

Technical Bulletin

DYNAX DX3001 FLUROSURFACTANT

DX3001 is an amphoteric fluorochemical surfactant of the perfluoroalkyl-betaine type. By itself, DX3001 is not soluble in water at room temperature, but is readily solubilized by hydrocarbon sulfate surfactants such as sodium octyl or sodium decyl sulfate which form a water soluble complex with the DX3001 betaine. Such complexes of DX3001 and alkyl sulfate salts provide surface tensions as low as 15.5 dynes/cm at very low concentrations in fresh and in sea water. DX3001-alkyl sulfate complexes are very rapidly equilibrating surfactant systems recommended especially for the formulation of aqueous film forming fire fighting agents and other applications where very low surface tensions in aqueous systems are required.

Typical Properties¹

Appearance	Amber liquid
Viscosity	60 Cp's
Structure	Fluoroalkyl Dimethyl Betaine
Ionic Character	Amphoteric
Actives	44±1%
Solvent System	Propylene glycol/water 11:1
Sodium Chloride	1.5% max.
pH	6.5 to 7.5 (2% actives in IPA/water, 1:4)
Storage	DX3001 should preferably be stored in original containers at temperatures not exceeding 50°C (122°F).
Stability	One year if stored in original containers at temperatures not exceeding 50°C (122°F).
Dilution	Because DX3001 per se is not soluble in water, it is recommended that it should be either blended with hydrocarbon surfactants or poured into aqueous solutions of hydrocarbon surfactants and preferably solutions of alkyl sulfate salts.

¹ Not for specifications

Surface Tensions of Solutions of DX3001 and Sodium n-Octyl Sulfate in Distilled Water.

DX3001 % Actives	Octyl Sulfate % Actives	Surface Tension Dynes/cm at 25°C (77°F)
0.100	0.160	15.5
0.050	0.080	15.5
0.025	0.040	16.5
0.010	0.016	19.0
0.005	0.008	24.0

Surface Tensions of Solutions of DX3001 and Sodium n-Decyl Sulfate in Distilled Water.

DX3001 % Actives	Decyl Sulfate % Actives	Surface Tension Dynes/cm at 25°C (77°F)
0.100	0.110	15.5
0.050	0.055	16.0
0.025	0.028	17.0
0.010	0.011	19.0
0.005	0.006	24.0

Product Safety

DX3001 is not eye irritant and is not skin irritant. The acute oral LD₅₀ of albino rats is greater than 5000 mg/kg

DX3001 is not derived from PFOS (Perfluorooctyl Sulfonate) or from PFOA (Perfluorooctanoic Acid). DX3001 does not degrade into PFOS or PFOA.

Precautions and First Aid

DX3001 should be handled with good industrial precautions. Safety goggles and rubber gloves, as well as protective clothing suitable to avoid skin contact should be worn. In case of contact with eyes, flush eyes with plenty of water and consult a physician. In case of skin contact, wash skin with plenty of soap and water.

Important Notice to Purchaser: All statements, technical information and recommendations contained herein are based on information and tests we believe to be reliable. The accuracy or completeness thereof are not guaranteed. Since conditions of use are outside our control, the purchaser should determine the suitability of the product for his intended use and assumes all risk and liability in connection therewith.
