



# ALFOTERRA<sup>®</sup> L167-4S 90

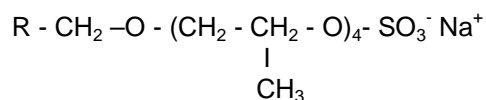
Technical Data Sheet No. 5220 – September 2012

## Product Description

ALFOTERRA<sup>®</sup> L167-4S 90 is the sodium salt of LIAL<sup>®</sup> 167 fatty alcohol propoxy-sulphate at about 85% active matter.

ALFOTERRA<sup>®</sup> L167-4S 90 is manufactured in Terranova dei Passerini plant (Lodi, Italy).

The chemical structure is the following:



R = C<sub>15</sub>H<sub>31</sub> or C<sub>16</sub>H<sub>33</sub> (linear & mono-branched carbon chain)

CAS registry no.: not defined  
EINECS no.: not defined, polymer

## Sales Specification

Property	Test Method	Unit	Specification <sup>1</sup>
√ Appearance at 25°C	Visual	-	Amber liquid
√ Anionic active matter *	Calculated	% mass	82.0-88.0
√ Unsulphated matter (HPLC)	RCM 1406	%mass	≤ 8
√ pH (5% active matter)	RCM 3645	-	6-10
√ Water (Karl-Fisher)	RCM 3804	% mass	≤ 15
√ Sodium sulphate	RCM3827	% mass	≤ 2

√ value reported on inspection certificate.

<sup>1</sup> specification No. D007741 rev01 of October 26<sup>th</sup>,2011

\* calculated:100 – water - unsulphated matter - Sodium sulphate

The product is buffered with Citric Acid

## Additional Properties

Property	Test Method	Unit	Typical Value
Viscosity at 20°C	ASTM D7042	mPa*s	2097
Viscosity at 40°C	ASTM D7042	mPa*s	655
Density at 20°C	ASTM D7042-04	g/cm <sup>3</sup>	1.042
Density at 40°C	ASTM D7042-04	g/cm <sup>3</sup>	1.027
Pour Point	RCM 3826	°C	Approx. +5

RCM are Sasol Italy analytical methods, internal or referred to international standard. Additional information available upon request.



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## Main Applications

ALFOTERRA<sup>®</sup> L167-4S 90 exhibits a unique extended surfactant structure allowing solubilization of oily materials in an aqueous medium by extending the interface. This chemical structure give at the surfactant unique emulsification properties and ultra-low interfacial surface tensions (IFT).

ALFOTERRA<sup>®</sup> L167-4S 90 improves oil recovery by cold wells (temperature lower than 60°C), improves the ability to emulsify oil/water and viceversa considering EACN range 12-16.

ALFOTERRA<sup>®</sup> L167-4S 90 is supplied as emulsifier in EOR and several differentiated oil applications such as cleaning tanks and drilling cuts.

ALFOTERRA<sup>®</sup> L167-4S 90 might be used alone or blended with other non-ionic surfactants as well as polymers.

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## Handling and Storage

ALFOTERRA<sup>®</sup> L167-4S 90 must be preferably stored in stainless steel or fibre glass tanks. The ideal storage temperature is +10 to +30°C. The product should be heated by glycol or hot water set to 45°C maximum temperature under gently stirring. Steam heating should be avoided as hot spots may degrade the product. For long-term storage (>15 days) the material should be maintained at +20 to +30°C, blanketed with nitrogen or other inert gas and gently mixed or recirculated.

Vigorous mixing which causes air entrapment should be avoided.

Contact with acids and/or treatment at temperature higher than 30°C for prolonged time could cause hydrolysis.

ALFOTERRA<sup>®</sup> L167-4S 90 is a viscous liquid at room temperature and it becomes not pourable at temperature lower than 5°C.

Diluted water solution of ALFOTERRA<sup>®</sup> L167-4S 90 can be easily prepared at room temperature by adding the product in water under stirring; addition of water to ALFOTERRA<sup>®</sup> L167-4S 90 has to be avoided because of the high viscosity of solutions at concentrations around 50% active.

ALFOTERRA<sup>®</sup> L167-4S 90 is not susceptible to microbial contamination. If the product is stored for several weeks it is recommended to carry out regular check of pH value.

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## Packaging

ALFOTERRA<sup>®</sup> L167-4S 90 is generally supplied in bulk by tank trucks or tank containers. It may also be delivered in plastic drums of 130 litres capacity or in IBC.

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Data regarding safety, transport classes, toxicology and biodegradability of the product can be obtained from the corresponding material safety data sheet.

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