PARASITE-S- formaldehyde liquid Western Chemical Inc.

PARASITE-S

Formalin (aqueous formaldehyde solution)

For control of External Protozoa and Monogenetic Trematodes on all Finfish and External Protozoans on Penaeid Shrimp; and for control of Fungi on all Finfish eggs and Freshwater-reared Finfish

DESCRIPTION

PARASITE-S is the aqueous solution of formaldehyde gas (this is equivalent to formalin 37% or

37grams of formaldehyde in 100mLof solution). U.S.P. grade PARASITE-S contains not less than

37% (by weight) of formaldehyde gas per weight of water and 6 to 14% methanol. In solution, formaldehyde

is present chiefly as HO(CH20)H. Its molecular weight is 30.93. PARASITE-S is readily miscible with water, methanol, and ethanol and is slightly soluble in ether. It is a clear, colorless

liquid (Heyden Newport Chemical Corporation, 1961).

FISH AND SHRIMP TOXICITY STUDIES

The toxicity of PARASITE-S was measured by standard methods in laboratory bioassays with

rainbow trout, Atlantic salmon, lake trout, black bullhead, channel catfish, green sunfish, bluegill,

smallmouth bass, largemouth bass and striped bass. The 3,6,24 and 96-hour LC50 (lethal

concentration for 50% of the animals) values for trout range from 1,230 to 100 μ L/L (455 to 37 ppm

formaldehyde); for catfish, from 495 to 65.8 μ L/L (183 to 24 ppm formaldehyde); for bluegill,

from 1,230 to 100 μ L/L (455 to 37 ppm formaldehyde); for catfish, from 495 to 65.8 μ L/L (183 to 24 ppm formaldehyde);

for bluegill, from 2,290 to 100 μ L/L (847 to 37 ppm formaldehyde); for largemouth bass, the values for 6 to 96-hour LC50 range from 1,030 to 143 μ L/L (381 to 53 ppm formaldehyde) (Bill et al. 1977)

and for striped bass the values for 6 to 96-hour LC50 range from 940 to 30 μ L/L (347 to 11 ppm formaldehyde)

(Bills, Marking and Howe-1993). The 24, 48, 72 and 96 hour LC50 values for penaeid shrimp range

from 712 to 250 $\mu\text{L/L}$ (ppm) (Johnson. 1974 and Williams, 1980).

INDICATIONS FOR USE

- 1. **Parasiticide for Finfish:** for the control of external protozoa (Chilodonella spp., Ichthyobodo spp., Epistylis spp., Ichthyophthirius spp., Ambiphrya spp. and Trichodina spp.), and the monogenetic trematode parasites (Cleidodiscus spp., Dactylogyrus spp., and Gyrodactylus spp.).
- 2. **Parasiticide for Penaeld Shrimp:** for the control of external protozoan parasites (Bodo spp., Epistylis spp., and Zoothamnium spp.).
- 3. Fungicide for Finflsh Eggs: for the control of fungi of the family Saprolegniaceae.
- 4. **Fungicide for Freshwater-reared Finfish:** for the control of mortality due to saprolegniasis associated with fungi in the family Saprolegniaceae.

DIRECTIONS FOR USE

1. Parasiticide for Finfish

Concentrations of Formalin

Aquatic Species	Administer in Tanks and Raceways for up to 1 hr (µL/L)*	r Administer in Earthen Ponds (Single Treatment) (μL/L)*
Salmon and Trout Above	Up to 170	15-25** ***
50		
Below 50	Up to 250	15-25** ***
All other Finfish	Up to 250	15-25** ***

^{*}Microliter per liter *(µL/L) = parts per million (ppm)

*** Although the indicated concentrations are considered safe for cold and warm water finfish, a small number of each lot of pond to be treated should always be used to check for any unusual sensitivity to formalin before proceeding.

2. Parasiticide for Penaeld Shrimp

Concentrations of Formalin

Aquatic	Administer in Tanks and Raceways	Administer in Eartehn Ponds (Single
Species	for up to 4 hr (μL/L)*	Treatment) (μL/L)*
Penaeid	50 to 100 **	7 5***

^{**} use the lower concentration when ponds are heavily loaded with phytoplankton or fish, to avoid oygen depletion due to the biological oxygen demand created by the decay of dead phytoplankton. Although the indicated concentrations might be used if strictly monitored.

- * Microliter per liter (L/L) = parts per million (ppm).
- ** Treat for up to 4 hours daily. Treatment may be repeated daily until parasite control is achieved.

Use the lower concentration when ponds, tanks or raceways are heavily loaded with phytoplankton,

or shrimp, to avoid oxygen depletion due to the biological oxygen demand created by decay of dead phytoplankton. Alternatively, a higher concentration might be used if dissolved

oxygen is strictly monitored.

*** Treatment may be repeated in 5 to 10 days, if needed

3. Fungicide for All Finfish Eggs

Concentrations of Formalin

Aquatic Species	Administer in Hatchery Systems (µL/L)*
Eggs of all finfish except Acipenseriformes	1000-2000 for 15 minutes **
Eggs of Acipenseriformes	Up to 1500 for 15 minutes **

^{*} Microliter per liter (μ L/L) = parts per million (ppm)

4. Fungicide for Freshwater-reared Finfish

Concentrations of Formalin

Aquatic Species	Administer in Tanks and Raceways (µL/L)*
Freshwater-reared Finfish	150 for 60 minutes per day on alternate days for three treatments

^{*}Microliter per Liter (μ L/L) = parts per million (ppm)

METHODS OF APPLICATION

APPLICATION TO TANKS AND RACEWAYS -Turn off water supply, provide aeration, apply

appropriate amount of PARASITE-S, and thoroughly dilute and mix to assure equal distribution of

PARASITE-S. Treat for up to 1 hour for fish and up to 4 hours for penaeid shrimp, then drain the

solution and refill the tank with fresh, well-aerated water. While tank is under treatment, adequate

^{**} Apply in constant flow water supply of incubating facilities. A preliminary bioassay should be conducted on a small subsample of fish eggs to determine sensitivity before treating an entire group. This is necessary for all species because egg sensitivity can vary with species or strain and the unique conditions at each facility.

oxygen must be present to maintain the fish or shrimp. If needed, aeration should be provided to

prevent oxygen depletion. Treatments may be repeated daily until parasite control is achieved.

APPLICATION TO PONDS - Apply greatly diluted PARASITE-S to the pond evenly using a pump,

sprayer, boat bailer, or other suitable device to assure even distribution. Allow PARASITE-S to dissipate

naturally. Single treatments usually control most parasites, but may be repeated in 5 to 10 days if

needed. Treatments for Ichthyophthirius should be made at 2-day intervals until control is achieved.

APPLICATION TO EGG INCUBATORS - Apply PARASITE-S into a constant water supply flowing

around the eggs. A drip or pressure system should be used and timed. Apply PARASITE-S under

the surface of the water flow.

WITHDRAWAL TIME Zero days.

Warning

Striped bass have been demonstrated to be hypersensitive to formalin; lethal toxicity has been

noted to occur at levels approximately 2-3 times the recommended therapeutic concentration.

DANGER POISON

USER SAFETY WARNINGS

Use Personal Protective Equipment(PPE) including eye, respiratory, and skin protection while handling this product. Refer to SDS and OSHA regulations(29 CFR 1910.1048) for guidance on the most appreciate PPE equipment. Failure to use PPE may increase the risk of unsafe exposure to formaldehyde.

Exposure to high concentrations of formaldehyde vapor causes severe respiratory irritation

which can be life-threatening. Lower vapor levels can cause irritation to the eyes, respiratory

tract, and skin. Swallowing formaldehyde can be life-threatening. Formaldehyde is an irritant

when splashed on skin or Into the eyes. It can cause severe eye damage, even blindness.

Keep out of reach of children.

In laboratory animals, formaldehyde has demonstrated the potential to cause reproductive and developmental toxicities at high dose.

Use only with adequate ventilation.

Keep container tightly closed when not in use.

May aggravate a pre-existing asthmatic condition and allergic rhinitis.

Moderate fire and explosion hazard exists when exposed to heat or flame.

Contains methanol - cannot be made non-poisonous. Prolonged exposure to methanol has

been associated with reproduction disorders.

Potential Cancer Hazard: Formaldehyde vapor may be carcinogenic if inhaled. Use applicable

safety protection. (Note: This drug, used as labeled, does not cause formaldehyde tissue residues in fish).

Employers: Refer to Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1910.1048 for human safety guidance that may be applicable to your specific operation.

OSHA's "action level" concentration for airborne formaldehyde is 0.5 part per million (ppm), calculated as an 8 hour time-weighted average (TWA). Use respiratory, skin, and eve

protection when needed (refer to OSHA's regulation 29 CFR 1910.1048). OSHA's airborne

exposure limits (without use of a respirator) for formaldehyde shall not exceed 1) 0.75 part

per million (ppm) as an 8-hour, time-weighted average (TWA) or 2) 2 parts per million (ppm)

as a 15-minute, short term exposure limit (STEL). **NOTE:** The odor of formaldehyde in the air

can generally be detected at about 0.5 to 0.8 ppm (range about 0.05 to 1 ppm).

USER EXPOSURE EMERGENCY AID

INHALATION (Breathing): Get medical aid immediately. Remove victim from exposure wearing protective clothing and respiratory protection appropriate to the type and degree of

contamination. Move victim to fresh air immediately. If breathing is difficult, give oxygen. DO

NOT use mouth-to-mouth respiration. If breathing has ceased, induce artificial respiration

with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

INGESTION (Swallowing): DO NOT induce vomiting. If the person is conscious, dilute, inactivate, or absorb the formaldehyde by giving milk, activated charcoal, or water. Get medical help immediately. If vomiting occurs, keep head lower than hips.

EYE CONTACT: Immediately flush eye(s) with large amounts of water for at least 15 minutes,

lifting the lower and upper eyelids occasionally, until no evidence of chemical remains. Seek medical attention immediately. DO NOT allow victim to rub eyes or keep eyes closed for burns to eyes may have a delayed effect.

SKIN CONTACT: Remove contaminated clothing (including shoes) immediately. Wash affected

area of body with soap and large amounts of water until no evidence of chemical remains (at least 15 minutes). If there are chemical burns, or appreciable eye or respiratory

irritation, get medical help immediately.

PRECAUTIONS

Store PARASITE-S indoors away from direct sunlight, heat, sparks, and open flames, and ventilate storage area.

Do not subject PARASITE-S to temperatures below 40°F (4.4°C). PARASITE-S subjected to temperatures below 40°F causes the formation of paraformaldehyde, a substance which is toxic to fish. Paraformaldehyde can be recognized as a white precipitate at the bottom or on the walls of the container.

Tolerance to PARASITE-S may vary with strain and species of fish, eggs and shrimp. While the indicated

concentrations are considered safe for the indicated use, a small number of each lot to be treated should be used to check for any unusual sensitivity to PARASITE-S before proceeding.

Under some conditions, fish or penaeid shrimp may be stressed by normal treatment concentrations. Heavily parasitized or diseased fish or penaeid shrimp often have a greatly reduced tolerance to PARASITE-S. Such animals do not tolerate the normal tank treatment regimen the first time they are treated. Therefore, time and dosage may need to be reduced. If they show evidence of distress (by piping at the surface), the solution should be removed and replaced with fresh, well aerated water. Careful observations should always be made throughout the treatment period whenever tank or raceway treatments are made. Treatment should never exceed 1 hour for fish or 4 hours for penaeid shrimp (even if they show no sign of distress), nor should it exceed 15 minutes for fish eggs.

Do not apply PARASITE-S to fish ponds, tanks, or raceways with water warmer than 80°F (27°C), when a heavy bloom of phytoplankton is present, or when the concentration of dissolved oxygen is less than 5 mg/L (ppm). Do not apply to penaeid shrimp ponds when the concentration of the dissolved oxygen is less than 3 to 4 mg/L (ppm). PARASITE-S may kill phytoplankton and can cause depletion of dissolved oxygen. If an oxygen depletion occurs, add fresh, well-aerated water to dilute the solution and to provide oxygen.

Use with caution in recirculating aquaculture systems due to potential for impacts on the biofilter. Monitor water quality parameters (e.g., ammonia, nitrate) during and after treatment. Consider bypassing biofilter if possible. After treatment, the system should be flushed and replaced with untreated water before reconnecting the biofilter.

ENVIRONMENTAL PRECAUTIONS

Do not discharge effluent containing this product 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 authorities are notified in writing prior to discharge. Notify the NPDES authority that water quality benchmarks for the protection of freshwater aquatic life have been derived for formaldehyde by Hohreiter and Rigg, 2001 (Chemosphere 45:471-486) following EPA guidelines. The acute benchmark value for formaldehyde is 4.58 mg/L (12.4 mg formalin/L). The chronic benchmark value is 1.61 mg/L (4.35 mg formalin/L). Water quality benchmark concentrations are not discharge limits, but may be used by the NPDES authority to derive such limits for the permit.

Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

STORAGE

Recommended storage temperature 59°F (15°C). DO NOT EXPOSE TO DIRECT SUNLIGHT.

Store PARASITE-S indoors away from direct sunlight, heat, spark, and open flame, and ventilate storage area. Do not subject PARASITE-S to temperatures below 40°F (4.4°C).

To report suspected adverse events, for technical assistance, or to obtain a copy of the SDS, contact Syndel at (360) 384-5898 or www.syndel.com. For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or online at http://www.fda.gov/AnimalVeterinary/SafetyHealth

Manufactured for:

Syndel 1441 W. Smith Road, Ferndale, WA 98248 (360) 384-5898 Ver. 030519

Approved by FDA under NADA# 140-989

- FOR USE ON ALL CULTURED FINRISH, PENAEID SHRIMP, AND ALL FINRISH EGGS INDICATIONS FOR USE.

 1. Parasticide for All Finfish for the control of external protoposa (Childchonelle spp., Ichthyochdo spp., Epistylis spp., and Trichodine spp.), and the monogeneans (Cleidchdeus spp.) abeatings are spin, and Gyrodacytis spp.).

 2. Parasticide for Penaeld Shrimp, for the control of external protoposan parastites (Bodo spp., Epistylis spp.) and Zoothamnium spp.).

- Zoothamnium spp.).

 3. Fungicide for Firifish Eggs: for the control of fungi of the family Saprolegniaceae.

 4. Fungicide for Freshwater-reared Firifish: for the control of mortality due to saprolegniasis associate the family Saprolegniaceae DIRECTIONS FOR USE

Aquatic species	Administer in Tanks & Raceways for up to 1 hr (µL/L)*	Administer in Earthen Ponds (Single Treatment (µL/L)*
Salmon & trout above 50°F below 50°F	up to 170 up to 250	15-25** *** 15-25** ***
All other finfish	up to 250	15-25** ***

- Microller for liter (u.k.) grafts par million (pcm).

 Use the lower concentration when profits are resembly loaded with phytoplankton or fish, to avoid oxygen despetion due to the biological oxygen demand created by deeply of dead phytoplankton.

 Alternatively, a higher concentration might be used if dissolved oxygen is strictly monitored.

 "Alternatively, a higher concentration are considered date for cold and warm water firfish, a small number of each lot or point be to tested should always be used to check for any unusual sensitivity to formalin before

Aquatic species	Administer in Tanks & Raceways for up to 4 hr (µL/L)*	Administer in Earthen Ponds (Single Treatment (µL/L)*
Penaeid Shrimp	50 to 100**	25***

- Microllet per liter (u.l.) = parts per million (pcm).

 Treaf for up 4 hours day, Treatment may be repeated daily until parasite control is achieved. Use the lower concentration when tanks or raceverays are heavily loaded with phytoplaniston or shrimp, to avoid oxygen depletion due to the biological oxygen demand created by decay of dead phytoplaniston. Alternatively, a higher concentration might be used if dissolved oxygen is strictly monitored.

 Treatment may be repeated in 6 to 10 days, if needed.

Fungicide for All Finfish Eggs		
	Concentrations of Forms	die

Aquatic species	Administer in Hatchery Systems (μL/L)*
Eggs of all finfish except Acipenseriformes	1000-2000 for 15 minutes**
Eggs of Acipenseriformes	up to 1500 for 15 minutes**

Microller per liter (Jul.): a parts per million (pcm).
 Apply in constant flow water supply of incubating facilities. A preliminary bioassay should be conducted on a small subsample of fish eggs to determine sensitivity before treating an entire group. This is necessary for all species because egg sensitivity can vary with species or strain and the unique conditions at each facility.
 Fungicide for Freshwater-reared Finfilia.

Aquatic species	Administer in Tanks and Raceways (µL/L)*
Freshwater-reared Finfish	150 for 60 minutes per day on alternate days for three treatments

Microller per liter (µLL) = parts per million (ppm).

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APPLICATION TO TANKS AND RACEWAYS - Turn off water supply, provide sention, agay's parpropriate amount of PARASTIES, and thosology by the part of the part of PARASTIES S Tear for up in 1 hour for first and up, at hour expenses the part of the part of

Is achieved.

APPLICATION TO PONDS - Apply greatly diluted PARASITE-S to the pond evenly using a pump, sprayer, boat baller, or other suitable device to assure even distribution. Allow PARASITE-S to dissipate naturally. Single treatments usually control most parasites, but may be repeated in 5 to 10 days if needed. Treatments for histophyriterus should be made at 2-day intervals until control is achieved.

APPLICATION TO EGG INCUBATIONS - Apply PARASITES into a constant water supply flowing around the eggs. A clip to pressure system alroad the used and smed. Apply PARASITES for under the surface of the water flow. Egg tanks may be treated as of them is necessary to prevent growth of provent growth of the province growth and may be treated as of them is necessary to prevent growth or prevent growth gro

FOR USE ON ALL CULTURED FINFISH, PENAEID SHRIMP, AND ALL FINFISH EGGS INDICATIONS FOR USE:

- 1. Parasiticide for All Finish for the control of external protozoa (Disclorations spp., ichthycodos spp., Epistylis spp., ichthycodos spp., Epistylis spp., ichthycotherius spp., and Epistylis spp.), and Trichodine spp.), and the monogeneans (Cleidodiscus spp.) backployarus spp., and Gyodachylis spp.).

 2. Parasiticide for Penaeld Shiring: for the control of external protozoan parasities (Bodo spp., Epistylis spp., and Zoothamnium spp.).

- Zoothamnium spp.).

 3. Fungloide for Firstneth Eggs: for the control of fungl of the family Saprolegniaceae.

 4. Fungloide for Freshwater-learned Firstneth For the control of mortality due to saprolegniasis associated with fungl in the family Saprolegniaceae.

1. Parasiticide for All Finfish

	Concentrations of Formalin	
Aquatic species	Administer in Tanks & Raceways for up to 1 hr (µL/L)*	Administer in Earthen Ponds (Single Treatment) (µL/L)*
Salmon & trout above 50°F below 50°F	up to 170 up to 250	15-25** *** 15-25** ***
All other finfish	up to 250	15-25** ***

- Microller per liter (u.k.) parts per million (pern).

 Use the lower constration when profits are heavily loaded with phytoplanishon or fish, to avoid oxygen depetion due to the biological oxygen denand created by decay of dead phytoplanishon. Alternatively, a higher concentration might be used if dissolved oxygen is strictly monitored.

 **Although the indicated concentrations are considered safe for cold and warm water finflish, a small number of each lot or point to be tested should alway be used to check for any runusual sensitivity formalin before

Aquatic species	Administer in Tanks & Raceways for up to 4 hr (µL/L)*	Administer in Earthen Ponds (Single Treatment) (µL/L)*
Penaeid Shrimp	50 to 100**	25***

- Microlite per liter (µ(µL) = parts per million (ppm).
 Treat for up to 4 hours daily. Treatment may be repeated daily until parasite control is achieved. Use the lower concentration when tanks or raceways are heavily loaded with phytoplankton or shrimp, to avoid oxygen depletion due to the biological oxygen demand created by deavy of dead phytoplankton. Attentiatively, a higher concentration might be used off dissolved oxygen is stictly monitored.

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 Concentrations of Formalin

 Concentrations of Formalin

Aquatic species	Administer in Hatchery Systems (µL/L)*
Eggs of all finfish except Acipenseriformes	1000-2000 for 15 minutes**
Eggs of Acipenseriformes	up to 1500 for 15 minutes**

- Microliter per liter (LLLL) = parts per million (ppm).

 Apply in constant flow water supply of incubating facilities. A preliminary bioassay should be conducted on a small subsample of fair eggs to determine sensitivity before realing an entire group. This is necessary for all spokes be cause egg sensitive. For including spokes or strain and the unique conditions at each facility.

 4. Fungicide for Freshwater-reared Finding.

 Concentrations of Formalin

Aquatic species	Administer in Tanks and Raceways (µL/L)*
Freshwater-reared Finfish	150 for 60 minutes per day on alternate days for three treatments

Microlate per litter (uL/L) = parts per million (ppm).

Agentate days of three treatments.

ARPHICATION

APPLICATION TO TANKS AND RACEWAYS - Turn off water supply, provide aeration, apply appropriate amount of PARASTIE-S, and thoroughly clutled and micro to assure equal distribution of PARASTIE-S. Treat for up to 1 hour of PARASTIE-S, and thoroughly clutled and micro assure equal distribution of PARASTIE-S. Treat for up to 1 hour of PARASTIE-S. T

is actilised.

APPLICATION TO PONDS - Apply greatly diluted PARASITE-S to the pond evenly using a pump, sprayer, boat baller, or other suitable device to assure even distribution. Allow PARASITE-S to dissipate naturally. Single treatments usually control most parasites, but may be repeated in 5 to 10 days if needed. Treatments for inchiphypothisize should be made at 2-day intervals until control is achieved.

APPLICATION TO EGG INCUBATIONS - Apply PARASITE-S into a constant water supply flowing around the eggs. A oftip or pressure system should be used and smed. Apply PARASITE-S under the surface of the water flow. Egg tanks may be treated as officen as necessary to prevent growth of fung.



PARASITICIDE FOR ALL CULTURED FISH, PENAEID SHRIMP, AND FUNGICIDE FOR ALL FINFISH EGGS, FRESHWATER-REARED FINFISH

ACTIVE DRUG INGREDIENT

GUARANTEED ANALYSIS

Formaldehyde (CH ₂ O)	37%
Methanol	6-14%
Water and inert ingredients	49-57%
	100%

Read Entire Package Insert Before Using This Product Keep Out of Reach of Children 208.2 Liters [55 (U.S.) GALLONS] Net Contents 480 pounds

Approved by FDA under NADA #140-989

Manufactured for: Syndel 1441 W. Smith Road, Ferndale, WA 98248 (360) 384-5898 ver. 030519

To report suspected adverse events, for technical assistance or to obtain a copy of the SDS, contact Syndel at (360) 384-5898 or www.syndel.com. For additional information about adverse drug experience reporting for animal drugs, contact FDA at **88-FDA-VETS or online at http://www.fda.gov/Anima/Veterinary/SafetyHealth.

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	FORMALDEHYDE, SOLUTIONS, 8 PG II ERG 132, CORROSIVE LIQUID, RQ
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Striped bass have been demonstrated to be hypersensitive to formalin, lethal toxicity has been noted to occur at levels approximately 2-3 times the recommended therapeutic concentration.

Syndel

PARASITE-S

[FORMALIN]

PARASITICIDE FOR ALL CULTURED FISH, PENAEID SHRIMP, AND FUNGICIDE FOR ALL FINFISH EGGS, FRESHWATER-REARED FINFISH

ACTIVE DRUG INGREDIENT FORMALIN (Aqueous solution of formal



USER SAFETY WARNINGS

USER Parsonal Protective Equipment (PPE) including eye, respiratory, and skih protection while handling this product. Refer to the SDS and OSHA regulations (29 CFR 1910.1048) for guidance on the most appropriate PPE equipment. Failure to use PPE may increase the risk of unsafe exposure to formaldehyde. Exposure to high concentrations of formaldehyde vapor causes severe respiratory irritation which can be life-threatening. Formaldehyde vapor tract, and skin. Swallowing formaldehyde can be life threatening. Formaldehyde is an intrins when spisahod on skin critical tracyses. It can cause severe eye damage, ever

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PVE CONTACT: Immediately flush eye(s) with large amounts of water for at least 15 minutes, litting the lower and upper yellids occasionally, until no evidence of chemical remains. Seek medical attention immediately, DO NOT allow within to more or keep eyes olded for burns to eyes may have a delayed effect, after the control of the con

ENVIRONMENTAL PRECAUTIONS

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Do not discharge effluent containing this product 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 authorities are notified in writing prior to discharge. Notify the NPDES authority that water quality benchmarks for the protection of freshwater aquatic life have been derived for formatichtyde by Honteer and Rigg, 2001 (Chemosphere 45471-465) (Inclinding EAP agadielies. The acute benchmark value for Engradielyde 4 s 54 ping IL (24 ng fresmini/L.) The chronic benchmark value in Engradielyde 4 s 54 ping IL (24 ng fresmini/L.) The chronic benchmark value in Engradielyde 4 s 54 ping IL (24 ng fresmini/L.) and the benchmark value in Engradielyde 4 s 54 ping IL (24 ng fresmini/L.) and the benchmark value in Engradielyde 4 s 54 ping IL (24 ng fresmini/L.) and the benchmark value in Engradielyde 4 s 54 ping IL (24 ng fresmini/L.) and the benchmark value in Engradielyde 4 s 54 ping IL (24 ng fresmini/L.) and the priority of the

Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

Recommended storage temperature 69°F (15°C), DO NOT EXPOSE TO DIRECT SUMLIGHT, Store PARASITE-S indoors away from direct sunlight, heat, spark, and open fame, and ventilate storage area. Do not subject PARASITE-S to temperatures below 40°F (4.4°C)



USER SAFETY WARNINGS

Use Presental Protective Equipment (PPE) including ye, respiratory, and shin protection while handling this product. Refer to the SSD and OSH Protection while handling this product. Refer to the SSD and OSH Protection will be product. Refer to the SSD and OSH Protection will be product. Refer to the SSD and OSH Protection will be provided by the SSD and SS

hardsdening.

Keep out of reach of children.

In laboratory animals, formatiderhythe has demonstrated the potential to cause reproductive and dever at high does Use only with adocuate ventilation. Keep container tightly closed when not in use. May agarvate a pre-existing asthmatic condition and allergic thinitis.

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Moderate fire and exclosion hazard exist when exposed to heat or flame.

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INICESTION (Swaltowing): DO NOT induce vorniting. If the person is conscious, clidle, inadivate, or absorb the crimalishyde by yighing milk, advanded chancol, or water, Get medical help immediately if vorning occurs, keep head lower than high.

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STORAGE

Recommended storage temperature 59°F (15°C). DO NOT EXPOSE TO DIRECT SUNLIGHT. Store PARASITE-S indoors away from direct smillight, heat, spark, and open flame, and ventilate storage area. Do not subject PARASITE-S to temperatures below 40°F (44°C).



Read Entire Package Insert Before Using This Product Keep Out of Reach of Children

Approved by FDA under NADA # 140-989

Manufactured for

ort suspected adverse events, for technical assistance or to obtain or epoint asspected over see evenies, or identificat assistance of ordered a copy of the SDS, contact Syndel at (360) 344-5986 or www.syndel.com. For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or online at http://www.fda.gov/Animal/Veterinary/SafetyHealth.

UN 2209 FORMALDEHYDE, SOLUTIONS, 8 PG III ERG 132, CORROSIVE LIQUID, RQ LOT #



Exp. Date



- FOR USE ON ALL CULTURED FINFISH, PENAEID SHRIMP, AND ALL FINFISH EGGS INDICATIONS FOR USE

 1. Parasiticide for All Finfish: for the control of external protozoa (Childotonella spp., Lichthyobodo spp., Epistyla spp., and Tichthodina spp.), and the monogenears (Cietodolicus spp.).

 2. Parasiticide for Penaeid Shimp, for the control of external protozoan parasites (2600 spp., Epistyla spp., and Zoothannium spp.)

 3. Fungicide for Penaeid Shimp, for the control of fungl of the family Saproleginiaceae.

 4. Fungicide for Persinvatier-reased Finfish: for the control of mortally due to saproleginiasis associated with fungl in the family Saproleginiaceae.

 DIRECTIONS FOR USE:

Aquatic species	Administer in Tanks & Raceways for up to 1 hr (µL/L)*	Administer in Earthen Ponds (Single Treatment (µL/L)*
Salmon & trout above 50°F below 50°F	up to 170 up to 250	15-25** *** 15-25** ***
All other finfish	up to 250	15-25** ***

Microller for life (u/L) - garts par million (pcm).

Use the lower connectration when prodis are heavily loaded with phytoplankton or fish, to avoid oxygen despition due to the biological oxygen demand created by deeay of dead phytoplankton.

Alternatively, a higher concentration might be used if dissolved oxygen is strictly monitoned.

"Alternatively, a higher concentration are considered safe for cold and warm water firfish, a small number of each jot or proof to be breated shorted shayes be used to check for any unusual sensitivity to formalin before each jot or proof to be breated sharped sharped sharped sharped to check for any unusual sensitivity to formalin before

asiticide for Penaeld Shrimp

Aquatic species	Administer in Tanks & Raceways for up to 4 hr (µL/L)*	Administer in Earthen Ponds (Single Treatment (µL/L)*
Penaeid Shrimp	50 to 100**	25***

Microliter per liter (µLL) = parts per million (opm).

Treat for up to 4 hours daily. Treatment may be repeated daily until parasite control is achieved. Use the lower concentration when tanks or raceways are heavily loaded with phytoplankton or shrimp, to avoid oxygen depletion due to the biological oxygen demand created by decay of dead phytoplankton. Alternatively, a higher concentration might be used if dissolved oxygen is strictly monitored.

Treatment may be repeated in 5 to 10 days, if needed.

Fundicide for All Firtifish Eggs.

Aquatic species	Administer in Hatchery Systems (µL/L)*
Eggs of all finfish except Acipenseriformes	1000-2000 for 15 minutes**
Eggs of Acipenseriformes	up to 1500 for 15 minutes**

Microliter per liter (ul.L.) = parts per million (ppm).

Apply in constant flow water supply of incubating facilities. A preliminary bioassay should be conducted on a small subsample of this tegs to telerimine sensitivity before treating an entire group. This is necessary for all species because egg sensitivity can vary with species of strain and the unique conditions at each facility.

5. Fungicitie for Techsiwater-reader Filtribis the conditions of Exempting of Exempting.

Aquatic species	Administer in Tanks and Raceways (µL/L)*
Freshwater-reared Finfish	150 for 60 minutes per day on alternate days for three treatments

Microliter per liter (µL/L) = parts per million (ppm).
 METHODS OF APPLICATION

APPLICATION TO TANKS AND RACEWAYS - Turn off water suppsy, provide aeration, apply appropriate amout of PARASITES, and throughly cliude and mix be assure equal distribution of PARASITES. Treat for up to 1 he fresh and up to 4 hours for primated shrings, then drain the solution are draft file than kin fresh, well-aeration should be provided to prevent oxygen depletion. Treatments may be repeated delay until parasitic contributions.

Is achieved.

APPLICATION TO PONDS - Apply greatly diluted PARASITE-S to the pond evenly using a pump, sprayer, boat baller, or other suitable device to assure even distribution. Allow PARASITE-S to dissipate naturally. Single treatments usually control most parasites, but may be repeated in 5 to 10 days if needed. Treatments for histophyriterus should be made at 2-day intervals until control is achieved.

APPLICATION TO EGG INCUBATIONS - Apply PARASITES into a constant water supply flowing around the eggs. A clip to pressure system alroad the used and smed. Apply PARASITES for under the surface of the water flow. Egg tanks may be treated as of them is necessary to prevent growth of provent growth of the province growth and may be treated as of them is necessary to prevent growth or prevent growth gro

FOR USE ON ALL CULTURED FINFISH, PENAEID SHRIMP, AND ALL FINFISH EGGS INDICATIONS FOR USE:

- Parasiticide for All Finitish for the control of external protozoo (Chibdosnelle spp., Lehtylocodo spp., Epistylis spp., Lehtylocodo spp., Epistylis spp., Lehtylocodo spp., Epistylis spp., and Trichodine spp.), and the monogeneans (Cleidodiocus spp.). Descriptions is spp., and Gyodochylos spp.).

 Parasiticide for Penaeld Shirting for the control of external protozoan parasites (Bodo spp., Epistylis spp., and Zoothamnium spp.).

- Zoothamnium spp.).

 3. Fungicide for Friefish Eggs: for the control of fungi of the family Saprolegniaceae.

 4. Fungicide for Freshwater-reared Finfish: for the control of mortality due to saprolegniasis associ in the family Saprolegniaceae

o tol yall t tillion	Concentrations of Formalin	
Aquatic species	Administer in Tanks & Raceways for up to 1 hr (µL/L)*	Administer in Earthen Ponds (Single Treatment) (µL/L)*
Salmon & trout above 50°F below 50°F	up to 170 up to 250	15-25** *** 15-25** ***
All other finfish	up to 250	15-25** ***

- Microllet per liter (ul.1) = parts per million (pern).

 Use the lower concentration when prodes are heavily loaded with phytoplanish no frish, to avoid oxygen depletion due to the biological oxygen demand created by deay of dead phytoplanishon. Alternatively, a higher concentration might be used if dissolved oxygen is strictly monitored.

 *Alternatively, a higher concentration are considered safe for cold and warm water firfish, a small number of each lot or point to be treated shared laways be used to check for any nursual sensitivity to formalin before

Aquatic species	Administer in Tanks & Raceways for up to 4 hr (µL/L)*	Administer in Earthen Ponds (Single Treatment) (µL/L)*
Penaeid Shrimp	50 to 100**	25***

- Microlite per liter (µ(µL) = parts per million (ppm).
 Treat for up to 4 hours daily. Treatment may be repeated daily until parasite control is achieved. Use the lower concentration when tanks or raceways are heavily loaded with phytoplankton or shrimp, to avoid oxygen depletion due to the biological oxygen demand created by deavy of dead phytoplankton. Attentiatively, a higher concentration might be used off dissolved oxygen is stictly monitored.

 Remarked for All Trinish Eggs
 Concentrations of Formalin

 Concentrations of Formalin

Aquatic species	Administer in Hatchery Systems (µL/L)*
Eggs of all finfish except Acipenseriformes	1000-2000 for 15 minutes**
Eggs of Acipenseriformes	up to 1500 for 15 minutes**

Microliter per liter (LLLL) = parts per million (ppm).

Apply in constant flow water supply of incubating facilities. A preliminary bioassay should be conducted on a small subsample of fair eggs to determine sensitivity before realing an entire group. This is necessary for all spokes be cause egg sensitive. The process or strain and the unique conditions at each facility.

4. Fungicide for Freshwater-reared Findian.

Concentrations of Formalin

Aquatic species	Administer in Tanks and Raceways (µL/L)*
Freshwater-reared Finfish	150 for 60 minutes per day on alternate days for three treatments

* Microliter per liter (µ/L) = parts per million (ppm).

METHODS OF APPLICATION
APPLICATION TO TANKS AND RACEWAYS - Turn off water supply, provide aeration, apply appropriate amount
of PARASTIE-S, and thoroughly diude and mix to assure equal distribution of PARASTIE-S. Treat for up to 1 hour
of PARASTIE-S, and thoroughly diude and mix to assure equal distribution of PARASTIE-S. Treat for up to 1 hour
of PARASTIE-S, and thoroughly diude and mix to assure equal distribution of PARASTIE-S. Treat for up to 1 hour
of PARASTIE-S, and thoroughly diude and mix to assure and reflect the tark in the risk, which are the risk in the suit of the present of the provide of the prevent oxygen depletion. Treatments may be repeated daily until parastic control
actions.

Is achieved.

APPLICATION TO PONDS - Apply greatly diluted PARASITE-S to the pond evenly using a pump, sprayer, boat baller, or other suitable device to assure even distribution. Allow PARASITE-S to dissipate naturally. Single treatments usually control most parasites, but may be repeated in 5 to 10 days if needed. Treatments for including control most parasites, but may be repeated in 5 to 10 days if needed. Treatments for including control on the properties of the suitable parasites. The properties are suitable parasites and the properties of the water flow. Egg tanks may be treated as often as necessary to prevent growth of fungi.

Syndel PARASITE-S [FORMALIN]

PARASITICIDE FOR ALL CULTURED FISH, PENAEID SHRIMP, AND FUNGICIDE FOR ALL FINFISH EGGS, FRESHWATER-REARED FINFISH

ACTIVE DRUG INGREDIENT ALIN (Aqueous solution of formaldehyde) FORMALIN GUARANTEED ANALYSIS

6-149
49-57%

Read Entire Package Insert Before Using This Pro Keep Out of Reach of Children

Approved by FDA under NADA # 140-989

Manufactured for: Syndel 1441 W. Smith Road, Ferndale, WA 98248 (360) 384-5898 ver. 030519

To report suspected adverse events, for technical assistance or to obtain a copy of the SDS, contact Syndel at (360) 384-5898 or www.syndel.com. For additional information about adverse drug experience reporting for animal drugs, contact FDA at 78-88-FDA-VETS or online at http://www.fda.gov/Animal/Veterinary/SafetyHealth.

WARNING
Striped bass have been demonstrated to be hypersensitive to formalin, lethal toxicity has been noted to occur at levels approximately 2-3 times the recommended therapeutic concentration.



USER SAFETY WARNINGS

USER Parsonal Protective Equipment (PPE) including eye, respiratory, and skih protection while handling this product. Refer to the SDS and OSHA regulations (29 CFR 1910.1048) for guidance on the most appropriate PPE equipment. Failure to use PPE may increase the risk of unsafe exposure to formaldehyde. Exposure to high concentrations of formaldehyde vapor causes severe respiratory irritation which can be life-threatening. Formaldehyde vapor tract, and skin. Swallowing formaldehyde can be life threatening. Formaldehyde is an intrins when spisahod on skin critical tracyses. It can cause severe eye damage, ever

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Moderate fire and explosion hazard exist when exposed to neat or name.

Contains methand - cannot be made on-poisonous. Pricinged exposure to methand has been associated with regroduction disorders.

Contains methand - cannot be made on-poisonous. Profunged exposure to methand has been associated with regroduction disorders.

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ENVIRONMENTAL PRECAUTIONS

ENVIRONMENTAL PRECAUTIONS

Do not discharge effluent containing this product into lakes, streams, ponds, estuantes, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Ellmination System (NPDES) permit and the permitting authorities are notified in writing prior closcharges. Notify the NPDES authority that water quality benchmarks for the protection of freshwater aquatic life have been derived for formaticityde by Horseler and Rigg, 2001 (Chemosphere 45.471-469) (Individual Pollutant). The chronic benchmark value is 16 mig Pollutant (4.75 mg formaticity). Water quality benchmark value is 16 mig prior to the protection of the protection of the PVDES authority of developes such miss for the permit.

Recommended starage temperature 59°F (15°C). DO NOT EXPOSE TO DIRECT SUNILIDATE. Store PARASITE-S indoors away from direct sunlight, heat, spair, and open flame, and ventilate starage area. Do not subject PARASITE-S to temperatures below 40°F (4.4°C).



USER SAFETY WARNINGS

Use Presonal Protective Equationer (PPE) including eye, respiratory, no protection will be handing this product. Refer to this 90E and 95E per including eye, respiratory, or guidence on the most appropriate PPE equipment. Failure to use PPE may increase the risk of unsafe exposure to formaldehyde. Exposure to high concentrations of formaldehyde vapor causes severe respiratory irritation which can be life—threatening Lower vapor levels can cause irritation to the eyes, respiratory tract, and skin. Swallowing formaldehyde can be life threatening. Formal dehyde is an irritant when psplashed on skin or list of eyes. It can cause severe eye damage, ever threatening. Formal dehyde is an irritant when psplashed on skin or list of eyes. It can cause severe eye damage, ever threatening. Formal eyes.

Moderels fire and explosion hazard crist when exposed to heat or flame.

Contains methand - cannot be made on-posisionus. Prolonged exposure to methand has been associated with reproduction disorders.

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In the contains the conta

INGESTION (Swallowing): DO NOT induce vomiting. If the prison is consolous, dilite, inactivate, or absorb the commission by loying milk, advanded charcoal, or water, Get medical help immediately. If voming occurs, keep head lower than high.

If COINTAG Immediately flash eye(s) with large amounts of value for at least 15 minutes, lifting the lower and IEEE COINTAG. Immediately flash eye(s) with large amounts of value for at least 15 minutes, lifting the lower and IEEE COINTAG. Immediately flash eye(s) with large amounts of value runs of evidence of chemical remains (set midels attention immediately. DO NOT allow victim to not eyes or keep eyes closed for burns to eyes may have a delayed effect.

SINIC COINTAGT. Remove contaminated cidning (including shoes) immediately. Wesh affected area of body with soap and large amounts of water until no evidence of chemical remains (at least 15 minutes). If there are chemical burns, or appreciable eye or respiratory intellated, not precise the control of the properties of the control of the control of the control of the properties of the control of

ENVIRONMENTAL PRECAUTIONS

Do not discharge efficient containing this product into lakes, streams, ponds, estudies, oceans, or other writers unless in accordance with the requirements of a Neblacia Flow of the Product of System (NPDES) permit and the permitting authorities are notified in writing prior to discharge. Notify the NPDES authority that water quality benchmarks for the protection of reshvarier acquaints life have been devied for formidatively by Intrinsier and Rigo, 2001 (Chemophere 45.47*4-46) following EPA guidelines. The acute benchmark value for formidatively be in the Production of t

Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

STORAGE
Recommended storage temperature 59°F (15°C). DO NOT EXPOSE TO DIRECT SUNLIGHT. Store PARASITE-S indoors away from direct smight, heat, spark, and open fame, and ventilate storage area. Do not subject PARASITE-S to temperatures below 40°F (44°C).



ACTIVE DRUG INGREDIENT FORMALIN (Aqueous solution of formaldehyde)

GUARANTEED ANALYSIS

Formaldehyde (CH ₂ O)	
Water and inert ingredients	49-57%
	100%

Read Entire Package Insert Before Using This Pro Keep Out of Reach of Children

Approved by FDA under NADA # 140-989

Syndel 1441 W. Smith Road, Ferndale, WA 98248 (360) 384-5898 ver. 030519

To report suspected adverse events, for technical assistance or to obtain a copy of the SDS, confact Syndel at (360) 384-5898 or www.syndel.com. For additional information about adverse drug experience reporting for animal drugs, contact FDA at **888-FDA-VETS or online at http://www.fda.gov/Anima/Veterinary/SafetyHealth.

UN 2209 FORMALDEHYDE, SOLUTIONS, 8 PG III ERG 132, CORROSIVE LIQUID, RQ LOT #



Striped bass have been demonstrated to be hypersensitive to formalin, lethal toxicity has been noted to occur at levels approximately 2-3 times the recommended therapeutic concentration.

formaldehyde liquid

Product Information

Product Type OTC ANIMAL DRUG Item Code (Source) NDC:50378-010

Route of Administration TOPICAL

Active Ingredient/Active Moiety

Ingredient Name	Basis of Strength	Strength

Formaldehyde (UNII: 1HG84L3525) (Formaldehyde - UNII:1HG84L3525) Formaldehyde 370 g in 1 L

Inactive Ingredients

mactive ingredients			
Ingredient Name	Strength		
Methyl alcohol (UNII: Y4S76JW15)	120 g in 1 L		
Water (UNII: 059QF0KO0R)	510 g in 1 L		

P	Packaging			
#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:50378-010-01	208 L in 1 DRUM		
2	NDC:50378-010-05	3.8 L in 1 BOTTLE, PLASTIC		
3	NDC:50378-010-10	19 L in 1 PAIL		
4	NDC:50378-010-99	1000 L in 1 CONTAINER		

Marketing Information				
Marketing Application Number or Monograph Category Citation		Marketing Start Date	Marketing End Date	
NADA	NADA140989	07/31/1992		

Labeler - Western Chemical Inc. (085803500)

Registrant - Western Chemical Inc. (085803500)

Establishment Name Address ID/FEI Business Operations

085803500

label, analysis

Establishment				
Name	Address	ID/FEI	Business Operations	
Bakelite Chemicals LLC		118752453	api manufacture	

Establishment

Western Chemical Inc.

Name	Address	ID/FEI	Business Operations
Cascade Columbia Distribution Company		868318908	relabel, repack

Revised: 10/2022 Western Chemical Inc.