

SUPPLIED BY



**TRIMAR
EUROLUBE**

EXSPERSE 1000

General Product Information

- EXSPERSE 1000 is a general antiscalant for reverse osmosis systems, highly effective in Controlling the deposition of inorganic scale forming salts on membrane surfaces.
- EXSPERSE 1000 is an aqueous solution of a phosphinocarboxylic acid. It is compatible in Use with all major reverse osmosis membranes.
- EXSPERSE 1000 will control CaCO_3 , CaSO_4 , BaSO_4 , SrSO_4 , and CaF_2 , scale deposition
- EXSPERSE 1000 is tolerant of up to 0.5 mg /l total iron in the brine concentrate.
- EXSPERSE 1000 is certified to ANSI/NSF standard 60 for use in reverse osmosis systems Producing potable water.

Product Properties

The following are typical properties for EXSPERSE 1000 and should not be regarded as Specification limits for the product .

Appearance :	Pale, Yellow liquid
Odour :	Slight
pH :	9.0 to 10.0
Solids Content :	33 to 37% w/w
Specific Gravity at 20/20 ⁰ C :	1.19 to 1.21
Boiling Point Range :	100 to 110 ⁰ C
Freezing Point Range :	0 to- 5 ⁰ C

Chemical Reactivity

EXSPERSE 1000 is not affected by chlorine or other oxidizing biocides under normal Conditions of use. EXSPERSE 1000 may be used in membrane systems using chlorine and Sodium metabisulfite. EXSPERSE 1000 is hydrolytically stable. It does not form insoluble Sodium or potassium salts.

Applications and Dose Level

EXSPERSE 1000 is an aqueous solution of an organic acid and is corrosive in its Concentrated form. Corrosion resistant dosing equipment must therefore be used. Examples of suitable materials are 316L stainless steel, or plastics such as GRP,PVC, and PE . The recommended injection point is into the feedwater downstream of any Filtration equipment and cartridge filters.

EXSPERSE 1000 is miscible with water in all proportions. It may be applied as the neat Product, or as a solution in distillate, A minimum dosing solution strength of 10% w/w is recommended. EXSPERSE 1000 should be dosed continuously and proportionately to the feed water flow, to maintain the recommended dose level.

The dose level required is dependent on the quality of the feedwater and the saturation indices of the various scale forming species present in the concentrated brine. Proprietary computer software is used to calculate scaling indices and calculate optimum system recovery. Dose level projections and recommendations are available on request.

Health and Safety

EXSPERSE 1000 is an aqueous solution containing phosphinocarboxylic acid . From results of acute studies, it is classed as non-toxic, A Material Safety Data Sheet (MSDS) is available on request.

Regulatory

EXSPERSE 1000 is certified to ANSI/NSF Standard 60 for in reverse osmosis systems producing potable water.

Toxicology Data

Acute Oral LD ₅₀ :	>6000 mg/kg
Eye Irritation (rabbits) :	Non-irritant (EEC guidelines)
skin Irritation (rabbits) :	Non-irritant (EEC guidelines)

Ecological Data

96-hr LC ₅₀ (rainbow trout) :	>2000 mg/l
96-hr LC ₅₀ (zebra fish) :	> 2000 mg/l
96-hr LC ₅₀ (brown shrimp) :	> 20,000 mg/l
24-hr LC ₅₀ (daphnia) :	> 420 mg/l
72-hr LC ₅₀ algae inhibition) :	> 250 mg/l
COD :	780 mg oxygen/g
Biodegradability :	Not readily biodegradable (OECD 301E)

Logistics

Classification :	Non- hazardous for conveyance; Non-irritant for supply.
Packaging:	HDPE 200L XL – rung measure drum 932 x 580 mm Height x dia net weight: 210 Kg; Gross Weight: 218.5Kg EXSPERSE 1000 is also available in 50-lb.containers.

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