

HEXAFOR™ 678-W

SHORT PERFLUORINATED CHAIN FLUOROSURFACTANT

DESCRIPTION

HEXAFOR™ 678-W is a water-based, non-ionic fluorosurfactant that effectively reduces surface tension at very low concentrations. **HEXAFOR™ 678-W** is based on short-chain molecule containing 6 fluorinated carbon atoms, that cannot breakdown to PFOA in the environment.

HEXAFOR™ 678-W has high property in terms of dynamic surface tension, allowing the coating formulations to reach rapidly the low values of static surface tensions.

It is stable in both acidic and basic conditions, making it perfect for paint and coatings.

SPECIAL FEATURES

- ❖ Specifically for water based systems
- ❖ Good reduction of surface tension at very low concentrations
- ❖ Excellent levelling
- ❖ Fast lowering of surface tension
- ❖ Reduced orange peel effect
- ❖ Improved wetting of substrates
- ❖ Improve hydro-oil repellency of Hexafor surface protection agents for porous mineral surfaces.
- ❖ **HEXAFOR™ 678-W** is exempt from the obligation imposed by REACH regulation because it is classified as a polymer.
- ❖ Meets the goals of the voluntary U.S. EPA 2010/2015 PFOA Stewardship Program
- ❖ Targeted below LOD for PFOA (**PFOA free***)

APPLICATIONS

HEXAFOR™ 678-W expresses its best properties already at very low concentration (0,04 – 0,8%).

Some examples of application:

- ❖ Paint and coating
- ❖ Floor waxes
- ❖ Graphic arts
- ❖ Emulsion polymerization
- ❖ Industrial detergents
- ❖ Adhesive

TECHNICAL INFORMATION

APPEARANCE	Colorless to pale yellow clear liquid
IONIC NATURE	Non ionic
DENSITY	1,05 g/cm ³
MOLECULAR WEIGHT	876 (indication only)
ACTIVE MATTER	24 – 26%
COMPOSITION	24 – 26 % active material 74 - 76 % Water

SPECIFICATION

Non volatile content: 24 – 26%

SOLUBILITY

Water, ethylene glycol, methoxypropanol, butyl cellosolve, dipropylene glycol methyl ether, ethanol, isopropyl alcohol, acetone

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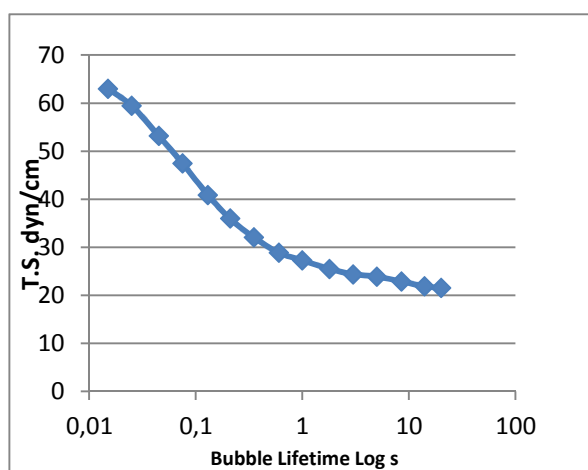


SURFACE TENSION IN WATER-BASED RESINS

Resin	Control	Hexafor 678-W (% a.m.)	
		0,1%	0,3%
Neorez R-9621	45,7	28,8	22,6
Joncryl 1532	39,6	31,1	24,6
Joncryl 8224	44,0	26,8	22,8
Joncryl 8330	43,2	25,8	20,9
Joncryl 8331	44,6	20,7	20,7

DYNAMIC SURFACE TENSION

(0,1% of active material in deionized water at 25°C)



- ❖ 36,0 dyn/cm at 0,21 sec (bubble lifetime)
- ❖ 27,3 dyn/cm at 1 sec (bubble lifetime)

STORAGE AND STABILITY

HEXAFOR™ 678-W is stable for two years if stored in original closed drums at temperatures of 4 – 45°C (39 – 113°F). If frozen, **HEXAFOR™ 678-W** can be liquefied by warming to 30 – 35°C (86 – 95°F). The efficacy of the surfactant is not impaired by freezing and thawing. However, if a freeze-thaw occurs, it is recommended that the entire contents of the container be agitated prior to use. Chemical stability: 2< pH < 12

FOAM VOLUME A 40°C (in deionized water) [ml]

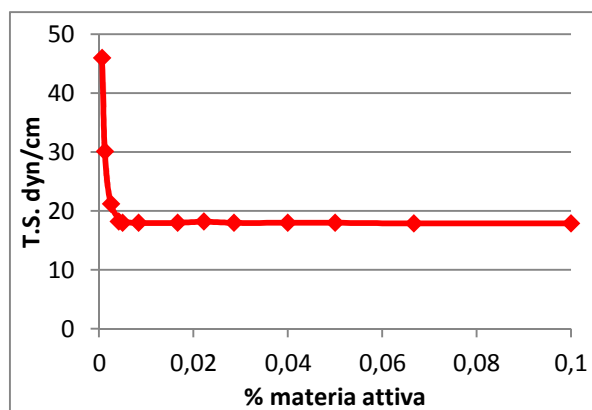
(Ross-Miles test according to ASTM D 1173)

	Initial	5 min
0,05% of active matter	206	157
0,15% of active matter	285	177
0,5% of active matter	412	363

SURFACE TENSION IN DEIONIZED WATER AT 25°C

(Wilhelmy plate method)

- ❖ 19,8 dyn/cm at 0,01% (active matter)
- ❖ 17,8 dyn/cm at 0,05%
- ❖ 17,6 dyn/cm at 0,1%



C.M.C. : 0,0045% in deionized water

PERSONAL SAFETY

HEXAFOR™ 678-W does not contain toxic substances. Consult the current **Safety Data Sheet** for safety use of the product.

PACKAGING

- ❖ Kg 5 – Drum
- ❖ Kg 25 – Drum
- ❖ Kg 100 – Drum

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TECHNICAL DATA SHEET



* Wherever the term "PFOA Free" is used in this website, it means content of PFOA is less than limit of detection (20ppb).

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