SUPER ICK CURE POWDER MEDICATION

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
SUPER ICK CURE POWDER MEDICATION

STATEMENT OF HAZARDOUS NATURE
CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

SUPPLIER
Company: Aquarium Pharmaceuticals Incorporated
Address:
50 East Hamilton Street
Chalfont
PA, 18914
USA
Telephone: +1 215 822 8181
Fax: +1 215 822 1906

PRODUCT USE
Used according to manufacturers directions.

SYNONYMS

Section 2 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
sodium chloride	7647-14-5	>95
Nitrofurazone	59-87-0	1-5
silica amorphous, fumed, crystalline free	112945-52-5	1-5
C.I. Basic Green 4 (hydrochloride)	569-64-2	<0.5

Section 3 - HAZARDS IDENTIFICATION

CANADIAN WHMIS SYMBOLS

EMERGENCY OVERVIEW

RISK
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

POTENTIAL HEALTH EFFECTS

continued...

ACUTE HEALTH EFFECTS

SWALLOWED

The material has NOT been classified as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g. liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality (death) rather than those producing morbidity (disease, ill-health).
Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, unintentional ingestion is not thought to be cause for concern.

EYE

There is some evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Moderate inflammation may be expected with redness; conjunctivitis may occur with prolonged exposure.

SKIN

There is some evidence to suggest that the material may cause mild but significant inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterized by redness, swelling and blistering.
Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Not normally a hazard due to non-volatile nature of product.

CHRONIC HEALTH EFFECTS

Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung. Prime symptom is breathlessness; lung shadows show on X-ray. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. There is limited evidence that, skin contact with this product is more likely to cause a sensitization reaction in some persons compared to the general population. There is some evidence to provide a presumption that human exposure to the material may result in impaired fertility on the basis of: some evidence in animal studies of impaired fertility in the absence of toxic effects, or evidence of impaired fertility occurring at around the same dose levels as other toxic effects but which is not a secondary non-specific consequence of other toxic effects.

Section 4 - FIRST AID MEASURES

SWALLOWED

- Immediately give a glass of water.

continued...

- First aid is not generally required. If in doubt, contact a Poisons Information Center or a doctor.

EYE

If this product comes in contact with the eyes:
- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- If pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED
- If fumes or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

NOTES TO PHYSICIAN

Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

Flash Point (F): Not Applicable
Lower Explosive Limit (%): Not Applicable
Upper Explosive Limit (%): Not Applicable
Autoignition Temp (F): Not Applicable

EXTINGUISHING MEDIA
- There is no restriction on the type of extinguisher which may be used.

Use extinguishing media suitable for surrounding area.

FIRE FIGHTING
- Alert Emergency Responders and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves for fire only.
- Prevent, by any means available, spillage from entering drains or water course.
- Use fire fighting procedures suitable for surrounding area.
- Do not approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS
- Non combustible.
- Not considered to be a significant fire risk, however containers may burn.

Decomposition may produce toxic fumes of, metal oxides.
May emit poisonous fumes.
May emit corrosive fumes., hydrogen chloride.

FIRE INCOMPATIBILITY

None known.

continued...

PERSONAL PROTECTION

Glasses:
Chemical goggles.
Gloves:
PVC chemical resistant type.
Respirator:
Particulate

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Clean up all spills immediately.
- Avoid breathing dust and contact with skin and eyes.
- Wear protective clothing, gloves, safety glasses and dust respirator.
- Use dry clean up procedures and avoid generating dust.
- Sweep up, shovel up or vacuum up (consider explosion-proof machines designed to be grounded during storage and use).
- Place spilled material in clean, dry, sealable, labeled container.

MAJOR SPILLS

Moderate hazard.

- CAUTION: Advise personnel in area.
- Alert Emergency Responders and tell them location and nature of hazard.
- Control personal contact by wearing protective clothing.
- Prevent, by any means available, spillage from entering drains or water courses.
- Recover product wherever possible.
- IF DRY: Use dry clean up procedures and avoid generating dust. Collect residues and place in sealed plastic bags or other containers for disposal. IF WET: Vacuum/shovel up and place in labelled containers for disposal.
- ALWAYS: Wash area down with large amounts of water and prevent runoff into drains.
- If contamination of drains or waterways occurs, advise emergency services.

EMERGENCY RESPONSE PLANNING GUIDELINES (ERPG)

The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour WITHOUT experiencing or developing

life-threatening health effects is:
sodium chloride 500 mg/m³

irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:
sodium chloride 300 mg/m³

other than mild, transient adverse effects without perceiving a clearly defined odour is:
sodium chloride 40 mg/m³

The threshold concentration below which most people. will experience no appreciable risk of health effects:
sodium chloride 15 mg/m³

American Industrial Hygiene Association (AIHA)

Ingredients considered according to the following cutoffs

continued...

Very Toxic (T+)	>= 0.1%	Toxic (T)	>= 3.0%
R50	>= 0.25%	Corrosive (C)	>= 5.0%
R51	>= 2.5%		
else	>= 10%		

where percentage is percentage of ingredient found in the mixture

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- DO NOT enter confined spaces until atmosphere has been checked.
- DO NOT allow material to contact humans, exposed food or food utensils.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Launder contaminated clothing before re-use.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

RECOMMENDED STORAGE METHODS

- Polyethylene or polypropylene container.
- Check all containers are clearly labelled and free from leaks.

STORAGE REQUIREMENTS

Observe manufacturer's storing and handling recommendations.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m³	STEL ppm	STEL m5/m³	Peak ppm	Peak mg/m³
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	sodium chloride		3		6		
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	sodium chloride		10		20		
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	Nitrofurazone		3		6		
Canada - Saskatchewan	Nitrofurazone		10		20		

continued...

Source	Material	TWA ppm	TWA mg/m³	STEL ppm	STEL m5/m³	Peak ppm	Peak mg/m³
Occupational Health and Safety Regulations - Contamination Limits							
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	C.I. Basic Green 4 (hydrochloride)		3		6		
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	C.I. Basic Green 4 (hydrochloride)		10		20		

The following materials had no OELs on our record under the following CAS or Chemwatch (CW) numbers
Super Ick Cure Powder Medication: No data available for CW:4658-78
sodium chloride: No data available for CAS:7647-14-5
Nitrofurazone: No data available for CAS:59-87-0
silica amorphous, fumed, crystalline free: No data available for CAS:112945-52-5 CAS:67256-35-3
C.I. Basic Green 4 (hydrochloride): No data available for CAS:569-64-2

EMERGENCY EXPOSURE LIMITS

Material	Original IDLH Value (ppm)	Original IDLH Value (mg/m3)	Revised IDLH Value (mg/m3)	R V
silica amorphous, fumed, crystalline free	N.E.	N.E.	3,000	

Not available. Refer to individual constituents.

EXPOSURE STANDARDS FOR MIXTURE

"Worst Case" computer-aided prediction of spray/ mist or fume/ dust components and concentration:

Composite Exposure Standard for Mixture (TWA) :2 mg/m³.
Operations which produce a spray/mist or fume/dust, introduce particulates to the breathing zone.
If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed.
Component Breathing Zone ppm Breathing Zone mg/m³ Mixture Conc (%).

Component	Breathing Zone (mg/m³)	Mixture Conc (%)
silica amorphous, fumed, crystalli	2.0000	5.0

INGREDIENT DATA

SODIUM CHLORIDE:
Not available. Refer to individual constituents.

For each of the following
NITROFURAZONE:
C.I. BASIC GREEN 4 (HYDROCHLORIDE):
These "dusts" have little adverse effect on the lungs and do not produce toxic effects or organic disease. Although there is no dust which does not evoke some cellular response at sufficiently high concentrations, the cellular response caused by P.N.O.C.s has the following characteristics:
· the architecture of the air spaces remain intact,
· scar tissue (collagen) is not synthesised to any degree,

continued...

· tissue reaction is potentially reversible.
Extensive concentrations of P.N.O.C.s may:
· seriously reduce visibility,
· cause unpleasant deposits in the eyes, ears and nasal passages,
· contribute to skin or mucous membrane injury by chemical or mechanical action, per se, or by the rigorous skin cleansing procedures necessary for their removal. [ACGIH]
This limit does not apply:
· to brief exposures to higher concentrations
· nor does it apply to those substances that may cause physiological impairment at lower concentrations but for which a TLV has as yet to be determined.
This exposure standard applies to particles which
· are insoluble or poorly soluble* in water or, preferably, in aqueous lung fluid (if data is available) and
· have a low toxicity (i.e.. are not cytotoxic, genotoxic, or otherwise chemically reactive with lung tissue, and do not emit ionizing radiation, cause immune sensitization, or cause toxic effects other than by inflammation or by a mechanism of lung overload).

SILICA AMORPHOUS, FUMED, CRYSTALLINE FREE:
TLV TWA: 2 mg/m³
ES TWA: 2 mg/m³

PERSONAL PROTECTION

EYE
- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them. DO NOT wear contact lenses.

HANDS/FEET
Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids.
- polychloroprene
- nitrile rubber
- butyl rubber
- fluorocaoutchouc
- polyvinyl chloride

Gloves should be examined for wear and/ or degradation constantly.
Wear chemical protective gloves, eg. PVC.
Wear safety footwear or safety gumboots, eg. Rubber.
NOTE: The material may produce skin sensitization in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.

OTHER
- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

RESPIRATOR

Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
10 x PEL	P1	-	PAPR-P1
	Air-line*	-	-
50 x PEL	Air-line**	P2	PAPR-P2

continued...

100 x PEL	-	P3	-
		Air-line*	-
100+ x PEL	-	Air-line**	PAPR-P3

* - Negative pressure demand ** - Continuous flow
Explanation of Respirator Codes:
Class 1 low to medium absorption capacity filters.
Class 2 medium absorption capacity filters.
Class 3 high absorption capacity filters.
PAPR Powered Air Purifying Respirator (positive pressure) cartridge.
Type A for use against certain organic gases and vapors.
Type AX for use against low boiling point organic compounds (less than 65ºC).
Type B for use against certain inorganic gases and other acid gases and vapors.
Type E for use against sulfur dioxide and other acid gases and vapors.
Type K for use against ammonia and organic ammonia derivatives
Class P1 intended for use against mechanically generated particulates of sizes most commonly encountered in industry, e.g. asbestos, silica.
Class P2 intended for use against both mechanically and thermally generated particulates, e.g. metal fume.
Class P3 intended for use against all particulates containing highly toxic materials, e.g. beryllium.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.
Use appropriate NIOSH-certified respirator based on informed professional judgement. In conditions where no reasonable estimate of exposure can be made, assume the exposure is in a concentration IDLH and use NIOSH-certified full face pressure demand SCBA with a minimum service life of 30 minutes, or a combination full facepiece pressure demand SAR with auxiliary self-contained air supply. Respirators provided only for escape from IDLH atmospheres shall be NIOSH-certified for escape from the atmosphere in which they will be used.

ENGINEERING CONTROLS

- Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
- If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered.

Such protection might consist of:
(a): particle dust respirators, if necessary, combined with an absorption cartridge;
(b): filter respirators with absorption cartridge or canister of the right type;
(c): fresh-air hoods or masks

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES
Mixes with water.

Molecular Weight: Not Applicable	Boiling Range (℃): Not Ap plicable
Melting Range (℃): Not Applicable	Specific Gravity (water =1): 1.01
Solubility in water (g/L): Miscible	pH (as supplied): Not Applicable
pH (1% solution): Not Applicable	Vapor Pressure (kPa): Not Applicable
Volatile Component (%vol): Not Applicable	Evaporation Rate: Not Applicable

continued...

Relative Vapor Density (air=1): Not Applicable
Flash Point (℃): Not Applicable
Lower Explosive Limit (%): Not Applicable
Upper Explosive Limit (%): Not Applicable
Autoignition Temp (℃): Not Applicable
Decomposition Temp (℃): Not Available
State: Divided Solid
Viscosity: Not Applicable

APPEARANCE

Green powder with no odour; soluble in water.

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerization will not occur.

STORAGE INCOMPATIBILITY

None known.

Section 11 - TOXICOLOGICAL INFORMATION

Super Ick Cure Powder Medication
Not available. Refer to individual constituents.
unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances

SODIUM CHLORIDE:

TOXICITY	IRRITATION
Oral (rat) LD50: 3000 mg/kg	Skin (rabbit): 500 mg/24h - Mild
Oral (human) TDLo: 12357 mg/kg/23d	Eye (rabbit): 10 mg - Moderate
Oral Lowest Toxic Dose (Human): 8.2 mg/kg Eye (rabbit):100 mg/24h - Moderate	

NITROFURAZONE:

TOXICITY	IRRITATION
Oral (rat) LD50: 590 mg/kg	Nil Reported
Subcutaneous (rat) LD50: 3000 mg/kg	
Oral (mouse) LD50: 249 mg/kg	
Intraperitoneal (mouse) LD50: 96 mg/kg	
Subcutaneous (mouse) LD50: 753 mg/kg	

Respiratory tract tumours, paternal effects, effects on fertility, foetoxicity, foetolethality, specific developmental abnormalities (musculoskeletal system) recorded.
The substance is classified by IARC as Group 3:
NOT classifiable as to its carcinogenicity to humans.
Evidence of carcinogenicity may be inadequate or limited in animal testing.

SILICA AMORPHOUS, FUMED, CRYSTALLINE FREE:

TOXICITY	IRRITATION
Oral (rat) LD50: 3160 mg/kg	No data
Dermal (rabbit) LD50: >5000 mg/kg *	* [Cabot]

C.I. BASIC GREEN 4 (HYDROCHLORIDE):

TOXICITY	IRRITATION
Oral (rat) LD50: 560 mg/kg	Skin (rabbit) - non-irritating

continued...

Eye (rabbit) - SEVERE
[BASF]

Section 12 - ECOLOGICAL INFORMATION

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.
Wastes resulting from use of the product must be disposed of on site or at approved waste sites.
DO NOT discharge into sewer or waterways.
Refer to data for ingredients, which follows:

SODIUM CHLORIDE:
TLm 96 > 1000 ppm

SILICA AMORPHOUS, FUMED, CRYSTALLINE FREE:
Zebra fish LC50(96hr): 10000 mg/L.
Daphnia magna LC50(24hr): 10000 mg/L.
No adverse effects on water purification plant if removed mechanically.

C.I. BASIC GREEN 4 (HYDROCHLORIDE):
"Half-life Soil - High (hours):" 4320
"Half-life Soil - Low (hours):" 672
"Half-life Air - High (hours):" 0.265
"Half-life Air - Low (hours):" 0.0389
"Half-life Surface water - High (hours):" 4320
"Half-life Surface water - Low (hours):" 672
"Half-life Ground water - High (hours):" 8640
"Half-life Ground water - Low (hours):" 1344
"Aqueous biodegradation - Aerobic - High (hours):" 4320
"Aqueous biodegradation - Aerobic - Low (hours):" 672
"Aqueous biodegradation - Anaerobic - High (hours):" 17280
"Aqueous biodegradation - Anaerobic - Low (hours):" 2688
"Photooxidation half-life air - High (hours):" 0.265
"Photooxidation half-life air - Low (hours):" 0.0389

The material is classified as an ecotoxin* because the Fish LC50 (96 hours) is less than or equal to 0.1 mg/l

* Classification of Substances as Ecotoxic (Dangerous to the Environment)
Appendix 8, Table 1
Compiler's Guide for the Preparation of International Chemical Safety Cards:
1993 Commission of the European Communities.
for product of similar composition
Biological Elimination above 80% (Zahn-Wellens test)
COD 850 mg/g~
Ecotoxicology:
Fish LC0 (96 h) Brachydanio rerio 0.1-1.0 mg/l
Inhibition of waste water bacteria:
50% inhibitory effect: 1-10 mg/l
Test procedure: Respiratory inhibition of activated sludge organisms according to D. Brown etal., Chemosphere, 10(3),245-261 (1981) and conforming to OECD Guideline 209
Water pollution class (WGK): 3 - high impairment of water quality
WGK: Classification in accordance with German Water Resources Act.
Product does not add to AOX-value of the sewage (DIN 38409)

continued...

Product does not contain heavy metals in concentrations of concern for waste water.
Product does not release nitrogen which can contribute to eutrophisation
Does not contain phosphates or organophosphorus compounds.
Cationic substances, and their polymers and those polymers that are reasonably anticipated to become cationic in the natural aquatic environment (pH range 4-9) may be environmental hazards.
Exempt from this concern are those polymers to be used only in solid phase, such as ion-exchange resins, and where the FGEW (Functional Group Equivalent Weight) of cationic groups is not 5000 and above.
Cationic groups such as alkylsulfoniums, alkylphosphoniums and quaternary ammonium polymers are highly toxic to fish an other aquatic organisms. Similarly potentially cationic groups such as amines and isocyanates are of concern. Some cationics, however, may fall into the category of PLCs (polymers of low concern) provided they possess low charge density, and/or are not water-soluble or are not self-dispersing polycarboxylates or poly- (aromatic or aliphatic) sulfonate polymers.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult Waste Management Authority for disposal.
- Bury residue in an authorized landfill.
- Recycle containers where possible, or dispose of in an authorized landfill.

Section 14 - TRANSPORTATION INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS:UN,IATA,IMDG

Section 15 - REGULATORY INFORMATION

RISK

Risk Codes	Risk Phrases
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

REGULATIONS

US EPCRA Section 313 Chemical List For Reporting Year 2004

Ingredient	CAS	% de minimus concentration
C.I. Basic Green 4 (hydrochloride)	569-64-2	1.0

sodium chloride (CAS: 7647-14-5) is found on the following regulatory lists;

Nitrofurazone (CAS: 59-87-0) is found on the following regulatory lists;

silica amorphous, fumed, crystalline free (CAS: 112945-52-5) is found on the following regulatory lists;

C.I. Basic Green 4 (hydrochloride) (CAS: 569-64-2) is found on the following

continued...

regulatory lists;

No data available for silica amorphous, fumed, crystalline free as CAS: 67256-35-3.

Section 16 - OTHER INFORMATION

LIMITED EVIDENCE

Cumulative effects may result following exposure*.
May produce discomfort of the eyes and skin*.
Limited evidence of a carcinogenic effect*.
Possible skin sensitiser*.
May affect fertility*.
* (limited evidence).

Denmark Advisory list for selfclassification of dangerous substances

Substance	CAS	Suggested codes
Nitrofurazone	59-87-0	Xn;R22 Carc3;R40 R43

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
silica amorphous, fumed, crystalline free	112945-52-5, 67256-35-3

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