

NOSB NATIONAL LIST FILE CHECKLIST

PROCESSING

MATERIAL NAME: #1 Ammonium Phosphate



NOSB Database Form



References



MSDS (or equivalent)



FASP (FDA)



**TAP Reviews from: Joe Montecalvo, Rich
Theuer**

**NOSB/NATIONAL LIST
COMMENT FORM
PROCESSING**

Material Name: #1 Ammonium Phosphate

Please use this page to write down comments, questions, and your anticipated vote(s).

COMMENTS/QUESTIONS:

1. In my opinion, this material is:
_____ Synthetic _____ Non-synthetic.

2. Should this material be allowed in an "organic food" (95% or higher organic ingredients)? _____ Yes _____ No
(IF NO, PROCEED TO QUESTION 3.)

3. Should this substance be allowed in a "food made with organic ingredients" (50% or higher organic ingredients)? _____ Yes _____ No

TAP REVIEWER COMMENT FORM for USDA/NOSB

Use this page or an equivalent to write down comments and summarize your evaluation regarding the data presented in the file of this potential National List material. Complete both sides of page. Attach additional sheets if you wish.

This file is due back to us by: AUGUST 8th, 1995

Name of Material: Ammonium Phosphate

Reviewer Name: DR. JOE MONTECALVO

Is this substance Synthetic or non-synthetic? Explain (if appropriate)

Synthetic

If synthetic, how is the material made? (please answer here if our database form is blank)

This material should be added to the National List as:

Synthetic Allowed Prohibited Natural

or, Non-synthetic (Allowed as an ingredient in organic food)

Non-synthetic (Allowed as a processing aid for organic food)

or, this material should not be on the National List

Are there any use restrictions or limitations that should be placed on this material on the National List? - see specifications

Please comment on the accuracy of the information in the file: good

Any additional comments? (attachments welcomed)

DiBanic form - used in purifying sugar

Monobanic " - ASA baking powder with sodium Bicarbonate

Do you have a commercial interest in this material? Yes; No

Signature [Signature] Date 7/30/95

**Please address the 7 criteria in the Organic Foods Production Act:
(comment in those areas you feel are applicable)**

- (1) the potential of such substances for detrimental chemical interactions with other materials used in organic farming systems;**

little

- (2) the toxicity and mode of action of the substance and of its breakdown products or any contaminants, and their persistence and areas of concentration in the environment;**

Breakdown products should not be a problem.

- (3) the probability of environmental contamination during manufacture, use, misuse or disposal of such substance;**

none

- (4) the effect of the substance on human health;**

Not known, none.

- (5) the effects of the substance on biological and chemical interactions in the agroecosystem, including the physiological effects of the substance on soil organisms (including the salt index and solubility of the soil), crops and livestock;**

Not known.

- (6) the alternatives to using the substance in terms of practices or other available materials; and**

None.

- (7) its compatibility with a system of sustainable agriculture.**

only for specific uses.

TAP REVIEWER COMMENT FORM for USDA/NOSB

Use this page or an equivalent to write down comments and summarize your evaluation regarding the data presented in the file of this potential National List material. Complete both sides of page. Attach additional sheets if you wish.

This file is due back to us by: AUGUST 8

Name of Material: Ammonium Phosphate

Reviewer Name: R THEUER

Is this substance Synthetic or non-synthetic? Explain (if appropriate)

SYNTHETIC

If synthetic, how is the material made? (please answer here if our database form is blank)

AMMONIA + PHOSPHORIC ACID

This material should be added to the National List as:

Synthetic Allowed Prohibited Natural

or, Non-synthetic (Allowed as an ingredient in organic food)

Non-synthetic (Allowed as a processing aid for organic food)

or, this material should not be on the National List

Are there any use restrictions or limitations that should be placed on this material on the National List?

LIMITED CURRENTLY BY GOOD MANUFACTURING PRACTICES

Please comment on the accuracy of the information in the file:

GOOD

Any additional comments? (attachments welcomed)

Do you have a commercial interest in this material? Yes; No

Signature Richard Theuer Date 8/28/95

**Please address the 7 criteria in the Organic Foods Production Act:
(comment in those areas you feel are applicable)**

- (1) **the potential of such substances for detrimental chemical interactions with other materials used in organic farming systems;**

NO ISSUE AT LOW USAGE LEVELS

- (2) **the toxicity and mode of action of the substance and of its breakdown products or any contaminants, and their persistence and areas of concentration in the environment;**

NO ISSUE

- (3) **the probability of environmental contamination during manufacture, use, misuse or disposal of such substance;**

MINED PHOSPHATE

- (4) **the effect of the substance on human health;**

AMMONIA DISSIPATES DURING BAKING
PHOSPHATE IS NUTRITIONALLY ESSENTIAL

- (5) **the effects of the substance on biological and chemical interactions in the agroecosystem, including the physiological effects of the substance on soil organisms (including the salt index and solubility of the soil), crops and livestock;**

NO ISSUE

- (6) **the alternatives to using the substance in terms of practices or other available materials; and**

VARIOUS OTHER LEAVENING AGENTS EXIST. EACH ONE HAS UNIQUE PROPERTIES WHICH ARE EXPLOITED IN DIFFERENT APPLICATIONS

- (7) **its compatibility with a system of sustainable agriculture.**

NO ISSUE

Identification

Common Name **Ammonium phosphates** **Chemical Name**
Other Names Monoammonium Phosphate, Diammonium Phosphate; Ammonium Phosphate Dibasic or Monobasic
Code #: CAS 07722-76-1 **Code #: Other**
N. L. Category Synthetic Allowed **MSDS** yes no

Chemistry

Family
Composition $(\text{NH}_4)_2\text{HPO}_4$ - Dibasic; $\text{NH}_4\text{H}_2\text{PO}_4$ - Monobasic
Properties White odorless crystals, crystalline powder or granules having a cooling, saline taste. Freely soluble in water.
How Made

Use/Action

Type of Use Processing
Specific Use(s) Leavening agent, buffer, dough conditioner, yeast food.
Action
Combinations

Status

OFPA
N. L. Restriction
EPA, FDA, etc FDA-GRAS
Directions
Safety Guidelines
State Differences
Historical status
International status

OFPA Criteria

2119(m)1: chemical interactions Not Applicable
2119(m)2: toxicity & persistence Not Applicable
2119(m)3: manufacture & disposal consequences

2119(m)4: effect on human health

2119(m)5: agroecosystem biology Not Applicable
2119(m)6: alternatives to substance

2119(m)7: Is it compatible?

References

AU: Boyacioglu,-D.; Hettiarachchy,-N.S.; D'Appolonia,-B.L.

TI: Additives affect deoxynivalenol (vomitoxin) flour during breadbaking.

SO: J-Food-Sci-Off-Publ-Inst-Food-Technol. Chicago, Ill. : The Institute. Mar/Apr 1993. v. 58 (2) p. 416-418.

CN: **DNAL 389.8-F7322**

AB: The effects of oxidizing (potassium bromate and L-ascorbic acid) and reducing (sodium bisulfite and L-cysteine) agents, and ammonium phosphate, at varying levels, on deoxynivalenol (DON; vomitoxin: 3,7,15-trihydroxy-12,13-epoxytrichothec-9 en-8 one) in whole wheat flour were investigated during breadbaking. Baking of flour containing 3.13 micrograms/g DON brought about 7.0% toxin reduction in bread. Sodium bisulfite (25 and 50 micrograms/g) and L-cysteine (10, 40, and 90 micrograms/g) and ammonium phosphate (1,000 micrograms/g) were moderately effective in reducing DON level in bread (38.0 to 46.0%). Potassium bromate (25 and 75 micrograms/g) and L-ascorbic acid (50 micrograms/g) had no effect.

1 - PRODUCT IDENTIFICATION

PRODUCT NAME: AMMONIUM PHOSPHATE, MONOBASIC
FORMULA: NH₄H₂PO₄ FORMULA WT: 115.03
CAS NO: 07722-76-1
COMMON SYNONYMS: AMMONIUM BIPHOSPHATE
PRODUCT CODES: 4931,0776,0777
EFFECTIVE: 05/08/86 REVISION #01

PRECAUTIONARY LABELLING

BAKER SAF-T-DATA(TM) SYSTEM

HEALTH - 1 SLIGHT
FLAMMABILITY - 0 NONE
REACTIVITY - 1 SLIGHT
CONTACT - 1 SLIGHT

HAZARD RATINGS ARE 0 TO 4 (0 = NO HAZARD; 4 = EXTREME HAZARD).

LABORATORY PROTECTIVE EQUIPMENT: SAFETY GLASSES; LAB COAT

PRECAUTIONARY LABEL STATEMENTS

CAUTION

MAY CAUSE IRRITATION

DURING USE AVOID CONTACT WITH EYES, SKIN, CLOTHING. WASH THOROUGHLY AFTER HANDLING. WHEN NOT IN USE KEEP IN TIGHTLY CLOSED CONTAINER.

SAF-T-DATA(TM) STORAGE COLOR CODE: ORANGE (GENERAL STORAGE)

2 - HAZARDOUS COMPONENTS

COMPONENT	%	CAS NO.
NOT APPLICABLE		

3 - PHYSICAL DATA

BOILING POINT: N/A VAPOR PRESSURE(MM HG): N/A
MELTING POINT: N/A VAPOR DENSITY(AIR=1): N/A
SPECIFIC GRAVITY: 1.60 EVAPORATION RATE: N/A
(H₂O=1) (BUTYL ACETATE=1)
SOLUBILITY(H₂O): MODERATE (1 TO 10 %) % VOLATILES BY VOLUME: 0
APPEARANCE & ODOR: WHITE CRYSTALS OR POWDER WITH A FAINT ACID ODOR.

4 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (CLOSED CUP): N/A
FLAMMABLE LIMITS: UPPER - N/A % LOWER - N/A %
FIRE EXTINGUISHING MEDIA
USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING FIRE.
SPECIAL FIRE-FIGHTING PROCEDURES
FIREFIGHTERS SHOULD WEAR PROPER PROTECTIVE EQUIPMENT AND SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN POSITIVE PRESSURE MODE.
TOXIC GASES PRODUCED: AMMONIA, NITROGEN OXIDES

5 - HEALTH HAZARD DATA

CARCINOGENICITY: NTP: NO IARC: NO Z LIST: NO OSHA REG: NO

EFFECTS OF OVEREXPOSURE

CONTACT MAY CAUSE IRRITATION OF SKIN, EYES, AND MUCOUS MEMBRANES.

TARGET ORGANS: NONE IDENTIFIED

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NONE IDENTIFIED

ROUTES OF ENTRY: NONE INDICATED

EMERGENCY AND FIRST AID PROCEDURES

INGESTION: IF SWALLOWED AND THE PERSON IS CONSCIOUS, IMMEDIATELY GIVE
LARGE AMOUNTS OF WATER. GET MEDICAL ATTENTION.

INHALATION: IF A PERSON BREATHE IN LARGE AMOUNTS, MOVE THE EXPOSED
PERSON TO FRESH AIR. GET MEDICAL ATTENTION.

EYE CONTACT: IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15
MINUTES. GET MEDICAL ATTENTION.

SKIN CONTACT: IMMEDIATELY WASH WITH PLENTY OF SOAP AND WATER FOR AT LEAST
15 MINUTES.

6 - REACTIVITY DATA

STABILITY: STABLE HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID: NONE DOCUMENTED

DECOMPOSITION PRODUCTS: AMMONIA, OXIDES OF NITROGEN

7 - SPILL AND DISPOSAL PROCEDURES

STEPS TO BE TAKEN IN THE EVENT OF A SPILL OR DISCHARGE

WEAR SUITABLE PROTECTIVE CLOTHING. CAREFULLY SWEEP UP AND REMOVE.

DISPOSAL PROCEDURE

DISPOSE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL
ENVIRONMENTAL REGULATIONS.

8 - PROTECTIVE EQUIPMENT

VENTILATION: USE ADEQUATE GENERAL OR LOCAL EXHAUST VENTILATION
TO KEEP FUME OR DUST LEVELS AS LOW AS POSSIBLE.

RESPIRATORY PROTECTION: NONE REQUIRED WHERE ADEQUATE VENTILATION
CONDITIONS EXIST. IF AIRBORNE CONCENTRATION IS
HIGH, USE AN APPROPRIATE RESPIRATOR OR DUST MASK.

EYE/SKIN PROTECTION: SAFETY GLASSES WITH SIDESHIELDS, PROPER GLOVES ARE
RECOMMENDED.

9 - STORAGE AND HANDLING PRECAUTIONS

SAF-T-DATA(TM) STORAGE COLOR CODE: ORANGE (GENERAL STORAGE)

SPECIAL PRECAUTIONS

KEEP CONTAINER TIGHTLY CLOSED. SUITABLE FOR ANY CHEMICAL STORAGE AREA.

10 - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

DOMESTIC (D.O.T.)

PROPER SHIPPING NAME CHEMICALS, N.O.S. (NON-REGULATED)

INTERNATIONAL (I.M.O.)

PROPER SHIPPING NAME CHEMICALS, N.O.S. (NON-REGULATED)

ADNUM=1687

U.S. FOOD AND DRUG ADMINISTRATION
FOOD ADDITIVE SAFETY PROFILE

AMMONIUM PHOSPHATE, DIBASIC

AS#:	007783280	HUMAN CONSUMPTION:	0.3177	MG/KG BW/DAY/PERSON
ASP#:	1687	MARKET DISAPPEARANCE:	375000.000	LBS/YR
(PE: ASP		MARKET SURVEY:	87	
AS#:	0016	JECFA:		
EMA#:		JECFA ADI:		MG/KG BW/DAY/PERSON
RAS#:		JECFA ESTABLISHED:	921215	
POTENTIAL BEVERAGE USE	LAST UPDATE:			

V: 132.08 DENSITY: LOGP:

STRUCTURE CATEGORIES: B1

COMPONENTS:

ANONYMS:

- DIAMMONIUM PHOSPHATE
- DIAMMONIUM ORTHOPHOSPHATE
- AMMONIUM MONOHYDROGEN ORTHOPHOSPHATE
- AMMONIUM PHOSPHATE, SECONDARY
- DIAMMONIUM HYDROGEN PHOSPHATE
- PHOSPHATE, DIAMMONIUM
- PHOSPHORIC ACID, DIAMMONIUM SALT
- DIAMMONIUM HYDROGEN ORTHOPHOSPHATE

CHEMICAL FUNCTION: G

TECHNICAL EFFECT:

- MALTING OR FERMENTING AID
- PH CONTROL AGENT
- LEAVENING AGENT
- NUTRIENT SUPPLEMENT
- FLAVOR ENHANCER
- FLAVORING AGENT OR ADJUVANT
- FIRMING AGENT

FR REG NUMBERS: 573.320 184.1141B

MINIMUM TESTING LEVEL: 3

COMMENTS: NO TOX STUDIES IN SCOGS-32
NO TOX DATA

CCNUM=1688

U.S. FOOD AND DRUG ADMINISTRATION
FOOD ADDITIVE SAFETY PROFILE

AMMONIUM PHOSPHATE, MONOBASIC

AS#:	007722761	HUMAN CONSUMPTION:	0.3135	MG/KG BW/DAY/PERSON
ASP#:	1688	MARKET DISAPPEARANCE:	370000.000	LBS/YR
YPE:	ASP	MARKET SURVEY:	87	
AS#:	0017	JECFA:	FU-C	
EMA#:		JECFA ADI:	70	MG/KG BW/DAY/PERSON
RAS#:		JECFA ESTABLISHED:	1983	
		LAST UPDATE:	921215	
W:	115.03	DENSITY:	1.80	LOGP:

STRUCTURE CATEGORIES: B1

COMPONENTS:

YNONYMS:

- MONOAMMONIUM PHOSPHATE
- AMMONIUM DIHYDROGEN PHOSPHATE
- AMMONIUM MONOPHOSPHATE
- AMMONIUM BIPHOSPHATE
- AMMONIUM PHOSPHATE, PRIMARY
- PHOSPHORIC ACID, MONOAMMONIUM SALT
- PHOSPHATE, AMMONIUM, MONO

HEMICAL FUNCTION: G

TECHNICAL EFFECT: MALTING OR FERMENTING AID
PH CONTROL AGENT
LEAVENING AGENT

FR REG NUMBERS: 184.1141A

MINIMUM TESTING LEVEL: 3

COMMENTS: NO TOX STUDIES IN SCOGS-32 OR 34
NO TOX DATA