

MATERIAL SAFETY DATA SHEET

- **CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: REJUVENATE™ SEED TREATMENT

GENERAL USE: Plant Growth Regulator

PRODUCT DESCRIPTION: Odorless, colorless to light amber liquid

EPA REGISTRATION NUMBER: 87320-2; 87320-2-5481;

5481-580 MSDS NUMBER: 442_4

CURRENT REVISION DATE: 22 SEPTEMBER 2014

MANUFACTURER: EMERGENCY TELEPHONE NUMBERS: AMVAC CHEMICAL CORPORATION
PRODUCT USE: 888-462-6822

4100 E. Washington Blvd. TRANSPORTATION (24 HOURS)

Los Angeles, CA 90023-4406 CHEMTREC: 800-424-9300

PHONE: 323-264-3910 OTHER (24 HOURS)

FAX: 323-268-1028 AMVAC: 888-681-4261

Phone: Stehekin LLC: 509-580-0359

- **COMPOSITION/INFORMATION ON INGREDIENTS**

COMPONENT

WT %

CAS No.

Potassium salt of 1-Naphthaleneacetic acid

6.25

15165-79-4

Inert Ingredients

93.75

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)

COMPONENT	HAZARD	OSHA
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ACGIH TLV*

 PEL*

None of the ingredients
are listed as hazardous

* Exposure Limits 8 hrs. TWA (ppm)

- 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. As with any chemical, ingestion, skin contact, and inhalation of mists should be monitored for overexposure symptoms.

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.

- 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.

INGESTION: Immediately dilute the swallowed product by giving large quantities of water. Induce vomiting by using Syrup of Ipecac according to bottle directions, or, if necessary, by touching the back of the throat with a finger. 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**

- **ACCIDENTAL RELEASE MEASURES**

GENERAL: Use adequate ventilation and appropriate personal protective equipment (See Section 8). 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.

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.

- 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.

- 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 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.

- PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

APPEARANCE: Colorless to light amber

ODOR: Odorless

BOILING POINT: 101 C/214 F

FREEZING/MELTING POINT: -1 C/30 F

SPECIFIC GRAVITY: 1.016 g/cm³ @ 20 C/4 C

DENSITY: 8.48 lb/gal

VAPOR PRESSURE : 17 mm/Hg @ 20 C (solvent)

VAPOR DENSITY: Same as water **PERCENT**

VOLATILE BY VOLUME: 93.75% **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

- 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.

- TOXICOLOGICAL INFORMATION

INGESTION: Oral LD₅₀ (rat): 5647 mg/kg (Tox Cat IV) **INHALATION:** Inhalation LC₅₀ (rat): 2.54 mg/L (aerosol) (Tox Cat IV) **DERMAL:** Skin LD₅₀ (rat): > 2000 mg/kg (Tox Cat IV) **IRRITATION:** Eye irritation: Mildly irritating. (Toxicity Category III)

Skin irritation: Minimally irritating (Toxicity Category IV)

SENSITIZATION: Sensitizer (1-NAA Acid): Not a skin sensitizer

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 laboratory 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 are available.

- 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.

- 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.

- 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**

ADR CLASS (road): None assigned **PROPER**

SHIPPING NAME(s): None assigned **REPORTABLE**

QUANTITY: None

TYPICAL PACKAGING: Sample bottles

NOTE: The classification of this product is based on the fact that the mist criteria found in 49CFR§173.132(b)(3) will not be met and therefore the LC₅₀ is not applicable.

- REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: This material is for RESEARCH AND DEVELOPMENT USE ONLY. It is being supplied under the exemption for research and development under the Toxic Substances control Act (TSCA) and/or the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Commercial use of this material is a violation of Federal law.

SARA TITLE III DATA

Section 311 & 312 Hazard Categories:

Immediate Health Hazard: Yes

Delayed Health Hazard: No

Fire Hazard: No

Reactive Hazard: No

- REGULATORY INFORMATION, cont'd

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

- **OTHER INFORMATION**

MSDS STATUS:

Date This Revision: 22 September, 2014

Date Previous Revision: 7 February, 2013

Person Responsible for Preparation: Gary A. Braden

REASONS FOR REVISION: New registration numbers was added and contact information was updated in section 1.

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.

TRADEMARKS: REJUVENATE is a trademark of Stehekin LLC.

Amvac Beaker logo is a registered trademark of AMVAC Chemical Corporation.

ABBREVIATIONS:

ACGIH - American Conference of Governmental Industrial Hygienists

ADR - European Agreement Concerning the International Carriage of Dangerous Goods

by Road

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 7 pages.