

Low VOC Sunscreen Spray

*Help shield yourself from UV radiation
with an Earth-friendly alternative*

Solstice Propellant (HFO-1234ze(E)), a breakthrough for aerosol-based products, and Solstice Enhance (HFO-1233zd(E)), a multifunctional solvent and carrier fluid, offer exciting possibilities for formulators. As nonflammable¹ alternatives to hydrocarbons and high global warming potential (GWP) hydrofluorocarbons, they are non-ozone-depleting, VOC-exempt,² with an **Earth-friendly** ultra-low GWP of one or less.

PHASE	TRADE NAME	INCI	WT%
Concentrate	PARSOL® 1789	Avobenzene	3
	PARSOL® HMS	Homosalate	15
	PARSOL® EHS	Octisalate	5
	PARSOL® 340	Octocrylene	10
	HallStar® DIPA	Diisopropyl Adipate	5
	WetFilm™	Trimethylpentanediol; Adipic Acid; Glycerin Crosspolymer	1
	dl-Alpha Tocopheryl Acetate	Tocopheryl Acetate	0.2
	Fragrance	Fragrance	0.4
	Solstice Enhance	Chlorotrifluoropropene	60.4
		TOTAL	100
Aerosolized	Concentrate		70
	Solstice Propellant	Tetrafluoropropene	30
		TOTAL	100

¹ ASTM E-681, EU A11

² Solstice Enhance: VOC-exempt (U.S. EPA), Solstice Propellant: VOC-exempt (U.S. EPA and CARB); negligible contribution to smog formation

FORMULATION PROCEDURE:

Pre-step: Chill Solstice Enhance (below 19°C) before combining with the formulation. Store in refrigerator.

Concentrate:

1. Weigh PARSOL 1789, PARSOL HMS, PARSOL EHS, PARSOL 340, Hallstar DIPA, and Wetfilm in a beaker.
2. Start heating to 70-75°C and mix with a stir bar to solubilize.
3. Once uniform, cool down to room temperature and add dl-Alpha Tocopheryl Acetate and Fragrance.
4. In a sealable vessel, add Solstice Enhance and mix until uniform.

Aerosolized:

1. Fill liquid concentrate into aluminum/ plastic cans in the order of addition.
2. Crimp valve on can.
3. Charge with Solstice Propellant.
4. Shake the can vigorously until uniform.

For more information:
call 800-631-8138
(U.S. and Canada)
or your local sales office.

www.hwll.co/personalcare

Honeywell Advanced Materials

115 Tabor Road
Morris Plains, NJ 07950

Solstice is a registered trademark of Honeywell International Inc.
PARSOL® 1789, PARSOL® HMS, PARSOL® EHS, PARSOL® 340 are registered trademarks of DSM Nutritional Products, LLC.
HallStar® DIPA is a registered trademark of Hallstar.
WetFilm™ is a registered trademark of INOLEX Incorporated.

Although Honeywell International Inc. believes that the information contained herein is accurate and reliable, it is presented without guarantee or responsibility of any kind and does not constitute any representation or warranty of Honeywell International Inc., either expressed or implied. A number of factors may affect the performance of any products used in conjunction with user's materials, such as other raw materials, application, formulation, environmental factors and manufacturing conditions among others, all of which must be taken into account by the user in producing or using the products. The user should not assume that all necessary data for the proper evaluation of these products are contained herein. Information provided herein does not relieve the user from the responsibility of carrying out its own tests and experiments, and the user assumes all risks and liabilities (including, but not limited to, risks relating to results, patent infringement, regulatory compliance and health, safety and environment) related to the use of the products and/or information contained herein. Solstice is a registered trademark of Honeywell International Inc.



RESPONSIBLE CARE®
OUR COMMITMENT TO SUSTAINABILITY

6406 FP PC LTR | v1 | 06/ 2020
© 2020Honeywell International Inc. All rights reserved.

Honeywell