

C.I.F

SAFETY DATA SHEET

7 D\$, (- 5 v' .' RS & &!* - %\$

RS REACH revision date 01/01/12

July 2011

FDS 11.07

1. Name of substance / preparation and company

Product information

Item name :

DEVELOPER PART A Réf : AR15

Waterish

Powder

Société : CIF

11 rue Charles Michels

92220 BAGNEUX

Tél : 01.45.47.48.00 – Fax : 01.45.47.16.14

E-mail : cif@cif.fr – Web : www.cif.fr

Supplied by:

RS Components Ltd,

Birchington Road, Corby, Northants, NN17 9RS.

Tel: +44 (0) 1536 402888 (8am to 8pm)

Email: technical.help@rs-components.com

2. Hazards identification

Symbol(s)	C	Corrosive
R-phrased(s)	R35	Causes severe burns.

3. Composition / information on ingredients

The hazard and labelling information in this section is that of the individual ingredients. The corresponding information relative to this product as supplied is given in section 15.

Full text of each relevant R-phrase is listed in section 16.

Hazardous components

- Sodium carbonate Concentration [%] : 20.0 - 30.0
CAS-No. 497-19-8
Index-No. : 011-005-00-2
EINECS-No. : 207-838-8
Symbol(s) Xi
R-phrase(s) R36
- Sodium hydroxide Concentration [%] : 5.0 - 10.0
CAS-No. 1310-73-2
Index-No. 011-002-00-6
EINECS-No. 215-185-5
Symbol(s) C
R-phrase(s) R35
- EDTA-sodium salt Concentration [%] : 1.0 - 5.0
CAS-No. : 64-02-8
EINECS-No. : 200-573-9
Symbol(s) : Xn
R-phrase(s) R22, R36, R52/53

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4. First aid measures

Skin contact : Wash immediately with plenty of water and soap. If symptoms persist, seek medical advice.
Eye contact : Rinse with plenty of water. Seek medical attention.
Ingestion : Rinse mouth with plenty of water. Seek medical advice.
Inhalation : Not relevant

5. Fire-Fighting measures

Further information : Product is not combustible.

6. Accidental release measures

Personal precautions : See section 8. Avoid formation of dust.
Environmental precautions : For waste disposal see section 13.
Methods for cleaning up : Collect large spills into a properly labelled and sealable container. Prevent release into the drain, soil or surface water.
Additional advice: Wash away residues with plenty of water.

7. Handling and storage

Handling

Advice on safe handling : Avoid generating airborne dust.
Advice on protection against : No special protective measures against fire and explosion fire and explosion required.

Storage

Requirements for storage areas : Keep container tightly closed. Protect from direct sunlight and containers
Advice on common storage : Store away from acids.

8. Exposure control and personal protection

Exposure Limit Values

Components	CAS-No	Values	Type	Revision date	Basis
Sodium hydroxide	1310-73-2	2 mg/m ³	STEL	2002	EH40 OES

Exposure controls

Engineering measures : Ventilation should be sufficient so that any applicable occupational exposure limits are not exceeded.
Respiratory protection : Use dust mask if necessary.
Hand protection : Use chemical resistant gloves. In case of prolonged immersion or frequently repeated contact use gloves made of the materials: butyl rubber (thickness ≥ 0.36 mm, breakthrough time > 480 min), nitrile rubber (thickness ≥ 0.38 mm, breakthrough time > 480 min) or neoprene (thickness ≥ 0.65 mm, breakthrough time > 240 min). For intermittent splash protection corresponding gloves with breakthrough times > 60 min can be used. Avoid gloves made of: natural latex.
Eye protection : Safety goggles.
Hygiene measures : Observe normal precautions when handling chemicals. Avoid generating airborne dust. Avoid inhaling dust. Keep away from foodstuffs, drinks and tobacco

9. Physical and chemical properties

Appearance : powder
Colour : white to yellowish
Odour : odourless

Safety data

pH (25 °C) : 12.9 at 10 V. solution
Lower explosion limit : Not applicable
Upper explosion limit : Not applicable
Solubility/qualitative : Readily soluble in water.
Relative vapour density : Not applicable

7 D\$, (- 5 v' . ' RS & &!* - %\$

10. Stability and reactivity

Stability	:	The product is stable under normal conditions of storage and use
Conditions and materials to avoid	:	Avoid generating airborne dust. Avoid contact with acids. Remove all chemicals and rinse the processing tanks thoroughly with water before using any cleansing products.
Hazardous decomposition Products	:	None

11. Toxicological information

R-phrases : R35 Causes severe burns.
Toxicity data specific for individual ingredients in their pure state

Acute oral toxicity

Sodium carbonate	:	LD50 rat	4,090 mg/kg
EDTA-sodium salt	•	LD50 rat	> 1,000 mg/kg

Other information

Hazard labelling of this preparation: see section 15.

12. Ecological information

Ecotoxicity effects

Pending the development of criteria for evaluating impact of a chemical preparation, ecological information referring to the most important individual ingredients present in this preparation is given here merely as an indication. The effective environmental impact of this preparation should of course be assessed taking into account the actual concentration of each individual ingredient in this preparation.

Toxicity to fish

EDTA-sodium salt	:	Species: Lepomis macrochirus (bluegill sunfish) Dose: 540.00 mg/l/ 96 h
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13. Diaposal procedure

Environmental regulations, discharge of chemicals and washwater, waste treatment and disposal conditions of chemicals and their packaging may vary from one country to another. The relevant local regulations should be consulted. When this product or its contaminated packaging has to be removed as waste, contact an authorized waste contractor. May be discharged to drain if local regulations permit.

For waste resulting from this product, it is recommended to use European Waste Code : 09 01 01 (water-based developer and activator solutions).

14. Transport information

ADR

UN-No	:	1823
Proper shipping name	:	SODIUM HYDROXIDE, SOLID, MIXTURE
Class	:	8
Packing group	:	II
Classification Code	:	C6
Label No	:	8
Risk No.	:	80

RID

UN-No	:	1823
Proper shipping name	:	SODIUM HYDROXIDE, SOLID, MIXTURE
Class	:	8
Packing group	:	II
Classification Code	:	C6
Label No	:	8
Risk No.	:	80

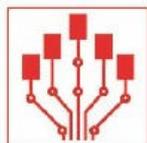
ADNR

UN-No	:	1823
Proper shipping name	:	SODIUM HYDROXIDE, SOLID, MIXTURE
Class	:	8
Packing group	:	II
Classification Code	:	C6
Label No	:	8

IMO / IMDG	
UN-No	: 1823
Proper shipping name	: SODIUM HYDROXIDE, SOLID, MIXTURE
Class	: 8
Packing group	: II
Label No	: 8
EmS	: F-A, S-B
ICAO IATA cargo aircraft only	
UN-No	: 1823
Proper shipping name	: SODIUM HYDROXIDE, SOLID, MIXTURE
Class	: 8
Packing group	: II
Label No	: 8
Packing instruction	: 816
ICAO /IATA passenger and cargo aircraft	
UN-No	: 1823
Proper shipping name	: SODIUM HYDROXIDE, SOLID, MIXTURE
Class	: 8
Packing group	: II
Label No	: 8
Packing instruction	: 814

<p>15. Regulatory information Labelling according to EC Directives Hazardous components which must be listed on the label :</p> <ul style="list-style-type: none"> • CAS-No. : 1310-73-2 Sodium hydroxide Symbol(s) : C Corrosive R-phrase(s) : R35 Causes severe burns. S-phrase(s) : S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. <p style="text-align: center;">S37/39 Wear suitable gloves and eye/face protection.</p> <p>S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).</p>

<p>16. Other information</p> <ul style="list-style-type: none"> - Full text of R-phrases referred to under Sections 2 and 3: - R22 Harmful if swallowed. - R35 Causes severe burns. - R36 Irritating to eyes. - R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. <p>This Safety Data Sheet is compiled in accordance with European Directives and corresponding national legislation.</p> <p>The information disclosed in this Safety Data Sheet is believed to be correct to the best of our current knowledge and experience. It only relates to the specific product designated herein and it may not be valid when said product is used in combination with any other material or in any process, unless specified in the text. This document aims to provide the necessary health and safety information of the product and is not to be considered a warranty or quality specification. It is the responsibility of the user to comply with local legislation relating to safety, health, environment and waste management</p>
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C.I.F

SAFETY DATA SHEET

CP0849B v3.3 RS 292-6910

RS REACH revision date 01/01/12

July 2011

FDS 11.07

1. Name of substance / preparation and company

Product information

Item name :

DEVELOPER PART B Réf : AR15

Waterish

Powder

Société : CIF

11 rue Charles Michels

92220 BAGNEUX

Tél : 01.45.47.48.00 – Fax : 01.45.47.16.14

E-mail : cif@cif.fr – Web : www.cif.fr

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Birchington Road, Corby, Northants, NN17 9RS.

Tel: +44 (0) 1536 402888 (8am to 8pm)

Email: technical.help@rs-components.com

2. Hazards identification

EC-classification:

Symbol(s)	Xn	Harmful
	N	Dangerous for the environment
R-phrases(s)	R22	Harmful if swallowed.
	R40	Limited evidence of a carcinogenic effect.
	R41	Risk of serious damage to eyes.
	R43	May cause sensitization by skin contact.
	R50	Very toxic to aquatic organisms.
	R68	Possible risk of irreversible effects.

3. Composition / information on ingredients

The hazard and labelling information in this section is that of the individual ingredients. The corresponding information relative to this product as supplied is given in section 15. Full text of each relevant R-phrase is listed in section 16.

Powdered photographic developer mixture, mainly consisting of:

Hazardous components

•	Hydroquinone	Concentration [%]	40.0	60.0
	CAS-No.	123-31-9		
	Index-No.	604-005-00-4		
	EINECS-No.	204-617-8		
	Symbol(s)	Xn, N		
	R-phrase(s)	R22, R40, R41, R43, R50, R68		
•	Sodium disulphite	Concentration [%]	1.0	5.0
	CAS-No.	7681-57-4		
	Index-No.	016-063-00-2		
	EINECS-No.	231-673-0		
	Symbol(s)	Xn, N		
	R-phrase(s)	R22, R31, R41		
•	1-Pheny1-3-pyrazolidone	Concentration [%]	1.0	2.5
	CAS-No.	92-43-3		
	Index-No.	606-022-00-2		
	EINECS-No.	202-155-1		
	Symbol(s)	Xn, N		
	R-phrase(s)	R22, R51/53		
•	HEDP-disodium salt	Concentration [%]	0.5	1.0

CP0849B v3.3 RS 292-6910

CAS-No.	7414-83-7
EINECS-No.	231-025-7
Symbol(s)	Xn, N
R-phrases(s)	R22

Other

• Sodium bromide	Concentration [%]	20.0	30.0
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4. First aid measures

Skin contact	:	Wash immediately with plenty of water and soap. If symptoms persist, seek medical advice.
Eye contact	:	Rinse with plenty of water. Seek medical attention.
Ingestion	:	Rinse mouth with plenty of water. Seek medical advice.
Inhalation	:	Not relevant

5. Fire-fighting measures

Suitable extinguishing media	:	e.g. water, CO2, foam, powder, sand
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6. Accidental release measures

Personal precautions	:	See section 8. Avoid formation of dust.
Environmental precautions	:	For waste disposal see section 13.
Methods for cleaning up	:	Collect large spills into a properly labelled and sealable container. Prevent release into the drain, soil or surface water.
Additional advice	:	Wash away residues with plenty of water.

7. Handling and storage**Handling**

Advice on safe handling	:	Avoid generating airborne dust.
Advice on protection against fire and explosion	:	Keep away from heat and sources of ignition.

Storage

Requirements for storage areas and containers	:	Keep container tightly closed. Protect from direct sunlight.
Advice on common storage	:	Store away from strong oxidizing agents and acids.

8. Exposure control and personal protection**Exposure Limit Values**

Components	CAS-No.	Values	Type	Revision date	Basis
Hydroquinone	123-31-9	0.5 mg/m ³	TWA	2003	EH40 MEL
Sodium disulphite	7681-57-4	5 mg/m ³	TWA	2002	EH40 OES

Exposure controls

Engineering measures	Ventilation should be sufficient so that any applicable occupational exposure limits are not exceeded.
Respiratory protection	Use dust mask if necessary.
Hand protection	Use chemical resistant gloves. In case of prolonged immersion or frequently repeated contact use gloves made of the materials: butyl rubber (thickness \geq 0.36 mm, breakthrough time $>$ 480 min), nitrile rubber (thickness \geq 0.38 mm, breakthrough time $>$ 480 min) or neoprene (thickness \geq 0.65 mm, breakthrough time $>$ 240 min). For intermittent splash protection corresponding gloves with breakthrough times $>$ 60 min can be used. Avoid gloves made of: natural latex.
Eye protection	Safety goggles.
Hygiene measures	Observe normal precautions when handling chemicals. Avoid generating airborne dust. Avoid inhaling dust. Keep away from foodstuffs, drinks and tobacco

9. Physical and chemical properties

Appearance : powder
 Colour : white to beige
 Odour : odourless

Safety data

pH (25 °C) : 4.4 at 5 % solution
 Lower explosion limit : Not applicable
 Upper explosion limit : Not applicable
 Solubility/qualitative : Readily soluble in water
 Relative vapour density : Not applicable

10. Stability and reactivity

- Stability : The product is stable under normal conditions of storage and use. Under particular critical conditions of handling and storage, organic powders could induce a dust explosion. In normal conditions of use it is unlikely that this would happen with this product.

- conditions and materials to avoid : Avoid generating airborne dust. Avoid contact with strong oxidizing agents and acids. Remove all chemicals and rinse the processing tanks thoroughly with water before using any cleansing products.

Hazardous decomposition products : None

11. Toxicological information

R-phrase(s) : R22 Harmful if swallowed.
 R40 Limited evidence of a carcinogenic effect.
 R41 Risk of serious damage to eyes.
 R43 May cause sensitization by skin contact.
 R50 Very toxic to aquatic organisms
 R68 Possible risk of irreversible effects.

Acute oral toxicity

• Hydroquinone	:	LD50 rat	320 mg/kg
• Sodium disulphite	:	LD50 rat	1,540 mg/kg
• 1-Phenyl-3-pyrazolidone	:	LD50 rat	475 mg/kg
• HEDP-disodium salt	:	LD50 rat	2,650 mg/kg

Acute dermal toxicity

• Hydroquinone	:	LD50 cat	5,970 mg/kg
• Sodium disulphite	:	LD50 rabbit	> 2,000 mg/kg
• 1-Phenyl-3-pyrazolidone	:	LD50 guinea pig	> 1,000 mg/kg

Other information

There is insufficient scientific evidence for classifying hydroquinone as a suspected carcino- or mutagenic substance in humans. Epidemiologic studies over a period of 48 years, wherein -during manufacturing and use of hydroquinone- more than 800 human individuals were daily exposed at significant airborne concentrations (greater than the MEL of 0.5 mg/m³), demonstrated that such exposure is not associated with the induction of cancer in humans. Hazard labelling of this preparation: see section 15

12. Ecological information

Ecotoxicity effects

Pending the development of criteria for evaluating impact of a chemical preparation, ecological information referring to the most important individual ingredients present in this preparation is given here merely as an indication. The effective environmental impact of this preparation should of course be assessed taking into account the actual concentration of each individual ingredient in this preparation.

Toxicity to fish

- Hydroquinone : Species: Pimephales promelas (fathead minnow)
Dose: 0.14 mg/l/ 96 h
- Sodium disulphite : Species: Pisces (fish)
Dose: 150.00 mg/l/ 96 h
- 1-Phenyl-3-pyrazolidone : Species: Pimephales promelas (fathead minnow)
Dose: 5.00 mg/l/ 96 h

Toxicity to daphnia

- Hydroquinone : Species: Daphnia magna (water flea)
Dose: 0.05 mg/l/ 48 h
- 1-Phenyl-3-pyrazolidone : Species: Daphnia magna (water flea)
Dose: **10.00** mg/l/ 96 h

Toxicity to algae

- 1-Phenyl-3-pyrazolidone : Species: Scenedesmus capricornutum (algae)
Dose: **10.00** mg/l/ 4 h

Toxicity to bacteria

- Hydroquinone : Species: Pseudomonas putida (bacteria)
Dose: **50.00** mg/l

13. Disposal procedure

Environmental regulations, discharge of chemicals and washwater, waste treatment and disposal conditions of chemicals and their packaging may vary from one country to another. The relevant local regulations should be consulted. When this product or its contaminated packaging has to be removed as waste, contact an authorized waste contractor. May be discharged to drain if local regulations permit. For waste resulting from this product, it is recommended to use European Waste Code : 09 01 01 (water-based developer and activator solutions).

14. Transport information

ADR

UN-No : 3077
 Proper shipping name : HYDROQUINONE, MIXTURE
 Class : 9
 Packing group : III
 Classification Code : M7
 Label No : 9
 Risk No. : 90

RID

UN-No : 3077
 Proper shipping name : HYDROQUINONE, MIXTURE
 Class : 9
 Packing group : III
 Classification Code : M7
 Label No : 9
 Risk No. : 90

ADNR

UN-No : 3077
 Proper shipping name : HYDROQUINONE, MIXTURE
 Class : 9
 Packing group : III
 Classification Code : M7
 Label No : 9

IMO / IMDG

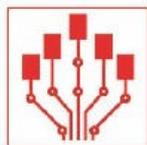
UN-No : 3077
 Proper shipping name : HYDROQUINONE, MIXTURE
 Class : 9
 Packing group : III
 Classification Code : M7

CP0849B v3.3 RS 292-6910

Label No	: 9
EmS	: F-A, S-A
ICAO / IATA cargo aircraft only	
UN-No	: 3077
Proper shipping name	: HYDROQUINONE, MIXTURE
Class	: 9
Packing group	: III
Classification Code	: 9MI
Packing instruction	: 911
ICAO IATA passenger and cargo aircraft	
UN-No	: 3077
Proper shipping name	: HYDROQUINONE, MIXTURE
Class	: 9
Packing group	: III
Classification Code	: 9MI
Packing instruction	: 911

15. Regulatory information	
Labelling according to EC Directives	
Hazardous components which must be listed on the label :	
• CAS-No. :	123-31-9 Hydroquinone
Symbol(s) :	Xn Harmful
	N Dangerous for the environment
R-phrase(s) :	R22 Harmful if swallowed.
	R40 Limited evidence of a carcinogenic effect.
	R41 Risk of serious damage to eyes.
	R43 May cause sensitization by skin contact.
	R50 Very toxic to aquatic organisms.
	R68 Possible risk of irreversible effects
S-phrase(s) :	S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
	S36/37/39 Wear suitable protective clothing, gloves and eye/face Protection
	S61 Avoid release to the environment. Refer to special instructions/safety data sheets

16. Other information	
Further information	
Full text of R-phrases referred to under Sections 2 and 3:	



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SAFETY DATA SHEET

CP0849C v3.3 RS 292-6910

RS REACH revision date 01/01/12

July 2011

FDS 11.07

1. Name of substance / preparation and company

Product information

Item name :

DEVELOPER PART C Réf : AR15

Sodium Hyposulfite

Société : CIF

11 rue Charles Michels

92220 BAGNEUX - FRANCE

Tél : (33) 1.45.47.48.00 – Fax : (33) 1.45.47.16.14

E-mail : cif@cif.fr – Web : www.cif.fr

Supplied by:

RS Components Ltd,

Birchington Road, Corby, Northants, NN17 9RS.

Tel: +44 (0) 1536 402888 (8am to 8pm)

Email: technical.help@rs-components.com

2. Hazards identification

Label precautionary statements

- Symbol Xi Irritant.
- R36/37/38 Irritating to eyes, respiratory system and skin.

3. Composition / information on ingredients

CAS # 7772-98-7

EINECS No: 231-867-5 MF: Na₂S₂O₃

Synonyms

Sodium thiosulphate; ametoc; chloro control; chlorine cure; declor-IT; antichlaro; disodium thisulfate; S-hydril; hypo; sodium hyposulfite; sodium oxide sulfied; sodium thiosulfate anhydrous; sodothiol.

4. First aid procedures

In case of eye contact, immediately flush eyes with copious amounts of water for at least 15 minutes. Assure adequate flushing of the eyes by separating the eyelids with fingers, and seek medical advice.

In case of skin contact, immediately flush skin with copious amounts of water for at least 15 minutes while removing contaminated clothing and shoes.

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen.

If swallowed, wash out mouth with water provided person is conscious. Call a physician. Do not induce vomiting.

Wash contaminated clothing before reuse.

5. Fire-fighting measures

Extinguishing media

- Non-combustible.
- Use extinguishing media appropriate to surrounding fire conditions.

Special fire fighting procedures

- Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual fire and explosions hazards

- Emits toxic fumes under fire conditions.
 - Decomposition on heating with ultimate formation of Na₂SO₄
- When heated to decomposition it emits very toxic fumes of Na₂O and SO_x

6. Accidental release measures

- Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.
- Sweep up, place in a bag and hold for waste disposal.
- Avoid raising dust.
- Ventilate area and wash spill site after material pickup is complete.

7. Handling and storage

Store in **GREY** area.

Refer to Section 8.

Additional information

Incompatible with lead, silver and mercury salts and iodides.

8. Exposure controls and personal protection

- Wear appropriate NIOSH/MASH-approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.
- Safety shower and eye bath.
- Mechanical exhaust required.
- Avoid breathing dust.
- Avoid contact with eyes, skin and clothing.
- Avoid prolonged or repeated exposure.
- Wash thoroughly after handling.
- Irritant.
- Keep tightly closed.
- Hygroscopic
- Avoid contact with acid.
- Store in a cool dry place.

9. Physical and chemical properties

Appearance and odour

- White/Colorless, deliquescent, monoclinic crystals or crystalline powder.

Physical properties

Specific gravity: 1.667

10. Stability and reactivity

Stability

- Stable.

Incompatibilities

- Strong acids.
- Strong oxidizing agents.
- Incompatible with metal nitrates, sodium nitrite.

Hazardous combustion or decomposition products

Sulfur oxides

11. Toxicity information

Acute effects

- May be harmful by inhalation, ingestion, or skin absorption.
- May cause eye and skin irritation.
- Material is irritating to mucous membranes and upper respiratory tract.
- Moderately toxic by subcutaneous route.

Toxicity data

ipr-mus LD₅₀:5200 mg/kg

12. Ecological information

No Data available

13. Disposal considerations

- For small quantities, cautiously add to a large stirred excess of water, Adjust the pH to neutral, separate any insoluble solids or liquids and package them for hazardous-waste disposal. Flush the aqueous solution down the drain with plenty of water. The hydrolysis and neutralisation reactions may generate heat and fumes which can be controlled by the rate of addition.
- Observe all Irish, EU and local environmental regulations.

14. Transport information

Hazard / Subsidiary Class :

UN/NA Number :

Packing group :

Marine pollutant :

NO

15. Regulatory information

European information.

EINECS Index No. **231-867-5**

Irritant. Xi

R36/37/38 Irritating to the eyes, respiratory system and skin.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36 Wear suitable protective clothing.

S60 This material and its container must be disposed of as hazardous waste

16. Other information

EPA Pesticide Registration Number : Not Applicable

NSF Maximum Use Level for Potable Water (Standard 60) : Not Applicable

TSCA (Toxic Substance control Act), 40 CFR 710 :

Source of the raw materials used in this mixture assure that all chemical ingredients present are in compliance with section 8(b) Chemical Substance Inventory, or are otherwise in compliance with TSCA.

DISCLAIMER

The data presented is true and correct to the best of our knowledge and belief ; However, neither seller nor preparer makes any warranties, expressed or implied, concerning the information presented. The user is cautioned to perform his own hazard evaluation and to rely upon his own determinations.