FORMALDEHYDE SOLUTIONS, LTD OTY

FOR USE IN HATCHER IES AS A FUMIGANT. FOR USE IN POULTRY AND SWINE CONFINEMENT BUILDINGS, MUSHROOM HOUSES, AND FOR USE IN DISINFECTING AND FUMIGATING ROOMS AND RAILROAD CARS. FOR USE BY FORMULATORS IN PREPARATION OF FORMULATED PRODUCTS.

Active Ingredient Enemaldahuda

romaidenyde	31.07
Other Ingredients	63.0%
TOTAL 1	00.09

(Contains Methanol)



KEEP OUT OF REACH OF CHILDREN DANGER/PELIGRO



POTENTIAL CANCER HAZARD based on animal data and limited epidemiological evidence. May cause allergic skin reaction, reproductive disorders, lung damage, liver damage, kidney damage, brain and nervous system damage.

	FIRST AID
IF INHALED:	Move victim to fresh air. If not breathing, call 911 or an ambulance, then, give artificial respiration, preferably mouth-to-mouth. Cell a poison control center or doctor for further treatment advice.
IF IN EYES:	Hold eyes open. Rinse slowly with water for 15-20 minutes. Remove contact lenses, if present after the first 5 minutes, then, continue rinsing eye, Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING:	Take off contaminated clothing. Rinse skin immediately with plenty of water for at least 15 to 20 minutes Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swellow. Do not induce vomiting unless told to do so by a poison control center. Do not dive anything by mouth to an unconscious person.

Net Contents (U.S. gals) 4

EPA REG. No.

8133-32-008743

EPA Est. No.

008743-NC-001 008743-OK-001

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted a detalle. (If you do not understand the label, find someone to explain it to you in detail.)



1200 N. PEORIA • P.O. BOX 470010 • TULSA, OK 74147-0010 800-551-5128 • 918-622-1214

PRECAUTIONARY STATEMENTS DANGER HAZARDS TO HUMANS AND DOMESTIC ANIMALS.

Corrosive. Causes eye damage and skin irritation. Methanol may cause bilindness. Harmful or fatal if swallowed. DO NOT get in eyes, on skin or on clothing, Avoid contamination of food. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Vapors harmful. Avoid breathing spray, mist or vapors. Wear a NIOSH/MSHA

respirator approved for formal dehyde exposure, chemical resistant boots or shoe covers chemical resistant gloves and goggles (if a full face respirator is not used) when handling. Formaldehyde is a primary skin sensitizing agent which may cause allergic contact dermatitis Inhalation studies in test animals have produced an excess of tumors. Users should consider the possibility that overexposure to the active ingredient may pose a cancer risk. Formaldehyde is considered an occupational carcinogen by OSHA and users should be aware of the occupational exposure standard PEL (Permissible Exposure Limit) of 0.75 ppm.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. DO NOT discharge effluent containing this active ingredient into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. DO NOT discharge effluent containing this product into sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the

PHYSICAL AND CHEMICAL HAZARDS Do not use or store near heat or open flames.

IN CASE OF FIRE: Use CO2 or dry chemical for small fires, alcohol type aqueous film forming foam or water spray for large fires. Use water spray to cool fire exposed containers. Wear self-contained breathing apparatus and complete personal protective equipment when potential for exposure to vapors or products of combustion exists. IN CASE OF SPILL: Clean up immediately. Place leaking containers in well ventilated area.

Eliminate ignition sources. To clean up spills, flush area sparingly with water or use absorbent. Avoid run-off to storm sewers and ditches leading to natural waterways. Neutralize with ammonium hydroxide or sodium hydroxide.

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Do not allow access to treated areas by any person unless provided with a respirator approved by NiOSH/MSHA for formaldehyde exposure unless the formaldehyde vapor level has been determined to be below 0.75 PPM. Warning signs may be removed only after the vapor level drops below 0.75 PPM as determined by an OSHA approved method used in accordance with

monitrouties of PERSONNEL - In accordance with FORMALDEHYDE regulation 29
CFR Section 1910.1048, all personnel who transport, pour, apply and clean up formaldehyde
must monitor formaldehyde in order to insure workplace safety. The formaldehyde vapor level must be measured to be below 0.75 ppm, using a PEL (8 hour) monitor that meets the NIOSH method 3500, following the manufacturer's instructions. All personnel that transport, pour, apply and clean up formaldehyde must monitor peak exposure to formaldebyde at below 2.0 ppm with a STEL (15 minute) monitor that meets the NIOSH method 3500, in accordance with the manufacturer's directions. PEL monitors are to be worn throughout the workshift. STEL monitors are to be worn for 15 minutes during the time of potential peak exposure.

AGRICULTURAL WORKER SAFETY USE REQUIREMENTS (WPS)

Use this product only in accordance with its labeling and with the Workers Protection Standard, 40 CFR 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural posticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements in this labeling about personal protective equipment, restricted-entry intervals, and notification to workers. These equirements only apply to uses of this product that are covered by the Workers Protection

Do not apply this product in a way that will contact workers or other persons, either directly or through dnit. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the Agency responsible for Pesticide Regulation.

Entry Restrictions: Follow the applicable entry restrictions listed elsewhere on the product

labeling.

Notification Instructions: Follow the rules in the WPS for notifying workers of the application.

Exception: If there are instructions elsewhere on the product labeling that requires the posting of specific signs at treated areas, you must notify workers of the application by warning them orally AND by posting the signs specified on the labeling.

Personal Protective Equipment (PPE) Requirements

Handler PPE: Applicators and other handlers must wear:

Air purifying full-face respirator with formaldehyde eartridges if in area being treated. Coveralls over long-sleeved shirt & long pants.

Chemical resistant gloves such as barrier laminate or viton.

Chemical resistant footwear plus socks.

Protective eyewear, and chemical resistant headgear for overhead exposure.

Chemical resistant apron when cleaning equipment, mixing or loading.

Early Entry: PPE required for early entry to treated areas that is permitted under Workers Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

Air purifying full-face respirator with formaldehyde cartridges.

Coveralls over long-sleeved shirt & long pants.

Chemical resistant gloves such as barrier laminate or viton.
Chemical resistant footwear plus socks.

Protective eyewear, and chemical resistant headgear for overhead exposure. Conflicting Instructions: If the requirements of the WPS conflict with instructions listed elsewhere on this product label, users must obey the more protective requirements.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

AGRICULTURAL USES: Prior to all housing applications, warning signs must be posted on confinement buildings as specified in State, Local and Federal Regulations. Where required, trained personnel must be present during introduction of the FORMALDEHYDE

Trained personner must be present during introduction of the PORMALDERT BE SOLUTIONS, LTD QTY.

FOR DISINFECTING AND FUMIGATING ROOMS, RAILWAY CARS: For each 1,000 cubic feet of space to be fumigated, use 16-73 oz. Potassium Permanganate and 20 oz. FORMALDERT DE SOLUTIONS, LTD QTY. Place on floor, a large dishpan in which a FORMALDEHTUE SOLOTION, LID QIT, THE CONTROL AND THE WHITE AND THE WHITE

instructions.

FOR FUMIGATION OF HATCHING EGGS: Incubators/hatchers may be funigated using a maximum of 2 ft. Oz. of FORMALDEHYDE SOLUTIONS, LTD QTT per 1,000 eggs in a 24-hour period. Dilute solution is to be placed in an open container and allowed to naturally evaporate or in slight vacuum condition from air ventilation. Potassium permanganate should to the used as a catalyst to liberate formaldehyde gas. Furnigation may be performed on both empty incubators/hatchers and incubators/hatchers containing eggs. Incubators/hatchers must be vented to outside air. Room housing the incubators/hatchers should also have adequate ventilation. Warning signs must be placed on incubators/hatchers and in surrounding area before

fumigation may begin.

Eggs to be fumigated should be held on clean racks or egg flats which permit air circulation. Furnigation is most effective if applied to nest clean eggs as soon after collection as possible or when eggs are delivered to the hatchery or when set in incubators/hatchers. Furnigation of eggs should not be done between 24 hours and five (5) days incubation because embryo damage may occur at this time.

Fumigation procedures may be repeated at a maximum rate of 2 fl.Oz of FORMALDEHYDE

SOLUTIONS, LTD QTY per 1,000 eggs in a 24-hour period. Last application of FORMALDEHYDE SOLUTIONS, LTD QTY should be added at least 12 hours before chicks are pulled to allow time for its complete evaporation. General access to the area may be allowed, and warning signs may be removed, when sufficient aeration has occurred to reduce formaldehyde vapor level to below 0.75 ppm as determined by an OSHA approved method used n accordance with manufacturer's instruc

FOR USE IN FUMIGATION OF POULTRY OR SWINE CONFINEMENT BUILDINGS: FORMALDEHYDE SOLUTIONS, LTD OTY can only be applied to unoccupied poultry or swine confinement buildings by either spray sled method or fixed sprinkler method. No workers are permitted in treated building during treatment. All application methods must be carried out and controlled from outside the area being furnigated.

For Poultry or Swine Confinement Buildings: Remove all poultry or swine and feed from premises to assure adequate surface coverage. Remove all portable equipment. Remove all bedding, manure and debris. Clean all appropriate surfaces. Empty all water troughs and feed racks. Clean rinse all surfaces with water. Sanitize with a suitable and approved sanitizing

Posting: Post warning signs on confinement building prior to start of furnigation. Post signs in plainly visible locations on or in immediate vicinity of all entrances. Do not remove signs until furnigation, ventilation and final testing has been completed, and building is safe for reentering. Warning signs shall be printed in red on white background and shall contain, in English and Spanish, the following statement in letters not less than two inches in height: "DANGER-FUMIGATION". They shall also depict a skull and crossbones not less than one inch in height and shall state in letters not less than one-half inch in height "FORMALDEHYDE" date and time fumigant was introduced, and name, address and telephone number of the applicator

Trained personnel must be present during the introduction of FORMALDEHYDE SOLUTIONS, LTD QTY and, after 24 - hour treatment period, if entry is necessary into treated confinement building for purposes of facilitating aeration. Establish prohibited entry zones extending at least 25 feet from building whenever aeration of fumigant is accomplished by opening doors or windows in areas where workers may be present. Identify prohibited entry zones with cones and yellow cautionary tape, staked 3 to 4 feet off the ground, using posting signs as described above

Mixing/Loading Instructions for remote house application methods. Calculate volume of building to be treated. Use 20-60 fluid ounces (590-1770 mL) FORMALDEHYDE SOLUTIONS, LTD QTY for each 1000 cubic feet of building volume. Dilution: See specific dilution recommendations under application methods below. Transfer through a closed system appropriate amount of FORMALDEHYDE SOLUTIONS, LTD OTY to the mixing tank containing appropriate amount of water. This product should be diluted with sufficient

water to thoroughly wet all surfaces during application.

Sprinkler Application Method: Install sprinkler system in poultry or swine confinement building. Use plastic rain bird impact sprinklers on six inch stands, spaced 20-30 feet apart using flexible 1/2 inch PVC irrigation hose. Some buildings may require two systems, one at each end covering one-half of building. Connect end of the sprinkler system to the truck or trailer mounted mix and pumping system or adapted agricultural spray rig. Close and secure door(s). Fumigate with FORMALDEHYDE SOLUTIONS, LTD QTY by mixing 1 part FORMALDEHYDE SOLUTIONS, LTD OTY with 10 parts water (a 1:11 dilution). All application activities must be carried out from outside confinement building. Application sprinklers should be rinsed following application solution with clean water, disconnected from pumping system, and left in confirment house until reentry is acceptable. Treated buildings should be left closed, locked and secured for a minimum of 24 hours, then, ventilated for sufficient time so that airborne levels of formaldehyde are less than 0.75 ppm as determined by

an OSHA approved method used in accordance with manufacturer's instructions.

Spray Sled Application Method: Apply using a portable spray sled (such as U.S. Patent# 5,489,066 method, Advance Pest Control, Lemoore, CA). Spray sled shall be of a design that allows it to spray formaldehyde solution in a rearward direction providing uniform coverage of sides, ceiling and floor as hose is recoiled and spray sled is pulled through poultry or swine confinement building. Dilution: Dilute FORMALDEHYDE SOLUTIONS, LTD QTY with sufficient water to provide uniform coverage (recommended dilution rate - 1 part forma

Position vehicle carrying application pump delivery system approximately 20 feet from access to poultry or swine confinement building. Position spray sled equipment and feeder hose in poultry or swine confinement building at furthest distance from vehicle mounted pump delivery system. Spray formaldehyde solution in a rearward direction towards sides, ceiling and floor as hose is recoiled and spray sled is pulled through poultry or swine house. Keen pentrance door closed to width of sled or approximately 30 inches. Follow application solution with sufficient clean water to flush sled system. Pull sled out of poultry or swine house. Close and secure

cream water of must easy system. First bould on jointly of swin boulds choose and accure entrance door. Follow treatment period and aeration procedure below.

Treatment and Aeration of Treated Poultry Confinement Buildings: Treated buildings must be left closed, locked and secured against unauthorized entry for a minimum of 24 hours.

Note: For effectiveness, relative humidity should be at least 70% and temperature at least 70°F.

(21°C) or higher. Following treatment, rooms are opened to outside fresh air for thorough venting while using appropriate personnel protective equipment. Removal of gas phase formaldehyde is a function of the number of building volumes (air exchanges) of air exhausted. If mechanical ventilation equipment is used, ventilate for a minimum of 20 air exchanges and 12 hours. If no mechanical ventilation equipment is used ventilate for a minimum of 24 hours.

Reentry After Aeration: Do not allow access into aerator treated areas by any person unless formaldehyde vapor level has been determined to be below 0.75 ppm. Warning signs may be tollinatelyte valor teet has been declarated to perfect with 5 ppm as determined by direct reading device, approved by OSHA and used in accordance with manufacturer's instructions.

FOR USE IN DISINFECTION OF MUSHROOM HOUSES, TOOLS AND EQUIPMENT:

This product may be used in the disinfection of mushroom houses, tools and equipment.

FORMALDEHYDE SOLUTIONS, LTD QTY can only be applied to unoccupied mushroom

houses by the method following on this label. No workers are permitted in treated building during treatment. All application methods must be carried out from outside the mushroon

Remove all mushrooms, soil and debris from premises to assure adequate coverage. Remove all portable equipment. Clean and sanitize with suitable solutions as needed. Rinse all surfaces with

Posts warning signs on confinement buildings prior to start of fumigation. Post signs in plainly visible locations on or in immediate vicinity of all entrances. Do not remove signs until fumigation, ventilation and final testing has been completed, and building is safe for reentering. Warning signs shall be printed in red on white background and shall contain, in English and Spanish, the following statement in letters not less than two inches in height: "DANGER -FUMIGATION". They shall also depict a skull and crossbones not less than one inch in height and shall state in letters not less than one-half inch in height "FORMALDEHYDE", date and time fumigant was introduced, and name, address and telephone number of the applicator performing the fumigation.

Trained personnel must be present during the introduction of formaldehyde and, after 24-hour treatment period, if entry is necessary into treated confinement building for purposes of

PROCEDURE: WEAR FULL PROTECTIVE CLOTHING AND FULL FACE RESPIRATOR WHEN USING FORMALDEHYDE.

APPLICATION: 1. Tools and Equipment: Wash thoroughly with water to remove debris; then,

dip with a solution made by mixing 1 gallon of FORMALDEHYDE SOLUTIONS, LTD QTY with tap water to make 100 gallons [a 0.37% solution of formaldehyde]. Rinse with water

to remove all fraces of formaldehyde.

2. Non producing areas-corridors, packing sheds, empty growing sheds, etc.

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2. Empty mushroom house of all growing media. Sweep out thoroughly, B. Wet out growing boards. C. Close up house, sealing as appropriate, to avoid formaldehyde fume seepage, D. Inject steam into house until interior temperature reads 140 to 150°F [about 12 hours of steam injection required]. E. Inject FORMALDEHYDE SOLUTIONS, LTD OTY into steam [4] gallons in small houses of up to 37 ft. by 48 ft. by 15 ft. high]; [5 gallons in regular dimension houses of 37 ft. by 60 ft. by 15 ft. high]; [8 gallons in large houses 37 ft. by 80 ft. by 15 ft high]. F. Continue steaming for 12 hours. G. Turn on exhaust fans for 4 hours and, then, oper doors for 24 hours before permitting reentry into house. Prior to reentry, check house for formaldehyde fumes at outside of exhaust fans and at entrances.

Treatment and Aeration of Treated Mushroom Houses: Treated buildings must be left closed, locked and secured against authorized entry for a minimum forced ventilation period of 4 hours. Removal of gas phase is a function of the number of building volumes (air exchanges) of air exhausted. If mechanical ventilation equipment is used, ventilate for a minimum of 20 air exchanges and 12 hours. If no mechanical ventilation equipment is used, ventilate for a minimum of 24 hours.

Reentry After Aeration: Do not allow access into aerator treated areas by any person unless formaldehyde vapor level has been determined to be below 0.75 ppm. Warning signs may be removed only after vapor level drops below 0.75 ppm as determined by direct reading device, approved by OSHA and used in accordance with manufacturer's instructions.

STORAGE AND DISPOSAL

Storage: Do not contaminate water, food or feed by storage or disposal. Should be stored apart from other combustibles, acids or oxidizing agents. Storage facilities should be non-combustible.

 Keep away from lights, fire and sparks.
 Make certain closure is securely closed before moving.
 Keep container closed.
 Keep out of sun and away from heat. Keep away from lights, fire and sparks. Store in a cool place. Never use pressure to empty. Ground container before emptying. Always handle in upright position. Never roll a container. Never add another material to contain

PESTICIDE DISPOSAL: Do not contaminate water, food or feed by disposal. Pesticide waste are toxic. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or Hazard Waste representative at nearest EPA

CONTAINER DISPOSAL: Completely empty drum, then, dispose of empty drum in accordance with Federal, State, or Local regulations. After this container has been emptied, it may contain explosive vapors. Keep away from heat, sparks, and flames. Do not cut, puncture, or weld on or near this container when empty

SPILL CLEAN UP REQUIREMENTS: Should a spill occur, contaminated soil and other clean up debris is a hazardous waste. If a reportable quantity is exceeded, report spill/leak to the National Response Center (800-424-8802). Reportable quantity (RQ) for formaldehyde is 100

PHYSICAL PROPERTIES

Specific Gravity	1.08
Pounds per Gallon	9.00
Solubility in Water @20 C	Complete
Flash Point	>140°F
Vapor Pressure	40 mm Hg
pH	3.5 - 4.5

Health 3 Reactivity **Personal Protection** Fire 2

CHEMICAL EMERGENCY CALL BRAINERD CHEMICAL CO., INC. AT 918-622-1214 OR CHEMTREC AT 1-800-424-9300 BEFORE USING CONSULT MATERIAL SAFETY DATA SHEET

To request a Material Safety Data Sheet, please call (918) 622-1214, or write: Brainerd Chemical Co., Inc., P.O. Box 470010, Tulsa, OK 74147-0010 Brainerd Chemical Co., Inc. assumes no responsibility when this product is not used in accordance with instructions contained on this label.