

VITAVAX® 34FF

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 11/27/2017 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : VITAVAX® 34FF
Other means of identification : EPA Reg. No. 400-107

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Seed treatment, Fungicide
Restrictions on use : Agriculture, For professional users only

1.3. Details of the supplier of the safety data sheet

MacDermid Agricultural Solutions, Inc.
245 Freight Street
Waterbury, CT 06702 - USA
T 1-866-761-9397
sds.request@arysta.com

1.4. Emergency telephone number

Emergency number : FOR 24-HOUR MEDICAL EMERGENCY ASSISTANCE CALL PROPHARMA: 1-866-303-6952
or +1-651-603-3432
FOR 24-HOUR CHEMICAL EMERGENCY (Spill, leaks, fire, exposure or accident) call
CHEMTREC: 1-800-424-9300 or +1-703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Carc. 1A H350
STOT RE 2 H373
Aquatic Acute 1 H400
Aquatic Chronic 2 H411

Full text of H statements : see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS08

GHS09

Signal word (GHS-US) : Danger
Hazard statements (GHS-US) : H350 - May cause cancer.
H373 - May cause damage to organs through prolonged or repeated exposure.
H400 - Very toxic to aquatic life.
H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements (GHS-US) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe mist, spray, vapours.
P273 - Avoid release to the environment.
P280 - Wear eye protection, protective gloves.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P314 - Get medical advice/attention if you feel unwell.
P391 - Collect spillage.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards

No additional information available

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2.4. Unknown acute toxicity (GHS US)

- 0.1% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)
- 0.1% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)
- 0.1% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	% (w/w)	GHS-US classification
Carboxin	(CAS-No.) 5234-68-4	34	Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Comb. Dust
Ethylene glycol	(CAS-No.) 107-21-1	20 - 25	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Dispersing Agent	(CAS-No.) trade secret	0.1 - 5	STOT RE 2, H373
Silicon dioxide (cristobalite)	(CAS-No.) 14808-60-7	0.01 - 0.5	Carc. 1A, H350

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/effects : May cause damage to organs through prolonged or repeated exposure.
- Symptoms/effects after inhalation : May cause cancer by inhalation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Burning produces irritating, toxic and noxious fumes.
- Reactivity : No dangerous reactions known.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Avoid all eye and skin contact and do not breathe vapour and mist. Ensure adequate ventilation.

6.1.1. For non-emergency personnel

- Protective equipment : Refer to section 8.2.
- Emergency procedures : Evacuate unnecessary personnel.

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6.1.2. For emergency responders

Protective equipment : Refer to section 8.2.
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Absorb and/or contain spill with inert material, then place in suitable container.
Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid all eye and skin contact and do not breathe vapour and mist.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool well ventilated place.
Incompatible products : Strong bases. Strong acids. Strong oxidizers.
Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

VITAVAX® 34FF		
ACGIH	Not applicable	
OSHA	Not applicable	
Carboxin (5234-68-4)		
ACGIH	Not applicable	
OSHA	Not applicable	
Dispersing Agent (trade secret)		
ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³ (Inhalable particulates not otherwise specified); 3 mg/m ³ (Respirable particulates not otherwise specified)
OSHA	Not applicable	
Silicon dioxide (cristobalite) (14808-60-7)		
ACGIH	ACGIH TWA (mg/m ³)	0.025 mg/m ³
ACGIH	Remark (ACGIH)	(respirable dust)
OSHA	OSHA PEL (TWA) (ppm)	250 mppcf
OSHA	Remark (OSHA)	(3) See Table Z-3.
Ethylene glycol (107-21-1)		
ACGIH	ACGIH Ceiling (mg/m ³)	100 mg/m ³
ACGIH	ACGIH Ceiling (ppm)	39.4 ppm
ACGIH	Remark (ACGIH)	Kidney dam; URT & eye irr
OSHA	Not applicable	

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8.2. Exposure controls

Appropriate engineering controls	: Avoid creating mist or spray. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide local exhaust or general room ventilation.
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: Wear suitable gloves resistant to chemical penetration. barrier laminate. neoprene gloves. Natural rubber.
Eye protection	: Safety glasses with side shields. tightly fitting safety goggles.
Respiratory protection	: In case of inadequate ventilation wear respiratory protection.
Environmental exposure controls	: Prevent leakage or spillage. Prevent contaminated water run-off.
Other information	: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: tan
Odour	: slight Sweet
Odour threshold	: No data available
pH	: 7 - 9
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Vapour pressure	: No data available
Relative density	: No data available
Relative vapour density at 20 °C	: No data available
Density	: 1.13 - 1.17 g/cm ³ @ 25 °C
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 80 - 140 cP @ 25 °C

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

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10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure : Inhalation; Skin and eye contact

Acute toxicity : Not classified

VITAVAX® 34FF	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
LC50 inhalation rat (mg/l)	> 0.74 mg/l/4h

Carboxin (5234-68-4)	
LD50 oral rat	2588 mg/kg male
LD50 dermal rat	> 4000 mg/kg
LC50 inhalation rat (mg/l)	> 4.7 mg/l/4h
ATE US (oral)	2588 mg/kg bodyweight

Dispersing Agent (trade secret)	
LD50 oral rat	> 12000 mg/kg

Ethylene glycol (107-21-1)	
LD50 dermal rat	> 3500 mg/kg (mouse)
LC50 inhalation rat (mg/l)	> 2.5 mg/l/4h
ATE US (oral)	500 mg/kg bodyweight

Skin corrosion/irritation : Not classified
(Not irritating to rabbits on cutaneous application)

Serious eye damage/irritation : Not classified
(Not irritating to rabbits on ocular application)

Respiratory or skin sensitisation : Not classified.
(No sensitizing reaction was observed for guinea pigs)

Germ cell mutagenicity : Not classified

Carcinogenicity : May cause cancer.

Silicon dioxide (cristobalite) (14808-60-7)	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : May cause damage to organs through prolonged or repeated exposure.

Carboxin (5234-68-4)	
NOAEL (oral, rat, 90 days)	5.5 mg/kg bodyweight/day
NOAEL (subacute, oral, animal/male, 28 days)	30 mg/kg bodyweight

Ethylene glycol (107-21-1)	
LOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight/day
NOAEL (oral, rat, 90 days)	150 mg/kg bodyweight/day kidney

Aspiration hazard : Not classified

Symptoms/effects after inhalation : May cause cancer by inhalation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

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Carboxin (5234-68-4)	
LC50 fish 1	2.3 mg/l 96 h
EC50 Daphnia 1	> 57 mg/l 48 h <i>Oncorhynchus mykiss</i>
EC50 other aquatic organisms 1	0.45 mg/l 120 h <i>Pseudokirchneriella subcapitata</i>
NOEC chronic crustacea	0.32 mg/l 17 d <i>Daphnia magna</i>
Dispersing Agent (trade secret)	
LC50 fish 1	361 ppm 96h <i>Pimephales promelas</i>
Ethylene glycol (107-21-1)	
LC50 fish 1	72860 mg/l <i>Pimephales promelas</i>
EC50 Daphnia 1	> 100 mg/l
NOEC chronic fish	15380 mg/l <i>Pimephales promelas</i>
NOEC chronic crustacea	8590 mg/l <i>Ceriodaphnia</i> sp.

12.2. Persistence and degradability

VITAVAX® 34FF	
Persistence and degradability	May cause long-term adverse effects in the environment.
Carboxin (5234-68-4)	
Persistence and degradability	Not readily biodegradable.
Dispersing Agent (trade secret)	
Persistence and degradability	Biodegrades slowly.
Biochemical oxygen demand (BOD)	0.021 g O ₂ /g substance (5 day/day); 0.043 g O ₂ /g (30 day/days)
Ethylene glycol (107-21-1)	
Persistence and degradability	Readily biodegradable.
Biodegradation	> 60 % 28 d

12.3. Bioaccumulative potential

VITAVAX® 34FF	
Bioaccumulative potential	Not established.
Carboxin (5234-68-4)	
Log Pow	2.3
Ethylene glycol (107-21-1)	
Log Pow	- 1.36
Bioaccumulative potential	Not expected to bioaccumulate.

12.4. Mobility in soil

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

For Non-bulk (<=119 Gallons/ 450 Liters) Not Regulated

For Bulk (>119 Gallons/ 450 Liters)

Transport document description : UN3082 Environmentally hazardous substances, liquid, n.o.s. (Carboxin), 9, III

UN-No.(DOT) : UN3082

Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s. (Carboxin)

Packing group (DOT) : III - Minor Danger

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Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials)



Dangerous for the environment : Yes

Marine pollutant : Yes



Additional information

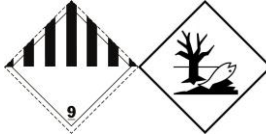
Emergency Response Guide (ERG) Number : 171

Other information : No supplementary information available.

Transport by sea

IMDG

Transport hazard class(es) (IMDG) : 9



Marine pollutant : Yes

UN-No. (IMDG) : 3082

Transport document description (IMDG) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Carboxin), 9, III, MARINE POLLUTANT

Class (IMDG) : 9 - Miscellaneous dangerous substances and articles

Packing group (IMDG) : III - substances presenting low danger

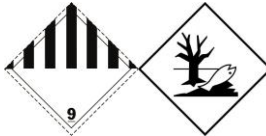
EmS-No. (Fire) : F-A

EmS-No. (Spillage) : S-F

Air transport

IATA

Transport hazard class(es) (IATA) : 9



Marine pollutant : Yes

UN-No. (IATA) : 3082

Transport document description (IATA) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Carboxin), 9, III

Class (IATA) : 9 - Miscellaneous Dangerous Goods

Packing group (IATA) : III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Carboxin	CAS-No. 5234-68-4	34%
Ethylene glycol	CAS-No. 107-21-1	20 - 25%

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Carboxin (5234-68-4)	
EPA TSCA Regulatory Flag	Exempt from TSCA Regulation under FIFRA Section 3 (2)(B)(ii) when used as a pesticide.
Dispersing Agent (trade secret)	
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Inventory Update Reporting Rule, i.e, Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(C)).
Ethylene glycol (107-21-1)	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.
CERCLA RQ	5000 lb
FIFRA Labelling	
EPA Registration Number	400-107
This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use..	
FIFRA Signal Word	Caution
FIFRA Human Health Hazards	Harmful if inhaled.
FIFRA First Aid	Avoid breathing vapor or spray mist.
FIFRA Environmental Hazards	Do not apply to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate or by disposal of wastes. Treated seed exposed on soil surface may be hazardous to birds. Cover or collect spilled seeds. This product may have effects on federally listed threatened or endangered species or their critical habitat in some countries. It is a violation of federal law to kill, harm or harass listed animal species without authorization. To limit the potential for such impacts when using this product, consult and follow the instructions provided in the EPA endangered Species bulletin for the County or Parish in which you are applying the seed. To determine whether your County or Parish has a bulletin, consult http://www.epa.gov/espp before each season's use of this product.

15.2. International regulations

CANADA

Carboxin (5234-68-4)
Listed on the Canadian DSL (Domestic Substances List) inventory.
Dispersing Agent (trade secret)
Listed on the Canadian DSL (Domestic Substances List) inventory.
Silicon dioxide (cristobalite) (14808-60-7)
Listed on the Canadian DSL (Domestic Substances List) inventory.
Ethylene glycol (107-21-1)
Listed on the Canadian DSL (Domestic Substances List) inventory.

15.3. US State regulations

 **WARNING** This product can expose you to Silicon dioxide (cristobalite), which is known to the State of California to cause cancer, and Ethylene glycol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Silicon dioxide (cristobalite) (14808-60-7)				No significant risk level (NSRL)	Maximum allowable dose level (MADL)
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male		
Yes	No	No	No		

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Ethylene glycol (107-21-1)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
No	Yes	No	No		

Carboxin (5234-68-4)
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities U.S. - New Jersey - Right to Know Hazardous Substance List

Silicon dioxide (cristobalite) (14808-60-7)
U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations U.S. - New Jersey - Right to Know Hazardous Substance List

Ethylene glycol (107-21-1)
U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Data sources : European Chemicals Agency (ECHA) Registered Substances list. Accessed at <http://echa.europa.eu/>. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition. OSHA 29CFR 1910.1200 Hazard Communication Standard. REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. TSCA Chemical Substance Inventory. Accessed at <http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html>.

Other information : None.

Full text of H-statements:

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H350	May cause cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

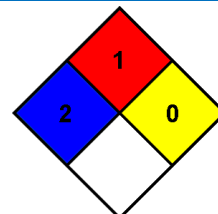
Abbreviations and acronyms:

	ACGIH (American Conference of Government Industrial Hygienists)
	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	CLP: Classification, Labelling, Packaging.
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population
	OSHA: Occupational Safety & Health Administration
	TSCA: Toxic Substances Control Act

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and not reactive with water.



SDS Prepared by: The Redstone Group, LLC.

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product