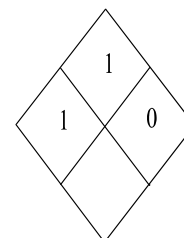


MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: FRUITONE® L
GENERAL USE: Plant Growth Regulator
PRODUCT DESCRIPTION: Odorless, colorless to light amber liquid
EPA Registration Number: Not Registered
MSDS No.: 348_2
Current Revision Date: 18 January, 2007



MANUFACTURER:
AMVAC CHEMICAL CORPORATION
4100 E. Washington Blvd.
Los Angeles, CA 90023-4406
Ph: 323-264-3910
FAX: 323-268-1028

EMERGENCY TELEPHONE NUMBERS:
MANUFACTURER: 323-264-3910
TRANSPORTATION (24 HOURS)
CHEMTREC: 800-424-9300
OTHER (24 HOURS)
AMVAC: 323-264-3910

2. COMPOSITION/INFORMATION ON INGREDIENTS

| COMPONENT | WT % | CAS No. |
|---|-------|---------|
| Sodium salt of 1-Naphthaleneacetic acid | 3.5% | 61-31-4 |
| Inert Ingredients | 96.5% | |

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)

| COMPONENT | HAZARD | OSHA PEL* | ACGIH TLV* |
|---|--------|--------------|---------------|
| None of the ingredients are listed as hazardous | | | |

* Exposure Limits 8 hrs. TWA (ppm)

Fruitone is a registered trademark of AMVAC Chemical Corporation

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

CAUTION. This product is not a significant, immediate concern for emergency response personnel. There is a chance of eye irritation upon contact. Avoid contact by wearing appropriate personal protective equipment.

This product should be kept out of bodies of water.

POTENTIAL HEALTH EFFECTS

ROUTE(S) OF ENTRY: This product may be contacted by inhalation, skin contact, eye contact, and ingestion.

SIGNS OF ACUTE OVEREXPOSURE: Acute overexposure to this product may irritate the skin, eyes, and mucous membranes. Ingestion may cause inebriation, headache, nausea, vomiting, and abdominal pains.

SIGNS OF CHRONIC OVEREXPOSURE: None known.

OTHER POTENTIAL EFFECTS: None known for the product. Laboratory studies carried out on technical 1-Naphthaleneacetic Acid Sodium Salt have shown no evidence of carcinogenicity or reproductive toxicity and the developmental studies have only shown effects in the rat and rabbit fetus at maternally toxic dose levels.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Preexisting skin or respiratory disorders may be aggravated by exposure to components of this product.

4. FIRST AID MEASURES

EYES: Immediately flush the eyes with copious amounts of clear, cool running water for a minimum of 15 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eyes and lids with water. Contact a physician immediately. If there will be a delay in getting medical attention, rinse the eyes for at least another 15 minutes.

INHALATION: Remove victim to fresh air. If breathing has ceased, clear the victim's airway and start mouth-to-mouth artificial respiration. If breathing is difficult, give oxygen. Contact a physician immediately.

4. FIRST AID MEASURES, cont'd

INGESTION: Immediately dilute the swallowed product by giving large quantities of water. Never give anything by mouth to an unconscious or convulsing person. Contact a physician immediately.

SKIN: Immediately flush all affected areas with large amounts of clear water for at least 15 minutes. Remove contaminated clothing. Do not attempt to neutralize with chemical agents. Wash clothing before reuse. If skin irritation develops, contact a physician immediately.

NOTE TO PHYSICIANS: Treat symptomatically. Further information on this product can be obtained from AMVAC Chemical Corporation. (See Section 1).

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

Flash Point: Not applicable

Autoignition Temperature: Not applicable

Flammable Limits:

Lower flammable limit: Not applicable

Upper flammable limit: Not applicable

Flammability: This product is flammable only when evaporated and heated in a direct flame (NFPA rating = 1)

EXPLOSIVITY

Mechanical Impact: Not explosive

Static Discharge: Has not been tested, but should not occur.

HAZARDOUS COMBUSTION PRODUCTS: May emit hazardous fumes when heated excessively. Wear self-contained breathing apparatus.

EXTINGUISHING MEDIA: Nonflammable. Base decision on surrounding materials in fire.

FIRE FIGHTING INSTRUCTIONS: None

6. ACCIDENTAL RELEASE MEASURES

GENERAL: Use adequate ventilation and air-supplied respirators, as well as impervious clothing and safety goggles, in order to prevent skin, respiratory, and eye contact. Keep bystanders upwind and away from the spill.

SMALL SPILL: Cover with absorbent (clay, sawdust, straw, kitty litter, etc.), to absorb the liquid. Sweep into an open drum. Close the drum and dispose of properly.

6. **ACCIDENTAL RELEASE MEASURES, cont'd**

LARGE SPILL: Dike the spill to prevent contamination of local water sources. Siphon the majority of the liquid into drums for use or disposal, depending on the circumstances. Clean the area as described for a small spill.

7. **HANDLING AND STORAGE**

HANDLING: Avoid contact with the skin and eyes. Keep this product away from food and drink. Keep it away from children and pets. Do not cross-contaminate this product with pesticides.

STORAGE: Store the product in its original container in a cool (not in direct sunlight), dry, locked place out of reach of children. Do not allow product to freeze.

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

ENGINEERING CONTROLS: None

RESPIRATORY PROTECTION: No special respiratory protection is required when product is used according to label instructions.

SKIN PROTECTION: The minimum protective clothing required is full-body covering clothing, such as slacks and long-sleeved shirt or coveralls, shoes or boots, and waterproof gloves. Certain states may require further protection. Your State Department of Agriculture should be consulted for the most current requirements.

EYE PROTECTION: Safety glasses with sideshields are required whenever a person is working with chemicals. Safety goggles or a full faceshield should be worn if there is a chance of exposure to mists.

9. **PHYSICAL AND CHEMICAL PROPERTIES**

| | |
|---------------------------------|------------------------------------|
| PHYSICAL STATE: | Liquid |
| APPEARANCE: | Colorless to light amber |
| ODOR: | Odorless |
| ODOR THRESHOLD: | Not applicable |
| BOILING POINT: | 101°C/214°F |
| FREEZING/MELTING POINT: | -1°C/30°F |
| SPECIFIC GRAVITY: | 1.011 g/cm ³ @ 20°C/4°C |
| DENSITY: | 8.44 lb/gal |
| VAPOR PRESSURE: | 17 mm/Hg @ 20°C |
| VAPOR DENSITY: | Lighter than air |
| PERCENT VOLATILE BY VOL: | 95+ % |

9. **PHYSICAL AND CHEMICAL PROPERTIES, cont'd**

| | |
|-------------------------------------|--------------------------|
| SOLUBILITY IN WATER: | Miscible |
| SOLUBILITY (other): | Soluble in alcohols |
| PARTITION COEFFICIENT (O/W): | Not available |
| pH (as is): | 9 - 10 |
| EVAPORATION RATE: | 1.0 as compared to water |

10. **STABILITY AND REACTIVITY**

CHEMICAL STABILITY (Conditions to avoid): Stable under normal use conditions.

INCOMPATIBILITY: Addition of acids to the product will cause Naphthaleneacetic acid to precipitate from the solution.

HAZARDOUS DECOMPOSITION PRODUCTS: When the product is heated to decomposition, acrid smoke and fumes may be given off.

HAZARDOUS POLYMERIZATION: This product will not polymerize.

11. **TOXICOLOGICAL INFORMATION**

There is no information available for this product. The following information is available for similar, more concentrated products, K-SALT™ FRUIT FIX™ 800 and 200, or for related technical materials.

| | | |
|-----------------------|------------------------------------|--|
| INGESTION: | Oral LD ₅₀ (rat): | >5050 mg/kg(male)/4400 mg/kg(female) |
| INHALATION: | Inhalation LC ₅₀ (rat): | > 1.62 mg/L (aerosol) |
| DERMAL: | Skin LD ₅₀ (rabbit): | > 2020 mg/kg |
| IRRITATION: | Eye irritation: | Minimally irritating. (Toxicity Category IV) |
| | Skin irritation: | Minimally irritating (Toxicity Category IV) |
| SENSITIZATION: | Skin Sensitization: | Not a skin sensitizer (1-NAA Acid) |

TERATOGENICITY: No data are available on this product. Tests carried out on Technical 1-Naphthaleneacetic Acid Sodium Salt have shown developmental effects on the fetus at maternally toxic dose levels in the rat and rabbit.

MUTAGENICITY: No data available on this product. There is no evidence of genotoxic potential, *in vivo*, when Technical 1-Naphthaleneacetic Acid Sodium Salt was tested.

CARCINOGENICITY: No data are available on this product. There was no evidence of carcinogenicity from laboratories studies carried out on Technical 1-Naphthaleneacetic Acid, Sodium Salt and Technical 1-Naphthaleneacetamide in rodents.

REPRODUCTIVE TOXICITY: No data are available on this product. A study carried out on Technical 1-Naphthaleneacetic Acid, Sodium Salt, has shown no reproductive effects. At the highest dose level tested there was some evidence of parental toxicity with accompanying associated effects on offspring survival and growth.

TOXICOLOGICALLY SYNERGISTIC PRODUCTS: No data is available.

12. ECOLOGICAL INFORMATION

GENERAL: Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark.

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product may be disposed on site by use according to the label or at an approved waste disposal facility. Be sure to check with the appropriate Federal, State and local authorities to determine the current regulations for your area.

CONTAINER DISPOSAL: Do not reuse the empty container. Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, by burning. If the container is burned stay out of the smoke. Be sure to check with the appropriate Federal, State and local authorities to determine the current regulations for your area.

14. TRANSPORTATION INFORMATION

| | |
|---------------------------------|---------------|
| DOT CLASS: | None assigned |
| UN NUMBER: | None assigned |
| IMDG CLASS (SEA): | None assigned |
| MARINE POLLUTANT: | No |
| PACKING GROUP: | None assigned |
| HAZARD LABEL(S): | None |
| PROPER SHIPPING NAME(S): | None assigned |
| REPORTABLE QUANTITY: | None |

PACKAGING

GENERAL DESCRIPTION: 1 quart and 1 gallon containers

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: This product is an experimental product and is not currently registered under EPA/FIFRA Regulations. It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

15. REGULATORY INFORMATION, cont'd

SARA TITLE III DATA

Section 311 & 312 Hazard Categories:

| | |
|---------------------------------|-----|
| Immediate Health Hazard: | Yes |
| Delayed Health Hazard: | No |
| Fire Hazard: | No |
| Reactive Hazard: | No |
| Sudden Pressure Release Hazard: | No |

Section 302 Extremely Hazardous Substances: None

Section 313 Toxic Chemicals: None

CERCLA Reportable Quantity (RQ):None

STATE REGULATIONS:

CALIFORNIA (Proposition 65): None

16. OTHER INFORMATION

MSDS Status:

Date This Revision: 18 January, 2007

Date Previous Revision: 17 April, 2006

Person Responsible for Preparation: Gary A. Braden

Reasons for Revision: Update information in sections 3 and 11 to reflect new toxicological information.

DISCLAIMER: This information is provided for the limited guidance to the user. While AMVAC believes that the information is, as of the date hereof, reliable, it is the user's responsibility to determine the suitability of the information for its purposes. The user is advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional, or variable conditions or circumstances exist (like combinations with other materials), or because of applicable regulations. No express or implied warranty of merchantability or fitness for a particular purpose or otherwise is made hereunder with respect to the information or the product to which the information relates.

16. OTHER INFORMATION, cont'd

ABBREVIATIONS:

| | | |
|--------|---|--|
| ACGIH | - | American Conference of Governmental Industrial Hygienists |
| ADR | - | European <u>A</u> greement Concerning the International Carriage of <u>D</u> angerous Goods by <u>R</u> oad |
| CERCLA | - | Comprehensive Environmental Response, Compensation, and Liability Act |
| EPA | - | Environmental Protection Agency |
| FIFRA | - | Federal Insecticide, Fungicide, and Rodenticide Act |
| IARC | - | International Agency for Research on Cancer |
| NTP | - | National Toxicology Program |
| OSHA | - | Occupational Safety and Health Agency |
| SARA | - | Superfund Amendments and Reauthorization Act |
| TSCA | - | Toxic Substances Control Act |

This is the last page of this MSDS. There should be 8 pages.