

Product Information Sheet
KRYSTAR® 450 Crystalline Fructose
00000000015100105
300000001453

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1. Supplier Information

Name: Tate & Lyle
Address: 2200 E Eldorado
Decatur, IL 62525
USA
Main Phone: 1-217-423-4411
Main Fax: 1-217-421-2628
E-mail: orders@tateandlyle.com

2. Emergency Contacts

Normal Business Hours: 1-800-526-5728
After Hours Emergency: 1-217-972-2230
Fax: 1-217-421-2628

3. Product Information

Common Name: Fructose
Material Number: 15100105
Specification Number: 300000001453
CAS Number: 57-48-7
21 CFR References: 21 CFR 182.1

Food Grade: Yes
Appearance: Crystalline
Color: White
Odor:

4. Regulatory Status

- Complies with FDA regulation 21CFR182.1 as Fructose - Generally recognized as safe.

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5. Ingredient Statement

Fructose

6. Quality Documents

Quality documents (Specification, Technical Data Sheet, MSDS & Nutritional) available upon Request.

7. Kosher/Halal Status

Certified Kosher: Yes

Certified Kosher for Passover: No

The above-mentioned ingredient or its components is certified Kosher by:

- Orthodox Union (OU)

Certified Halal: Yes

8. Allergen Status

If present in this Tate & Lyle ingredient, allergens will be denoted as "Present" in the table below:

Allergen	Status
	Absent

Meaning of Present/Absent/Present-Exempt

Present - Intentionally added during the production process.

Absent - Not intentionally added during the production process.

Present-Exempt - Intentionally added during the production process, however have been given exemption from being required to be labeled on the final package.

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The above list of allergens is in accordance with all applicable EU and US legal requirements.

Additional allergen information:

- The above-mentioned ingredient does not originate from substances having allergenic properties for which labeling is required as defined in the Food Allergen Labeling and Consumer Protection Act of 2004 (Public Law 108-282, Title II). Specific allergens listed in this Act are milk, eggs, fish (e.g., bass, flounder, cod), Crustacean shellfish (e.g., crab, lobster, shrimp), tree nuts (e.g., almonds, walnuts, pecans), peanuts, wheat, and soybeans.

9. Sulfur Dioxide and Sulfite Level

The sulfur dioxide and sulfite level for above-mentioned ingredient or its components is:

<u>Package</u>	<u>Sulfur Dioxide and Sulfite Level</u>
Multiwall Bag	< 10 ppm

10. Gluten Status

This product is not either originating from gluten containing cereals or not identified as containing gluten and complies with the applicable EU and US legal requirements based on real-time PCR gluten test methodology. It can be safely used in foodstuffs for people intolerant to gluten.

11. GMO Statement

The above-mentioned ingredient is manufactured from corn. Tate & Lyle purchases the corn used in our manufacturing plants from the U.S. corn market. Current growing techniques and grain handling systems intersperse various varieties of corn so it is difficult to segregate the non-GMO corn from the GMO corn varieties. There are no systems in place for the segregation of the quantities of non-GMO corn needed to supply the hundreds of thousands of bushels needed daily by our manufacturing plants. We are unable to certify that the above products are manufactured from non-GMO corn.

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12. Irradiation, ETO and Sewage Sludge

The above-mentioned ingredient or its components have not been produced and handled with the use of:

1. treatment with ionizing radiation
2. exposure to ethylene oxide
3. sewage or sludge.

13. Organic Statement

- Products manufactured at this Tate & Lyle facility are not designated as Organic.

14. Diet Suitability

Vegetarian: Suitable

Vegan: Suitable

Ovo-Vegetarian: Suitable

Lacto-Vegetarian: Suitable

Lacto-Ovo-Vegetarian: Suitable

15. Bovine Spongiform Encephalopathies (BSE) /Transmissible Spongiform Encephalopathies (TSE)

1. This ingredient does not contain ingredients of animal origin.
2. If processing aids are contained in this ingredient, the processing aids are not derived from animal origins.
3. Prior to the manufacture of this ingredient, no ingredients of animal origin are present in equipment.

16. Sudan I – IV Dyes Content

- The above-mentioned ingredient or its components do not contain Sudan azo dyes (this includes Sudan I, Sudan II, Sudan III and Sudan IV, which is also known as scarlet red).

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17. Country of Origin

The above-mentioned ingredient or its components is manufactured in the following country:
United States

18. Shelf Life

The expected shelf life for the ingredient based on being stored under the proper storage conditions:

<u>Package</u>	<u>Shelf Life</u>
Multiwall Bag	540 Days

19. Transportation Information/Storage Conditions

Storage Conditions

<u>Container</u>	<u>Storage Temperature</u>	<u>Storage conditions to achieve maximum shelf life</u>
Multiwall Bag	< 25 °C	Optimum storage conditions for KRYSTAR are 25°C (77°F) or lower, and less than 50% relative humidity. Crystalline fructose begins to absorb moisture at 56% relative humidity and room temperature. Unopened bags are designed to protect KRYSTAR under optimum warehouse conditions up to 18 months. Crystalline Fructose is a very stable molecule however temperature and humidity should be controlled to avoid potential lumping. These lumps are usually pliable and are easily broken by massaging the bags prior to opening or passing the crystalline fructose thru de-lumping machinery. For further information please

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reference the Tate & Lyle “Krystar
Crystalline Fructose Storage and Handling”
technical bulletin.

20. Lot Code Explanation

Batch Numbering Scheme:

PACKED PRODUCTS

PPYYM9NNNN

PP - Plant ID

YY - Last two digits of the year (2012)

M - Month (A, B, C, D, E, F, G, H, I, J, K, L for Jan - Dec)

9NNNN - Plant related sequential number

Example: KO12G91130

KO - Plant ID for Tate & Lyle Netherlands

12 - Last two digits of the year (2012)

G - Month, July

91130 - Plant related sequential number

BULK DELIVERIES

PPYYMNNNNN

PP - Plant ID

YY - Last two digits of the year (2012)

M - Month (A, B, C, D, E, F, G, H, I, J, K, L for Jan - Dec)

NNNNN - Plant related sequential number

Example: KO12G00001

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21. Certificate of Analysis

- Certificates of Analysis are available by request.

22. current Good Manufacturing Practices (cGMP)

- The process used for the production of this product is operated based on Tate & Lyle's procedures, quality guidelines, HACCP programs and Good Manufacturing Practices. This operation complies with the FDA Good Manufacturing Practices detailed in 21 CFR 110 for Food Manufactures, and those referenced in the European Commission Regulation (EC) No. 852/2004 on hygiene of foodstuff.

23. Guarantee (Continuing)

- Available upon request.

24. HACCP/Flowchart

- Available upon request.

25. Audit Information

- Third Party audits are performed annually at Tate & Lyle locations. Information available upon request.

26. Emergency/Recall Procedures

- Please be assured that Tate & Lyle has a written Recall Procedure. In the event of an actual recall, Tate & Lyle will notify all customers who have receive affected product. Mock Recalls are conducted at least annually.

27. Bioterrorism

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- Tate and Lyle is in compliance with 21 CFR Part 1-Registration of Food Facilities, and Maintenance and Inspection of Records for Foods, under Public Health Security and Bioterrorism Preparedness and Response Act of 2002. Due to concerns with security, our legal department limits giving out the plant number unless there is an imperative border crossing issue.

28. Pest Control

- Tate & Lyle employs outside contractors to provide routine pest control service.

29. Pesticides

- Tate & Lyle has an ongoing pesticide monitoring program.

30. Proposition 65

- The State of California enacted the Safe Drinking Water and Toxic Enforcement Act of 1986 ("Proposition 65"), which "prohibits any person in the course of doing business from knowingly and intentionally exposing any individual to a chemical known to the State of California to cause cancer or reproductive toxicity without first giving clear and reasonable warning to such individuals." In our effort to satisfy the requirements of this law, independent laboratory analyses were obtained for those products which we manufacture or formulate for sale to you. The results of this analysis confirmed that there are no chemicals regulated under Proposition 65, other than naturally occurring chemicals, detectable in our products using standard analytical methods.