

EUPHORICS™

Technical Data Sheet

CHARACTERISTICS:

EUPHORICS™ is an innovative flavor product from John I. Haas, Inc. (HAAS®) that provides a range of water-soluble, intense flavors designed from distilled essential oils found in hops and in other botanical sources. This versatile flavor tool can be used to complement the hop aroma in heavily hopped beers or as a building block in any other beer style or beverage.

PRODUCT SPECIFICATIONS

Description:	Water-soluble blend of essential oils derived from hops and other botanical sources
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Appearance:	Opaque, white to pale yellow liquid
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Product aroma profiles:	<ul style="list-style-type: none">- Peachy Keen: Peach, Tropical, Berry- Cosmic Guava: Guava, Cannabis, Tangerine- Pineapple Paradise: Pineapple, Citrus Zest- Pomelo Daydream: Grapefruit, Tropical- Strawberry Surge: Strawberry, Cherry, Tangerine Zest- Mango Mirage: Mango, Sweet Orange, Guava- Cloud Lime: Lime Peel, Mango, Pine Needles- Moonlit Dark Berry: Mixed Berries, Grape Soda, Cannabis- Hypnotropic: Tropical Punch, Cantaloupe, Bubblegum
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Specific Gravity:	1.01 – 1.05
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pH:	2.5 – 4.0
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Viscosity:	10 – 40 mPa·s
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QUALITY AND FOOD SAFETY:

HAAS® maintains food safety and quality management systems registered to the FSSC 22000 and ISO 9001 standards. Please refer to our website (www.johnihaas.com) for more information on our systems and programs.

PRODUCT USE:

All the flavors in the EUPHORICS™ product line are completely water soluble and solvent free, and are intended for addition to the final beverage, prior to packaging. A suggested dosage range of EUPHORICS™ is listed in Table 1 for different beverage matrices. Laboratory scale trials are recommended to determine which dose gives the desired effect. On the lower end of the suggested dosing rate, the evaluations can be carried out using a minimum of 32 fl oz (946 mL) of beverage, using a 10-100 µL micropipette.

On a production scale, EUPHORICS™ may be added without prior dilution to beer and other beverages after the final filtration, preferably by metered injection into a turbulent liquid stream during transfer. Alternatively, it can be dosed directly into a bright beer tank, with or without the use of a brink or other external vessel. For the direct application to a finished beverage, EUPHORICS™ should be diluted in water to at least 25% v/v and applied via an atomizer. Laboratory tests showed that EUPHORICS™ can be added to beer without deterioration in foam stability. EUPHORICS™ products are light-stable.

Matrix	EUPHORICS Dose rate (% v/v)	Bench trials: dose for 32 fl oz (0.95 L) of beverage
Beer and NA Beer	0.003 – 0.010	28 µL - 95 µL
Waters and Tea	0.001 – 0.006	10 µL - 57 µL
Hard Seltzers & FMB	0.001 – 0.010	10 µL - 95 µL

Table 1. Suggested dosage rate ranges and guidelines for benchtop trials.

Please refer to our General Description and Application Guidelines, as well as to our EUPHORICS™ White Paper for additional information.

PACKAGING:

Containers meet all food industry packaging regulations.

STORAGE AND BEST-BY RECOMMENDATION:

Store the product in refrigerated conditions. Do not freeze.

When stored under refrigeration (35 – 46 °F / 2 – 8 °C), in airtight, sealed containers, EUPHORICS™ is stable for up to 12 months. To preserve freshness, the product should not be stored at ambient temperature (71.6 °F/22 °C) for more than 3 months. For open containers, we recommend blanketing the headspace with nitrogen gas before resealing. Once opened, keep containers refrigerated and use within 1 month.

SAFETY:

This product is concentrated and should not be consumed undiluted. Any material that contacts skin should be washed off with soap and water. For more information, download the relevant Safety Data Sheet (SDS) from the HAAS® website.

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LABELING

Alcohol and Tobacco Tax and Trade Bureau (TTB)-approved. Flavor Ingredient Data Sheets (FIDS) are available upon request.

When used in beer and other alcoholic and non-alcoholic beverages, EUPHORICS™ should be declared as a flavoring in accordance with recommended ingredient and/or nutritional labeling guidelines as may apply to the specific beverage type.

This product contains ingredient(s) which are approved for use by the Food and Drug Administration (FDA) and/or are listed as Generally Recognized as Safe (GRAS) for use in beverages on a reliable, published industry association list pursuant to 21 CFR 101.22.

TECHNICAL SUPPORT:

We are pleased to offer support for the many uses and applications of this product and can be contacted at brewing.solutions@johnihaas.com.

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Change/Review Log

Revision	Description of Changes (w/ reason why)	Revised By	Approved By	Reviewed By	Date of Last Review
00	Created document for new product	Alejandro Cortés Bryan Ball	Brian Buffin		01/08/2024
01	Updated document with new product name and new names for each flavor profile. Added new flavor profile for fourth flavor. Changed product description to match that on SDS. Updated storage recommendations.	Bryan Ball Caitlin Rippner	Brian Buffin		03/19/2024
02	Stylistic changes in Characteristics section. Removed benefits and features chart and rephrased bench trial recommendation in Product Use section. Updated storage and best-by recommendations. Added Labelling section. Minor formatting and grammar changes. Removed Haas/BarthHaas logo in favor of combined logo with HPA included, and moved logos to footer. Replaced product name with type treatment font.	Alejandro Cortés Bryan Ball	Brian Buffin	Josh Vigansky	04/17/2024
03	Added viscosity range to the Product Specifications section.	Bryan Ball	Brian Buffin	Caitlin Rippner	05/06/2024
04	Added note to Safety section not to consume the product undiluted. Added a note to Product Use section to advise use of an atomizer to directly dose product into finished beverage. Edited formatting of document.	Bryan Ball	Conor O'Brien	Caitlin Rippner Alejandro Cortés Jeff Dailey	08/29/2024
05	Updated HPA logo in footer.	Bryan Ball	Conor O'Brien		11/12/2024
06	Minor formatting changes.	Bryan Ball	Conor O'Brien		2/4/2025
07	Added new flavors to the flavor range section; renamed flavor range to "Product Aroma Profiles". Removed blanket descriptions of the product as a "Natural" flavor.	Bryan Ball	Conor O'Brien		4/7/2025