



**\*\*\* MATERIAL SAFETY DATA SHEET \*\*\***

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

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PRODUCT NUMBER	51-6024
PRODUCT NAME	HI FLO ® modified food starch
Manufacturer	National Starch & Chemical Company P.O. Box 6500, 10 Finderne Avenue Bridgewater, NJ 08807 USA
	EMERGENCY PHONES:
	MEDICAL: 866-359-5657 (Health & Safety Call Center-24 hours)
	TRANSPORT: CHEMTREC: 800-424-9300 (24 hours)
	CHEMTREC International: 703-527-3887 (call collect)
	Corporate Emergency Phone: 908-685-5100 (24 hours)
	MSDS Requests/Customer Service: See phone numbers in Section 16

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

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CHEMICAL FAMILY	Modified Starch	CAS NUMBER	CONCENTRATION
COMPONENT			(% by weight)
None classified as hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200).			

**3. HAZARDS IDENTIFICATION**

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EMERGENCY OVERVIEW

Possible physical irritant from dust particles. Potential for dust explosion.  
White Powder. Starch odor

EYE	Particulates may scratch eye surfaces and cause mechanical irritation.
SKIN CONTACT	Low order of toxicity.
INHALATION	This product can produce a nuisance dust which should be maintained below a time weighted average of 10 mg/m <sup>3</sup> .
INGESTION	Low oral toxicity.

**4. FIRST-AID MEASURES**

EYE	Remove particles by irrigating with eye wash solution or clean water, holding the eyelids apart. If symptoms develop, obtain medical attention.
SKIN CONTACT	Wash skin with soap and water.
INHALATION	Remove to fresh air. Get medical attention if irritation persists.
INGESTION	None required.

**5. FIREFIGHTING MEASURES**

AUTOIGNITION	Not available
FLASH POINT	Not applicable
EXTINGUISHING MEDIA	Dry Chemical; CO2; Water Fog; Foam
SPECIAL FIREFIGHTING PROCEDURES	No special procedures are required.
FIRE & EXPLOSION HAZARDS	Minimum ignition temperature of dust cloud- approx. 390 C. Minimum explosive concentration- approx. 70 mg/l. Minimum energy to ignite cloud by electrical spark- approx. 0.06 joules.
HAZARDOUS COMBUSTION PRODUCTS	This product does not undergo spontaneous decomposition. Typical combustion products are carbon monoxide, carbon dioxide, nitrogen and water.
LOWER EXPLOSION LIMIT (%)	Not applicable
UPPER EXPLOSION LIMIT (%)	Not applicable

**6. ACCIDENTAL RELEASE MEASURES**

SPILL AND LEAK PROCEDURES	Normal precautions for "nuisance dust" should be observed. Avoid prolonged inhalation of dust. Sweep up or vacuum up and place in suitable container for disposal.
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For safety and environmental precautions, please review entire Material Safety Data Sheet for necessary information.

**7. HANDLING AND STORAGE**

STORAGE TEMPERATURE	Ambient.
SENSITIVITY TO STATIC ELECTRICITY	Yes
SENSITIVITY TO MECHANICAL IMPACT	No
OTHER PRECAUTIONS	Use care to minimize dust generation in normal use conditions. Avoid dispersing the powder in the air. Prevent buildup of powder on surfaces.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

<u>ACGIH</u>	<u>OSHA</u>	<u>Mfg Working Standard</u>
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**COMPONENT**

There is no evidence that this product poses a carcinogenic risk under normal conditions of handling and use.

**CHRONIC (LONG TERM) EFFECTS OF EXPOSURE**

EFFECTS OF CHRONIC EXPOSURE	This product is considered as being non-toxic. Use of good industrial hygiene practices is recommended.
TARGET ORGANS	Not applicable.

**12. ECOLOGICAL INFORMATION**

POTENTIAL TO BIOACCUMULATE	Unknown.
AQUATIC TOXICITY	None Established

**13. DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL METHODS	Disposal should be in accordance with local, state or national legislation.
EMPTY CONTAINER WARNINGS	Empty containers may contain product residue; follow MSDS and label warnings even after they have been emptied.

**14. TRANSPORTATION INFORMATION**

This section provided for general information only.

FOR NON-BULK SHIPMENTS.

FOR MORE COMPLETE TRANSPORTATION REGULATORY INFORMATION PLEASE REFER TO THE SHIPPING DOCUMENTS ACCOMPANYING THE SHIPMENT OF THIS PRODUCT.

**DOT CLASSIFICATION**

PROPER SHIPPING NAME	Not regulated.
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The information provided herein may not include the impact of additional regulatory requirements (eg, for materials meeting the definition of a hazardous waste under RCRA, hazardous substances under CERCLA, and/of marine pollutants under CWA or other similar federal, state or local laws) or any associated exceptions or exemptions under regulations applicable to the transport of this material.

**15. REGULATORY INFORMATION**

**USA**

TSCA

This product is manufactured in compliance with all provisions of the Toxic Substances Control Act, 15 U.S.C. 2601 et. seq.

FDA

21CFR172.892.

SARA/TITLE III

CAS NUMBER

CONCENTRATION

(% by weight)

Contains no substances at or above the reporting threshold under Section 313.

**16. OTHER INFORMATION**

HMIS® Hazard Ratings

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs by OSHA's 29 CFR 1910.1200, we choose to provide them as a service to our customers using HMIS®. These ratings are to be used only with a fully implemented HMIS® program. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

NPCA recommends that employers must determine appropriate PPE for the actual conditions under which this product is used in their workplace. For information on PPE codes, consult the HMIS® Implementation Manual.

HMIS® is a registered trademark of the National Paint and Coatings Association (NPCA).

<u>Health</u>	<u>Flammability</u>	<u>Reactivity</u>
1	1	0

MSDS DATE

12-January-2005

FOR INFORMATION CONTACT:

For product information, contact:

National Starch & Chemical Company

National Starch Food Innovation

Customer Service: 1-800-859-8569

Technical Service Support: 1-800-743-6343

ADDITIONAL INFORMATION: The information given and the recommendations made herein apply to our product(s) alone and are not combined with other product(s). Such are based on our research and on data from other reliable sources and are believed to be accurate. No guaranty of accuracy is made. It is the purchaser's responsibility before using any product to verify this data under their own operating conditions and to determine whether the product is suitable for their purposes.