



Sales and Marketing of Natural Biocide Formulations

NATRApHASE™ NP60ATS

Anti Oxidant/Preservative

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ANTIOXIDANT NATRAPHASE™ NP60ATP

for use in Food

PRODUCT DESCRIPTION AND SPECIFICATION

Description: NATRAPHASE™ NP60ATS (the “all in one” Antioxidant/Chelator/Emulsifier system) is a natural clear, yellow to light brown viscous liquid with a typical vegetable oil odour. It consists of a synergistic mixture of Ascorbyl Palmitate, Mixed Tocopherols and Sunflower Oil.

Specifications:	Appearance:	Clear, yellow to light brown liquid
	Taste:	Mild, characteristic
	Odour:	Typical vegetable oil
	Heavy metals (Total):	≤ 10ppm
	Microbiological Analysis: (ufc/g – USP)	Standard Plate count: <10000 Yeast Mold: <300 Coliforms @ 31°C: None Salmonella: None E.Coli: None Staphylococcus Aureus: None Benzo (a) pyrene: <1ppm
	(As per EC regulation n.178/2002 art.50 published 6 February 2003 Rapid Alert)	
	Solubility:	Insoluble in water. Soluble in ethanol, animal fats and vegetable oils, essential oils and mineral oils.
Stability:	Unstable to light, heat, alkali and oxidizing conditions.	

Product	Product Code	Application	Packaging
NATRAPHASE™ NP60ATS	NP60ATS020 NP60ATS190	Meat, Dairy products, Baby foods, Sauces, Vegetable and Mineral oils, Mayonnaise Dressing and Dips	20kg and 190kg poly container

All ingredients are Kosher, GMO and Gelatine free. NATRAPHASE™ NP60ATS is soluble in animal fats, vegetable oils, essential oils and mineral oils.

Functionality:

- Delays lipid oxidation = longer shelf life.
- Inactivation of metal ions which catalyse the initiation of oxidation processes.
- Makes antioxidant distribution uniform facilitating easier incorporation in liquids pastes or powders.

Potential benefits:

- Consumer friendly alternative to traditional antioxidants (BHA- and BHT based antioxidants)
- Improvement of food products by retarding lipid oxidation
- Synergistic effect with d- α - Tocopherol particularly when used in fats and processed foods
- Longer shelf life of oils, fats and processed products
- Consistent product quality from batch to batch by minimising variation in taste, odour, colour and texture with no loss in nutritional value

Main Application areas: NATRAPHASE™60ATS is a **Natural, Non GMO, Very Low Volatile**, potent antioxidant widely used in nutrition to avoid the negative effects of oxidation.

- Vegetable oils, frying oils
- Dairy products
- Snacks
- Mayonnaise dressings, sauces
- Meat products (fish, beef, pork and poultry – sausages and burgers) and baby foods

Usage levels: The exact dosage cannot be stated in general since it depends on the application and fat content. For example if fat content is 20% we generally suggest a concentration of 0.03% - 0.5%.

Storage: **NATRAPHASE™60ATS** may oxidize on exposure to air and light resulting in gradual darkening.

Shelf life: The shelf life of **NATRAPHASE™NP60ATS** is two (2) years from packaging date (unopened). Store tightly closed.

Packaging: **NATRAPHASE™NP60ATS** is available in 20kg and 190kg net poly containers.

Safety and Handling: A materials Health and Safety Data Sheet is available on pages 4 - 7

MATERIAL SAFETY DATA SHEET
Complies to Directive 2001/59/CE

ANTIOXIDANT NATRAPHASE™ NP60ATS

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Solubility: Insoluble in water. Soluble in ethanol, animal fats and vegetable oils, essential oils and mineral oils.

Stability: Unstable to light, heat, alkali and oxidizing conditions.

II. SAFETY INFORMATION

1. IDENTIFICATION

Name: **NATRAPHASE™NP60ATS**

Product Code: NP60ATS020, NP60ATS190

Supplied by: Natural Preserves Limited
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Eanam Wharf
Blackburn
Lancashire BB1 5BL
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E-mail: info@naturalpreserves.co.uk

2. COMPOSITION

INCI Name: Tocopherol / Ascorbyl Palmitate

<u>Contents:</u>	<u>Mol Formula</u>	<u>Mol Wt</u>	<u>CAS Reg</u>
Ascorbyl Palmitate:	C22H38O7	414.55	137-66-6
Mixed Tocopherols:	C29H50O2	420.00	
d-alpha			59-02-9
Beta,			16698-35-4
Gamma			54-28-4
Delta			119-13-1

3. HAZARD IDENTIFICATION **NATRAPHASE™NP60ATS** is classified as very low hazard.

Health Rating:	0 (None)
Flammability:	1 (Slight)
Chemical Reactivity:	0 (None)
Contact rating:	0 (None)

4. FIRST AID MEASURES

Eye Contact: Irrigate thoroughly with water, open eyelids forcibly.

Skin: Wash affected skin with water and soap (not solvents); report any skin irritation to medical advisor.

Inhalation: Bring immediately to fresh air; consult physician if discomfort occurs or persists.

Excessive Ingestion: Induction of vomiting should not be necessary. Symptomatic treatment by physician.

5. FIRE FIGHTING MEASURES

Use water spray, foam, powder, carbon dioxide or other extinguishing medium appropriate to existing fires.

Breathing apparatus must be worn.

6. ACCIDENTAL RELEASE MEASURE

Dispose in accordance with Section 13. Wash area thoroughly with detergent and water.

Avoid contact with skin and eyes.

Do not allow release into drainage system.

Absorb spillage with sand or vermiculite then place in a closed container.

7. HANDLING AND STORAGE

Sensible precautions should be taken to avoid contact with the eyes and skin, inhalation or accidental ingestion.

Observe strict cleanliness and personal hygiene at all times.

Keep container tightly closed.

Store in a cool, dry area.

Protect from light and heat

Keep away from odorous and toxic substances.

8. EXPOSURE, CONTROL AND PERSONAL PROTECTION

An official occupation exposure limit for **NATRApHASE™NP60ATS** has not been established but the recommended limited time working weighted average (8 hour working day) is 10.00 mg/m³

Eye protection and PVC or rubber gloves should be worn as appropriate and local exhaust ventilation employed if there is a risk of exceeding the recommended exposure limit.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Colour:	Viscous liquid / clear yellow to light brown.
Odour:	Typical vegetable oil odour
Molecular mass:	Not relevant – mixture
Boiling Point:	>200°C
Flash Point:	>100°C
Specific Gravity (@25°C):	0.92 – 0.96
Evaporation Rate:	<1
Solubility:	Insoluble in water.

10. STABILITY AND REACTIVITY

Protect from humidity, light and heat for quality reasons. Since its function in foods is to react with active oxygen during storage it is incompatible with oxidising agents (particularly peroxides), ferric and silver salts. Decomposition products include carbon monoxide and carbon dioxide. Polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

All the ingredients in **NATRApHASE™NP60ATS** are food grade materials generally regarded as safe for Human and Animal consumption.

Pure Ascorbyl Palmitate:

Acute toxicity:	LD50>10,000 mg/kg
Local effects:	May cause irritation of eyes and mucous membranes.
Specific effects:	Not mutagenic (Ames-test)

Mixed Tocopherol

Acute toxicity:	LD50 >5,000 mg/kg Excessive oral intake can cause headache, fatigue, weakness, digestive disturbance and nausea. Prolonged and intensive skin contact may lead to erythema and contact dermatitis.
Local effect:	No eye irritation Skin irritation Oxidation products irritate skin.
Sensitisation:	Not sensitising
Specific effects:	Not mutagenic (Ames-test) Not phototoxic

12. ECOLOGICAL INFORMATION

Biodegradable. **NATRApHASE™NP60ATS** is not expected to result in any persisting environmental influence.

13. DISPOSAL CONSIDERATION

Discharge, treatment must be disposed/treated in accordance with The Special Waste Regulations at a licensed incinerator or landfill site.

14. TRANSPORT INFORMATION

Not classified as hazardous for transport.

15. REGULATORY INFORMATION

Mixed Tocopherols and Ascorbyl Palmitate, the antioxidant ingredients of **NATRApHASE™NP60ATS** are permitted food antioxidants with EU and UK Regulations.

When added to food their presence must be declared on the product label. A suitable declaration might be:-

Either: **Antioxidants – Ascorbyl Palmitate, Mixed Tocopherols**

Or: **Antioxidants – E304, E306**

NATRApHASE™NP60ATS is supplied for use in food recipes/processing and is not for retail sale. Classification and labelling is in accordance with Directives 67/548/CEE and 1999/45/CE

16. INFORMATION ON USE

Uses: As an antioxidant/preservative for use in food recipes and processing

Pack size: 20kg and 190kg sealed poly container

Country of Origin: United Kingdom

DIETARY INTOLERANCE DATA

Product: NATRAPHASE™NP60ATS

Product Code: NP60ATS020,
NP60ATS190

Supplier: Natural Preserves Ltd

Does the product contain any of the following?

Ingredient	Yes	No	Additional information
Genetically modified organisms		✓	
Material from or produced from Genetically Modified Organisms		✓	
Seafood		✓	
Oil of seafood		✓	
Nuts		✓	
Oils of nuts		✓	
Seeds		✓	
Oils of seeds	✓		Sunflower
Sesame seeds of their derivatives		✓	

Is this product suitable for?

Ingredient	Yes	No	Additional information
Vegetarians	✓		
Vegans	✓		
Kosher foods/diets	✓		
Celiac disease	✓		
Diabetics	✓		

DIETARY INTOLERANCE DATA

Product: NATRAPHASE™NP60ATS

Product Code: NP60ATS020,
NP60ATS190

Supplier: Natural Preserves Ltd

Does the product contain any of the following?

Ingredient	Yes	No	Additional Information
Wheat or wheat derivatives		✓	
Gluten		✓	
Egg or egg derivatives		✓	
Soya or Soya derivatives		✓	
Artificial colour		✓	
Added colour		✓	
Artificial flavourings		✓	
Added salt		✓	
Added sugars		✓	
Benzoates		✓	
Sulphur Dioxide		✓	
Other preservatives/acidifiers		✓	
BHA/BHT		✓	
Other antioxidants		✓	
Glutamate (% if naturally occurring)		✓	
Yeast or yeast extracts		✓	
Level of chloropropanols if present		✓	
Garlic		✓	
Bovine products or by products		✓	
Cows milk or cows milk products		✓	
Other animal products or by products		✓	
Maize or maize derivatives		✓	

Natural Preserves has used every possible care in compiling, preparing and issuing this information. Manufacturers using this product must nevertheless satisfy themselves of the suitability of the material for incorporation in their own end-products having regard to all relevant obligations therewith, whether under the Food Safety Act, Feeding Stuffs Regulations, Health & Safety at Work Act, Control of Substances Hazardous to Health Regulations or any other relevant legislation or common law requirement.

The information contained in this publication is based on our own research and development work and is to the best of our knowledge reliable. Users should, however, conduct their own tests to determine the suitability of our product for their own specific purposes. Statements contained herein should not be considered as a warranty of any kind, expressed or implied and no liability is accepted for the infringement of any patents.



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