

The formula for pH Up was modified in 2005 so there are two different Material Safety Data Sheets for this product. Both sheets are attached.

To determine which formula you have, look at the lot number printed on the label or the shoulder of the bottle. The lot number will have 7 digits. The last 4 digits of the lot number are the date of manufacture (for example, 0108 is January 2008).

If the lot number ends in a date of 0405 (April 2005) or earlier, the sheets beginning on page 2 with a revision date of 08-15-00 apply.

If the lot number is May 2005 (0505) or more recent, the sheets beginning on page 4 with the issue date of 30-Sep-2005 apply.

## Material Safety Data Sheet

Rev. 08-15-00

Identity

pH Up

Aquarium Pharmaceuticals, Inc.  
50 E Hamilton Street  
P.O. Box 218  
Chalfont PA 18914

General Info. (215)822-8181  
For Poison Control Information,  
please contact your regional  
Poison Control Center

## • Hazardous Ingredients/Identity Information

Hazardous Components	OSHA PEL	ACGIH TLV	Other Limits	%
Sodium Hydroxide CAS# 1310-73-2	NA	NA	NA	-
Deionized Water	NA	NA	NA	-

## • Physical/Chemical Characteristics

Boiling Point	212° F (100° C)	Specific Gravity (H <sub>2</sub> O = 1)	~1.05
Vapor Pressure (mm Hg.)	1 N = 23.7	Melting Point	NA
Vapor Density (Air = 1)	NA	Evaporation Rate (Butyl Acetate = 1)	NA
Solubility in Water	Soluble		
Appearance and Odor	Clear Odorless Liquid		

## • Fire and Explosion Hazard Data

Flash Point (Method Used)	Non-Flammable	Flammable Limits	LEL NA	UEL NA
Extinguishing Media	Water, alcohol, foam, CO <sub>2</sub>			
Special Firefighting Procedures	NA			
Unusual Fire and Explosion Hazards	None known			

## • Reactivity Data

Stability	Unstable <input type="checkbox"/>	Conditions to Avoid NA
	Stable <input checked="" type="checkbox"/>	
Incompatibility (Materials to Avoid)	Strong acid solutions, metals	
Hazardous Decomposition or Byproducts	None known	
Hazardous	May Occur <input type="checkbox"/>	Conditions to Avoid NA
	Polymerization	

• Health Hazard Data

Route(s) of Entry:                      Inhalation?                       Skin?                       Ingestion?

Health Hazards (Acute & Chronic)      Will cause irritation of eyes, skin and gastrointestinal tract. pH UP is corrosive to all body tissues. Damage may be permanent. Severe irritation or burning will occur when there is exposure to skin or eyes.  
10% Sodium Hydroxide solution LD50 oral (rabbit) = 500 mg/kg

Carcinogenicity                      NTP?                       IARC?                       OSHA?

Signs & Symptoms of Exposure                      Irritation to exposed areas

Medical Conditions Generally Aggravated By Exposure      None known

Emergency and First Aid Procedures                      Flush eyes with water. Wash exposed area with soap and water. If ingested drink plenty of milk. Do not induce vomiting. Call a physician.

• Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled      Contain spill. Absorb liquid with chemically absorbent material.

Waste Disposal Method                      Dispose of in an approved landfill. Federal, State and Local regulations take precedence.

Precautions to Be Taken in Handling and Storing                      Avoid contact. Store in original container away from any reactive materials. Keep out of reach of children.

Other Precautions                      Wash with soap and water after handling.

• Control Measures

Respiratory Protection                      NA

Ventilation                      NA

Protective Gloves                      Impervious

Eye Protection                      Safety Glasses

Other Protective Clothing or Equipment      As necessary to protect skin.

Work/Hygienic Practices                      Practice good sanitary habits after handling (ie wash hands)

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## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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**PRODUCT NAME**  
PH UP

**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

Company: Aquarium Pharmaceuticals Incorporated  
Address:  
PO Box 218  
Chalfont  
PA, 18914-0218  
USA  
Telephone: +1 215 822 8181  
Emergency Tel: +1800 222 1222 (US Only)

**PRODUCT USE**

pH Up for use in aquariums.

**SYNONYMS**

"Solution ID# 3325", "Product #: 31"

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## Section 2 - COMPOSITION / INFORMATION ON INGREDIENTS

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NAME	CAS RN	%
sodium carbonate	497-19-8	10-19
water	7732-18-5	>60

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## Section 3 - HAZARDS IDENTIFICATION

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**CANADIAN WHMIS SYMBOLS**



**EMERGENCY OVERVIEW**

**RISK**

Cumulative effects may result following exposure\*.

\*(limited evidence)

continued...

## POTENTIAL HEALTH EFFECTS

### 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

Although the liquid is not thought to be an irritant, direct contact with the eye may produce transient discomfort characterized by tearing or conjunctival redness (as with windburn).

#### SKIN

The material is not thought to produce adverse health effects or skin irritation following contact (as classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. 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

Not normally a hazard due to non-volatile nature of product. 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.

### CHRONIC HEALTH EFFECTS

Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified using animal models); nevertheless exposure by all routes should be minimized as a matter of course.

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## Section 4 - FIRST AID MEASURES

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#### SWALLOWED

- Immediately give a glass of water.
- 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 eyes:
- Wash out immediately with water.
  - If irritation continues, seek medical attention.
  - Removal of contact lenses after an eye injury should only be undertaken by

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Section 4 - FIRST AID MEASURES

skilled personnel.

## SKIN

If skin or hair contact occurs:

- 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.

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## Section 5 - FIRE FIGHTING MEASURES

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Flash Point (°F): Not Applicable

Lower Explosive Limit (%): Not Applicable

Upper Explosive Limit (%): Not Applicable

Autoignition Temp (°F): Not Applicable

## EXTINGUISHING MEDIA

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.

Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances.

In such an event consider:

- foam
- dry chemical powder
- carbon dioxide.

## 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.
- Expansion or decomposition on heating may lead to violent rupture of containers.
- Decomposes on heating and may produce toxic fumes of carbon monoxide (CO).
- May emit acrid smoke.

Decomposition may produce toxic fumes of, carbon dioxide (CO<sub>2</sub>), other pyrolysis products typical of burning organic material.

May emit poisonous fumes.

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Section 5 - FIRE FIGHTING MEASURES

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## FIRE INCOMPATIBILITY

None known.

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## Section 6 - ACCIDENTAL RELEASE MEASURES

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### MINOR SPILLS

- Clean up all spills immediately.
- Avoid breathing vapors and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.
- Wipe up.
- Place in a suitable labeled container for waste disposal.

### MAJOR SPILLS

Moderate hazard.

- Clear area of personnel and move upwind.
- Alert Emergency Responders and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Stop leak if safe to do so.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labeled containers for recycling.
- Neutralize/decontaminate residue.
- Collect solid residues and seal in labeled drums for disposal.
- Wash area and prevent runoff into drains.
- After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
- If contamination of drains or waterways occurs, advise emergency services.

## ACUTE EXPOSURE GUIDELINE LEVELS (AEG) (in ppm)

AEG 1: The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic nonsensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure.

AEG 2: The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape.

AEG 3: The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience life-threatening health effects or death.

## 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 carbonate	500 mg/m <sup>3</sup>
water	500 mg/m <sup>3</sup>

continued...

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## Section 6 - ACCIDENTAL RELEASE MEASURES

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irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:

sodium carbonate	50 mg/m <sup>3</sup>
water	500 mg/m <sup>3</sup>

other than mild, transient adverse effects without perceiving a clearly defined odour is:

sodium carbonate	30 mg/m <sup>3</sup>
water	500 mg/m <sup>3</sup>

The threshold concentration below which most people will experience no appreciable risk of health effects:

sodium carbonate	10 mg/m <sup>3</sup>
water	500 mg/m <sup>3</sup>

American Industrial Hygiene Association (AIHA)

Ingredients considered according exceed the following cutoffs

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

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## Section 7 - HANDLING AND STORAGE

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### 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.
- Packing as recommended by manufacturer
- Check all containers are clearly labeled and free from leaks.

### STORAGE REQUIREMENTS

- Store in original containers.

continued...

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- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

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### EXPOSURE CONTROLS

No data available: sodium carbonate as (CAS: 497-19-8)  
No data available: water as (CAS: 7732-18-5)

Not available. Refer to individual constituents.

### EXPOSURE STANDARDS FOR MIXTURE

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

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

Composite Exposure Standard for Mixture (TWA) :100 mg/m<sup>3</sup>.

### INGREDIENT DATA

#### SODIUM CARBONATE:

Dusts not otherwise classified, as inspirable dust;  
ES TWA: 10 mg/m<sup>3</sup>.  
OEL STEL: (Russia) 5 mg/m<sup>3</sup>

#### WATER:

No exposure limits set by NOHSC or ACGIH.

### PERSONAL PROTECTION

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

### EYE

- Safety glasses with side shields
- Chemical goggles.
- Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them.

### HANDS/FEET

Wear chemical protective gloves, eg. PVC.  
Wear safety footwear or safety gumboots, eg. Rubber.

### OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

- Eye wash unit.

### RESPIRATOR

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Breathing Zone Level ppm (volume)	Maximum Protection Factor	Half-face Respirator	Full-Face Respirator
1000	10	-1 P	-
1000	50	-	-1 P
5000	50	Airline*	-
5000	100	-	-2 P
10000	100	-	-3 P
	100+		Airline* *

\* - Continuous Flow \*\* - Continuous-flow or positive pressure demand.

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

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear an approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### PHYSICAL PROPERTIES

Liquid.  
Mixes with water.

Molecular Weight: Not Applicable  
Melting Range (°C): Not Available  
Solubility in water (g/L): Miscible  
pH (1% solution): Not Available  
Volatile Component (%vol): Not Available  
Relative Vapor Density (air=1): Not Available  
Lower Explosive Limit (%): Not Applicable  
Autoignition Temp (°C): Not Applicable  
State: Liquid

Boiling Range (°C): Not Available  
Specific Gravity (water=1): 1.095  
pH (as supplied): 10-12  
Vapor Pressure (kPa): Not Available  
Evaporation Rate: Not Available  
Flash Point (°C): Not Applicable  
Upper Explosive Limit (%): Not Applicable  
Decomposition Temp (°C): Not Available

### APPEARANCE

Clear, colorless odorless liquid.

continued...

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## Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

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### CONDITIONS CONTRIBUTING TO INSTABILITY

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

### STORAGE INCOMPATIBILITY

Segregate from acids.

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## Section 11 - TOXICOLOGICAL INFORMATION

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### pH Up

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

### SODIUM CARBONATE:

#### TOXICITY

Oral (rat) LD50: 4090 mg/kg

Inhalation (rat) LC50: 2300 mg/m<sup>3</sup>/2h

Eye (rabbit): 100 mg/30s mild

Eye (rabbit): 50 mg SEVERE

#### IRRITATION

Skin (rabbit): 500 mg/24h mild

Eye (rabbit): 100 mg/24h Moderate

### WATER:

#### TOXICITY

No significant acute toxicological data identified in literature search.

#### IRRITATION

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## Section 12 - ECOLOGICAL INFORMATION

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DO NOT discharge into sewer or waterways.

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## Section 13 - DISPOSAL CONSIDERATIONS

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### Disposal Instructions

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

- Recycle wherever possible.
  - Consult manufacturer for recycling options or consult Waste Management Authority for disposal if no suitable treatment or disposal facility can be identified.
  - Dispose of by: Burial in a licensed land-fill or Incineration in a licensed apparatus (after admixture with suitable combustible material)
  - Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.
- Puncture containers to prevent re-use and bury at an authorized landfill.

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## Section 14 - TRANSPORTATION INFORMATION

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DOT Information  
Shipping Name: None  
Hazard Class: None  
SubRisk: None  
UN/NA Number: None  
Packing Group: None  
Additional Shipping Information:  
International Transport Regulations:  
IMO: None

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## Section 15 - REGULATORY INFORMATION

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### RISK

#### US Federal Regulations

##### A. General Product Information

In addition to Federal and State regulation, local regulations may apply. Check with your local regulatory authorities.

##### B. Component Information

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 455 Appendix A) SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4):

None

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Component            TSCA  
sodium carbonate    Y

#### State Regulations

##### A. General Product Information

##### B. Component Information

The following components appear on one or more of the following state hazardous substance lists.

Component	CAS No	CA	FL	MA	MN	NJ	PA
sodium carbonate	497-19-8	N	N	N	N	N	N

Y=Yes this material appears on that state's hazardous substances list.

N=No this material does not appear on that state's hazardous substances list.

#### Other Regulations

##### A. General Product Information

All components are listed in the European Inventory of New and Existing Chemical Substances (EINECS)

##### B. Component Information

###### CANADA

The following component(s) are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS No	%	Min Conc.
sodium carbonate	497-19-8	10-19	1% item 1431 (392)

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All of this product's components are on the Canadian Domestic

## REGULATIONS

sodium carbonate (CAS: 497-19-8) is found on the following regulatory lists  
Canadian Domestic Substances List (DSL)  
US Toxic Substances Control Act (TSCA)  
US EPA High Production Volume Chemicals Additional List  
Canadian Ingredient Disclosure List (SOR/88-64)  
US Food Additive Database  
US DOE Temporary Emergency Exposure Limits (TEELs)

water (CAS: 7732-18-5) is found on the following regulatory lists  
Canadian Domestic Substances List (DSL)  
US Toxic Substances Control Act (TSCA)  
US DOE Temporary Emergency Exposure Limits (TEELs)  
US Californian Proposition 65 - Priority List for the Development of MADLs for  
Chemicals Causing Reproductive Toxicity

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## Section 16 - OTHER INFORMATION

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