

# Cornmeal, Soy-Fortified

This processed commodity is most used in emergency programs and to a lesser extent in other categories.

## 1. NUTRITIONAL VALUES (per 100 g)

These are average values, taken from the U.S.

Department of Agriculture, Agricultural Research Service (USDA:ARS) 1998 USDA Nutrient Database Laboratory Home Page, Release 12,

(<http://www.nal.usda.gov/fnic/foodcomp>). These nutrient values are provided as a guide for use in the calculation of food aid rations; users should be aware that shipments of food aid may vary from these exact values. The values for thiamin, riboflavin, niacin, vitamin A, calcium and iron represent the minimum levels of enrichment nutrients (converted to a 100 g basis) as listed in Specifications below.

## 2. COMPONENTS

85% Cornmeal	Degermed to reduce susceptibility to rancidity.
15% Soy Flour	Defatted and toasted.
Vitamins & Minerals	Added to help meet nutritional requirements.

## 3. SPECIFICATIONS

(See Table next page)

## 4. PACKAGING

25 kg (55 lb.) bags of multi-wall Paper. Three plies of paper (minimum) with an inner polyethylene or polypropylene plastic liner. The outer paper ply is treated to provide wet strength.

## 5. SHELF LIFE

At least one year. See "Section III: Storage/Shelf Life Specifications" for more information.

Nutrient	Amount	Unit
Water	10.9	g
Energy	360.2	Kcal
Protein	14.9	g
Total Lipid	1.6	g
Carbohydrate	71.1	g
Fiber, total dietary	8.92	g
Ash	1.4	g
Calcium	110	mg
Iron	2.90	mg
Magnesium	77.50	mg
Phosphorus	173	mg
Potassium	495	mg
Sodium	5.6	mg
Zinc	1.0	mg
Copper	0.7	mg
Manganese	0.5	mg
Selenium	7	mcg
Vitamin C	0	mg
Thiamin	0.44	mg
Riboflavin	0.26	mg
Niacin	3.53	mg
Pantothenic acid	0.6	mg
Vitamin B-6	0.3	mg
Folate	150	mcg
Vitamin B-12	0	mcg
Vitamin A	2205.00	IU
Vitamin E	0.3	mg-ATE
Vitamin D	n/a	IU
Iodine	n/a	mcg

**CHEMICAL AND PHYSICAL REQUIREMENTS**

<b>ITEM</b>	<b>REQUIREMENT<sup>1</sup></b>	
	<b>Minimum</b>	<b>Maximum</b>
Moisture	--	13.0
Protein (Nx6.25), % <sup>2</sup>	13.0	--
Fat, % <sup>2</sup>	--	1.5
Crude Fiber, % <sup>2</sup>	--	2.0
Ash, % <sup>2</sup>	--	<sup>3</sup>
Material that will pass through U.S. Standard No. 20 woven-wire-cloth sieve, %	99	--
Material that will pass through U.S. Standard No. 25 woven-wire-cloth sieve, %	91	--
Material that will pass through U.S. Standard No. 45 woven-wire-cloth sieve, %	40	--
Material that will pass through U.S. Standard No. 80 woven-wire-cloth sieve, %		

<sup>1</sup> All values are on the basis of weight.

<sup>2</sup> These limiting values are on a moisture-free basis.

<sup>3</sup> For maximum ash see Table on "Maximum Ash Allowable Without Discount at Specified Calcium Levels" (paragraph 9.D) in USDA Specifications.

<b>ENRICHMENT INGREDIENTS</b>	<b>Minimum</b>	<b>Maximum</b>
Thiamine, mg/lb.	2.0	3.0
Riboflavin, mg/lb.	1.2	1.8
Niacin or niacinamide, mg/lb.	16.0	24.0
Vitamin A-Palmitate, IU/lb. <sup>1</sup>	10,000	12,000
Calcium (in harmless and assimilable form), mg/lb.	500	750
Iron (reduced iron, 325 mesh, to be used as the iron source), mg/lb. <sup>2</sup>	13.0	26.0

<sup>1</sup> Vitamin A Palmitate (stabilized) must be added in encapsulated form containing 250,000 IU Vitamin A Palmitate/g.

<sup>2</sup> Ferrous sulfate is not to be used as the iron source in any processed cereal products purchased for export assistance programs.

(Source: USDA:FSA:PDD:EOB November, 1997. Contact 202-690-3565  
<http://www.fas.usda.gov/excredits/pl480/commodities/sfcornmeal.html>)