

Technical Packet

MoistureLok™

Powder

COMPARISON OF HUMECTANTS

Ingredient	Humectancy Value	Issues
MoistureLok™ Powder	5.00	<ul style="list-style-type: none"> • None
Invertase	4.00	<ul style="list-style-type: none"> • Expensive • High pH destroys leavening • Artificial
Invert Sugar	1.00	<ul style="list-style-type: none"> • Highly acidic-suppresses leavening • High water activity • Short shelf-life in baked goods
High-Fructose Corn Syrup	0.78	<ul style="list-style-type: none"> • Unstable <ul style="list-style-type: none"> - Crystallizes at 65°F - Burns at 140°F • Accelerates malliard browning • Does not extend shelf life
Honey	0.72	<ul style="list-style-type: none"> • Bacteriologically active • Non-standardized ingredient • Flavor hard to mask • High water activity • Accelerates malliard browning • Allergenic
Glycerin/Glycerol	0.60	<ul style="list-style-type: none"> • Bad aftertaste • Not a very effective humectant
Polyols (Sorbitol, Mannitol Maltitol, Lactitol, Xylitol)	0.58	<ul style="list-style-type: none"> • Laxative side effect • Not a very effective humectant • Highly acidic-suppresses leavening • Artificial

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MoistureLok™ - POWDER
PRODUCT SPECIFICATIONS

Description – MoistureLok™ Powder is a carbohydrate and fiber-based powder formed from dextrose, dextrin and fiber. This combination creates a very effective humectant that can bind a large amount of water into food while maintaining a low level of water activity. MoistureLok™ Powder is a cream-to-gold colored powder that is stable at room temperature and does not require special handling.

Ingredient Declaration: MoistureLok™ Powder (dextrose, dextrin, fiber)

Other Declarations MoistureLok™ Powder is GMO-free, gluten-free, and contains no MSG. It is GRAS (Generally Recognized As Safe) under U.S. food standards. MoistureLok™ Powder is also Kosher and Pareve under supervision of the Orthodox Union (OU).

<u>Proximate Analysis*:</u>	Carbohydrate Profile (naturally occurring)	(%)	78.3
	Monosaccharides	(%)	32-37
	Disaccharides	(%)	10-13
	Higher Saccharides	(%)	2-4
	Fiber	(%)	28.8
	Moisture	(%)	16.5
	Protein	(%)	1.70
	Ash	(%)	2.0
	Fat	(%)	0.3
	Solids	(%)	83.5

*These values are dependent upon natural ingredients and therefore may vary slightly.

Density: 26 lbs. per cu. ft.

Mesh Size: 90% through 14 mesh

Color: Cream-gold

<u>Microbial:</u>	Total Plate Count	<1000/gram	Total Coliform	<10/gram
	Yeast	<20/gram	Salmonella (in 100 gram)	negative
	Mold	<20/gram	E. Coli (in 100 gram)	negative
	Staph aureus	negative	Listeria monocytogenes	negative

Pack Size, Storage and Shipping: Net Weight - 40 lbs per bag (Gross Weight: 42 lbs per bag). Net Weight per pallet maximum is 1,600 lbs. - 40 bags per pallet (5 per row, 8 high). Pallet size: 48" x 40". **ALL PALLETS SHOULD BE SLIPSHEETED AND SHRINKWRAPPED. DOUBLE STACKING PALLETS MAY CAUSE SOME CLUMPING OF THE POWDER. DO NOT TOP STACK WITH OTHER PRODUCTS.**

Shelf Life: To avoid possible compaction and clumping, we suggest ordering no more than a two-month supply. The best practice is to use partial bags immediately or seal thoroughly from air and moisture. Properly shipped and stored, this ingredient is stable for at least six months after it is produced.

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CARBOHYDRATE PROFILE

TECHNICAL DATA SHEET

MoistureLok™ Powder is a blend of dextrose, dextrin and fiber which has been combined to produce a powder with a distinctly bland and slightly sweet taste. The carbohydrate profile which appears below is provided as a range due to the normal variations in natural ingredients.

MoistureLok™ Powder Carbohydrate Profile (Naturally Occurring)

Sugars:	% of Total Carbohydrates
Monosaccharides	40-48%
Disaccharides	12-18%
Fiber	34-40%
Other Carbohydrates:	<u>1-7%</u>
Total	100%

Under the NLEA, the carbohydrates in MoistureLok™ Powder would be divided into the following categories on labels and claimed according to serving content.

Total Carbohydrates:	78g/100g
Sugars	46g/100g
Total Fiber	29g/100g
Other Carbohydrates	3g/100g

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<u>Assay*</u>	<u>Analysis</u>	<u>Units</u>
Protein (N X 6.25)	1.70	g/100g
Moisture	16.5	g/100g
Fat	0.3	g/100g
Ash	2.0	g/100g
Carbohydrates	78.3	g/100g
Calories	223.6	calories/100g
Sulfite-IC	<0.4	mg/100g
Fiber	28.8	g/100g
Calcium (mg)	476.0	mg/100g
Iron (mg)	2.26	mg/100g
Potassium	117	mg/100g
Sodium	128	mg/100g

* The above assay is typical analysis and should not be construed as specifications. Since MoistureLok™ Powder is not a refined product, variations in the natural raw materials (dextrose, dextrin and fiber) will cause slight changes in the above assay.

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MoistureLok™ - POWDER
MATERIAL SAFETY DATA SHEET

DISCLAIMER - MoistureLok™ Powder is produced according to appropriate food regulations, and it is not a hazardous chemical. The following information is being supplied as a convenience for customers.

SECTION I - PRODUCT IDENTIFICATION

Product Name: MoistureLok™ Powder
Food/Chemical Name: Dextrose, dextrin, fiber
Chemical Family: Carbohydrate

SECTION II - HAZARDOUS INGREDIENTS

Material: None

SECTION III - PHYSICAL DATA

Boiling Point: N/A
Melting Point: N/A
Specific Gravity: 26 lbs. per cu. ft.
Vapor Pressure: N/A
Vapor Density: N/A
Water Solubility: Completely soluble
Appearance, Odor, Taste: Cream-gold powder, odorless, sweet-powdery taste

SECTION IV - FIRE PHYSICAL HAZARD DATA

Flash Point: N/A
Flammable Limits: N/A
Fire Extinguishing Media: Water
Hazardous Decomposition Products: None
Hazardous Polymerization: Will Not Occur
Conditions to Avoid: Fire and Flame
Unusual Fire/Explosion Hazard: Dust explosion may occur if suspended in air with ignition source
Incompatibility: Powerful oxidizing agents such as perchloric acid

SECTION V - HEALTH HAZARD

Effects of Overexposure: Inhalation - None known
Ingestion - No health hazard, can be used as human food
Signs and Symptoms of Overexposure: Unknown
Primary Route(s) of Entry: Ingestion
Exposure Limits: None known

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MATERIAL SAFETY DATA SHEET (cont.)

SECTION VI - LISTING AS A CARCINOGEN

National Toxicology Program Annual Report on Carcinogens: Not Listed

International Agency for Research on Cancer Monographs: Not Listed

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Hygienic Practices: Normal housekeeping measures, water cleanup

Protective Measures During Repair/Maintenance: Dust Masks

Waste Disposal Method: Landfill - Material is biodegradable and not harmful

Special Fire Fighting Procedures: None

Extinguishing Media: Water or CO₂

SECTION VIII - CONTROL MEASURES

Engineering Controls:	None
Ventilation:	Usual GMP ventilation should be adequate
Work Practices:	No smoking in work area
Respiratory Protection:	Not required
Eye Protection:	Not required
Other Protective Equipment:	Not needed

SECTION IX - EMERGENCY AND FIRST AID PROCEDURES

None

SECTION X - PRODUCT STORAGE

Storage: ALL PALLETS SHOULD BE SLIPSHEETED AND SHRINKWRAPPED.

In Use: Use partial bags immediately or seal thoroughly from air and moisture.

Stability: To avoid compaction and clumping, order no more than a two-month supply. Properly shipped and stored, this ingredient is stable in finished products for 12 months.

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APPLICATIONS

Bacon	Hot Dogs
Bagels	Jelly Rolls
Breads	Mixes
Brownies	Muffins
Cakes	Pastries & Torts
Cinnamon	Pork
Rolls	Pork Belly
Chicken	Pork Loins
Chicken	Pork Shoulders
Burgers	Processed Beef
Chicken Dogs	Rolls
Danish	Sausage
Donuts	Scones
Ham	Steaks
Hamburgers	Sweet Dough