

Solberg Asia Pacific Pty Ltd

Product Environmental Data Information



SOLBERG REHEALING FOAM™ RF3 FOAM CONCENTRATE (3%)

CHEMICAL FAMILY: Fire control agent

APPEARANCE: Water miscible, light to dark amber coloured liquid

COMPOSITION:

Water	<75 Wt.%
Emulsifiers	<12 Wt.%
Diethylene Glycol Butyl Ether	<10 Wt.%
Thickeners	< 8 Wt.%
Surfactants	< 5 Wt.%

USAGE:

Foams containing RF3 cover, and thus extinguish, hydrocarbon liquid-based fires. For more detailed usage information, see your technical service representative.

BIODEGRADATION:

The aerobic, aquatic ready biodegradability of RF3 in general accordance with the "Closed Bottle Test", OECD Method No. 301D was determined and found to be readily biodegradable with duplicate removal values of 90% and 84%. The mean removal value was calculated to be 87%. BOD (28-Day) was measure as 339,500mg/kg. COD was measures as 390,000mg/kg.

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AQUATIC TOXICITY DATA:

Daphnia magna (waterflea)

24-Hr EC ₁₀ :	>1000mg/L
24-Hr EC ₅₀ :	>1000mg/L
48-Hr EC ₁₀ :	216mg/L
48-Hr EC ₅₀ :	644mg/L
48-Hr NOEC:	260mg/L
48-Hr LOEC:	600mg/L

Oncorhynchus mykiss (Rainbow trout)

96-Hr EC ₁₀ :	25mg/L
96-Hr EC ₅₀ :	42mg/L
96-Hr NOEC:	25mg/L
96-Hr LOEC:	42mg/L

Growth Inhibition for Green Alga (*Selenastrum capricornutum*)

Cell Count 4-day EC ₁₀ :	5.3mg/L
Growth Rate 4-day EC ₁₀ :	6.9mg/L
Cell Count 4-day NOEC:	5mg/L
Cell Count 4-day LOEC:	8mg/L
Growth Rate 4-day NOEC:	5mg/L
Growth Rate 4-day LOEC:	8mg/L

Effect was determined to be algistatic based on the production of cells exposed to 60mg/L test substance during the definitive test.

EC₅₀ = Median Effective Concentration. It is the concentration of a substance necessary to produce the biological effect under study (immobilisation for *Daphnia* and reduced light production by microorganisms in the Microtox test) in 50% of the population of a test species exposed to it in a specified time.

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ENVIRONMENTAL INFORMATION ON FOAM RUNOFF DURING FIREFIGHTING ACTIVITIES:

Fire fighting services which use Solberg Rehealing Foam™ RF3 Foam Concentrate in actual firefighting activities will release RF3 in its diluted form to soil and sometimes aquatic environments. The rate of its degradation will depend on the characteristics of the receiving environment. This product is expected to biodegrade rapidly once naturally occurring organisms capable of degrading RF3 Foam establish themselves.

DISPOSAL OF PRODUCT:

For disposal of unused or collected material, Solberg Asia Pacific Pty Ltd recommends disposing of RF3 Foam by slowly discharging wastes to a properly operating wastewater treatment system. RF3 has no effect on activated sludge (OECD Guideline 209) at concentrations of 1000mg/L (30-Min & 3-Hr). Therefore, RF3 can be added to a waste stream at concentrations of >1000mg/L without effecting activated sludge in a wastewater treatment facility. If foaming occurs, reduce the discharge rate. Since regulations vary, consult applicable regulations or authorities before disposal.

Waste Water Treatment flow (L/Hr)	Amount of RF Foam Concentrate (L)	Total Time for Release in:		
		Minutes	Hours	Days
10,000	500	30,000	500	20.8
50,000	500	6,000	100	50
100,000	500	3,000	50	2.08

If foaming is a problem, add one of the follow antifoams (Litres per minute)

Antifoams	Waste Water Treatment flow (L/Hr)		
	10,000	50,000	100,000
Henkel WB-209	0.003333	0.016667	0.033333
GE Silicones AF9020	0.003333	0.016667	0.033333
Henkel Foammaster™ DS	0.003333	0.016667	0.033333
Wacker Silicones SRE	0.003333	0.016667	0.033333
Wacker Silicones SWS-214	0.006667	0.033333	0.066667
GE Silicones AF93	0.003333	0.016667	0.033333
GE Silicones AF72	0.003333	0.016667	0.033333
Wacker Silicones SE-36	0.005	0.025	0.05