National Stabilizers, Inc.

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Good Sensations Dough Conditioner Product Bulletin

How does Good Sensations Dough Conditioner for Pizza Dough work to improve pizza dough and flatbreads

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Good Sensations Dough Conditioner consists of a blend of L-cysteine (an amino acid) and ascorbic acid (Vitamin C).

L-cysteine and ascorbic acid are commonly used dough conditioners that work in tandem to improve pizza dough's texture, elasticity, and overall handling.
Here's how they work:
1. L-Cysteine: Dough Softener (Reducing Agent):

- Breaks Disulfide Bonds: L-cysteine, a reducing agent, weakens the gluten structure by breaking some of the disulfide bonds that hold gluten proteins together.
- Increases Extensibility: This weakens the gluten network, making the dough more extensible (able to stretch) and less prone to snapping back during shaping and stretching.
- Reduces Mixing Time: By weakening the gluten, l-cysteine can reduce the energy and time required for mixing, as the gluten network develops more quickly.
- Improves Machinability: Softer dough is easier to work with and handle in automated or manual pizza-making processes.

2. Ascorbic Acid: Dough Strengthener (Oxidizing Agent):

- Gluten Development: Ascorbic acid, acting as an oxidizing agent in the presence of oxygen and a flour enzyme, converts to dehydroascorbic acid.
- Strengthens Gluten Network: Dehydroascorbic acid further promotes the formation of disulfide bonds in the gluten network, strengthening it.
- Balances L-Cysteine's Softening Effect: While l-cysteine softens the dough, ascorbic acid ensures that the dough doesn't become too weak or sticky.
- Improves Gas Retention: A stronger gluten network traps the carbon dioxide produced by yeast during fermentation, resulting in a better rise and improved oven spring.
- Finer Crumb: Ascorbic acid contributes to a more uniform and finer crumb structure in the baked pizza crust.

In summary: L-cysteine initially relaxes and softens the dough, improving its extensibility and workability, while ascorbic acid then strengthens the gluten network, leading to better gas retention, rise, and overall dough handling for pizza making.

Recommended starting usage level: 6 - 8 oz per 100 lbs flour

In simpler terms to understand,

Okay, let's break down how l-cysteine and ascorbic acid make pizza dough better, using simple language:
Imagine your pizza dough has stretchy, springy strands called gluten. These strands give the dough its structure.
L-Cysteine: The Relaxer

- Think of l-cysteine as a "dough softener." It goes in and gently loosens some of those stretchy gluten strands.
- This makes the dough more relaxed and easier to work with. It becomes more "stretchy" and less likely to snap back when you're trying to shape it into a pizza.
- Basically, l-cysteine makes the dough more flexible.

Ascorbic Acid: The Builder

- Now, ascorbic acid is like a "dough strengthener." It comes in and helps those gluten strands connect to each other, making them stronger overall.
- While the l-cysteine loosens things up, the ascorbic acid ensures the dough doesn't become too weak or floppy.
- It helps the dough hold its shape better and trap all the little air bubbles that make the crust light and airy.

Putting it together:

- First, l-cysteine softens the dough, so it's easy to handle and stretch.
- Then, ascorbic acid helps the gluten strands build back up, creating a nice, strong dough that rises well and bakes into a great pizza crust.

Think of it like this:

- L-cysteine helps the dough "breathe" and relax.
- Ascorbic acid then helps it stand up tall and strong.

So, by using both, you get a dough that's both easy to work with and makes a great-tasting, nicely textured pizza!

Specifications

PHYSICAL/ORGANOLEPTIC

Form: Powder

Color: Tan

Odor: No odor

Flavor: No Flavor

Chemical

Parameter	Min	Max	Units
Moisture (5%) (RV@100rpm,25°C)	18	23	CPS
pH (5%)	2.5	5	pH
Qualitative Test L-Cysteine	Test must Pass		

Microbiological

Parameter	Specification (Max)
Standard Plate Count	10,000 /g
Mold and Yeast	100 /g
Coliform	10 /g
Salmonella	Negative

Packaging

A. Packed in multi-wall fiber drums with poly-lined bags, cardboard boxes with poly liner bags.

B. Outside of containers to be labeled with:

1. Product name
2. Lot number
3. National Stabilizers' name and address
4. Net contents/weight
5. Ingredient Statement
6. Only if applicable-Kosher Symbols, Customer Codes, Production Date and/or Expiration Date

Standard Packing: 50 lb. bag in box. 2000- lb. per pallet.

Optional Pack Sizes: 1 lb pouch, 10 lb bag in box

MOQ is flexible

Storage

Store in a cool (60-80 ° F), dry place.

Shelf Life:12 months

Usage Levels

Suggested Level: 8 oz. per 100lbs flour. Hard flour may require 12 to 14 oz.

Intended Use: Tortillas, pizza dough.

Certifications

Kosher

Ingredients

Calcium sulfate, L-cysteine hydrochloride, Ascorbic acid.

Nutritional Information (per 100g)

Parameter	Value	Unit
Calories	10	Kcal
Total Fat	0	g
Saturated Fat	0	g
Trans Fat	0	g
Cholesterol	0	mg
Sodium	0	mg
Total Carbohydrates	0	g
Dietary Fiber	0	g
Total Sugar	0	g
Added Sugar	0	g
Protein	2	g
Vitamin D	0	mcg
Calcium	22430	mg
Iron	0	mg
Potassium	0	mg
Vitamin A	0	mcg
Vitamin C	1	mg

General:

A. This material will comply with the requirements of the Federal Food, Drug, and Cosmetic Act and its amendments.

B. This material will be manufactured under good manufacturing practices as prescribed by F.D.A. regulations.

C. This material is subject to approval by the Quality Control Laboratory.

D. This material will conform to specifications contained in the Food Chemicals Codex.