinol10,Ph.Eur.) on commercial scales and welcomes enquiries. No matter the quantity you need, our exceptional quality and service will make ExSyn your supplier of choice! If you need any additional information or SDS, please contact us.