

# SAFETY DATA SHEET

GHS  
United States

## Section 1. Product and company identification

<b>Product name</b>	<b>VANAX® FC-20 GRANULES</b>	<b><u>In case of emergency</u></b>
<b>Code</b>	45107	1-203-853-1400
<b>Supplier/Manufacturer</b>	Vanderbilt Chemicals, LLC 30 Winfield Street Norwalk, CT 06855	Chemtrec: 1-800-424-9300 Outside US: +1-703-527-3887
<b>Synonym</b>	Not available.	
<b>Material uses</b>	Accelerator.	
<b>Product type</b>	Solid.	

## Section 2. Hazards identification

<b>OSHA/HCS status</b>	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
<b>Classification of the substance or mixture</b>	ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (inhalation) - Category 2 SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

### GHS label elements

#### Hazard pictograms



#### Signal word

Danger

#### Hazard statements

Toxic if swallowed.  
Causes serious eye damage.  
Fatal if inhaled.  
May cause respiratory irritation.  
Causes damage to organs through prolonged or repeated exposure. (lungs, nose/sinuses)

### Precautionary statements

#### Prevention

Wear eye or face protection: Recommended: safety glasses with side-shields.. In case of inadequate ventilation wear respiratory protection. Use only outdoors or in a well-ventilated area. Do not breathe dust. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

#### Response

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### Storage

Store locked up. Store in a well-ventilated place. Keep container tightly closed.

## Section 2. Hazards identification

**Disposal** Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazards not otherwise classified** None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** Mixture

Ingredient name	CAS number	% by weight
1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1-difluoroethene	9011-17-0	60 - 70
Phosphonium, triphenyl(phenylmethyl)-, chloride (1:1)	1100-88-5	35

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

<b>Eye contact</b>	Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
<b>Inhalation</b>	Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Skin contact</b>	Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Ingestion</b>	Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	Causes serious eye damage.
<b>Inhalation</b>	Fatal if inhaled. May cause respiratory irritation.
<b>Skin contact</b>	No known significant effects or critical hazards.
<b>Ingestion</b>	Toxic if swallowed.

## Section 4. First aid measures

### Over-exposure signs/symptoms

<b>Eye contact</b>	Adverse symptoms may include the following: pain watering redness
<b>Inhalation</b>	Adverse symptoms may include the following: respiratory tract irritation coughing
<b>Skin contact</b>	Adverse symptoms may include the following: pain or irritation redness blistering may occur
<b>Ingestion</b>	Adverse symptoms may include the following: stomach pains

### Indication of immediate medical attention and special treatment needed, if necessary

<b>Notes to physician</b>	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	No specific treatment.
<b>Protection of first-aiders</b>	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	In case of fire, use water spray (fog), foam, dry chemical or CO <sub>2</sub> .
<b>Unsuitable extinguishing media</b>	None known.

**Specific hazards arising from the chemical** No specific fire or explosion hazard.

<b>Hazardous thermal decomposition products</b>	Decomposition products may include the following materials: carbon dioxide carbon monoxide phosphorus oxides halogenated compounds
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**Special protective actions for fire-fighters** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment for fire-fighters** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
<b>For emergency responders</b>	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

<b>Environmental precautions</b>	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
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### Methods and materials for containment and cleaning up

<b>Small spill</b>	Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
<b>Large spill</b>	Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

<b>Protective measures</b>	Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
<b>Advice on general occupational hygiene</b>	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

None.

#### **Appropriate engineering controls**

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

#### **Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

#### **Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

#### **Eye/face protection**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead. Recommended: safety glasses with side-shields.

### Skin protection

#### **Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

#### **Body protection**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat

#### **Other skin protection**

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

#### **Respiratory protection**

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

#### **Personal protective equipment (Pictograms)**



## Section 9. Physical and chemical properties

### Appearance

Physical state	Solid. [Granules]
Color	Blue.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point	Not available.
Boiling point	Not available.
Flash point	Not available.
Burning time	Not available.
Burning rate	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Lower and upper explosive (flammable) limits	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Density	Not available.
Relative density	Not available.
Solubility	Not available.
Solubility in water	Not available.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
SADT	Not available.
Viscosity	Not available.

## Section 10. Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Heat, flames, sparks, ignition sources and contamination.
Incompatible materials	Avoid strong acids and strong oxidizers.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Phosphonium, triphenyl (phenylmethyl)-, chloride (1:1)	LC50 Inhalation Vapor	Rat	≥80 to ≤200 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	43 mg/kg	-

#### Irritation/Corrosion

Not available.

#### Conclusion/Summary

##### **Skin**

Phosphonium, triphenyl(phenylmethyl)-, chloride (1:1): Non-irritating to the skin.

##### **Eyes**

Phosphonium, triphenyl(phenylmethyl)-, chloride (1:1): Causes serious eye damage.

#### Sensitization

Product/ingredient name	Route of exposure	Species	Result
Phosphonium, triphenyl (phenylmethyl)-, chloride (1:1)	skin	Guinea pig	Not sensitizing

#### Mutagenicity

Product/ingredient name	Test	Experiment	Result
Phosphonium, triphenyl (phenylmethyl)-, chloride (1:1)	OECD 471	Experiment: In vitro Subject: Bacteria	Negative

#### Carcinogenicity

Not available.

#### Reproductive toxicity

Not available.

#### Teratogenicity

Not available.

#### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Phosphonium, triphenyl(phenylmethyl)-, chloride (1:1)	Category 3	-	Respiratory tract irritation

#### Specific target organ toxicity (repeated exposure)

## Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Phosphonium, triphenyl(phenylmethyl)-, chloride (1:1)	Category 1	-	lungs, nose/sinuses

### Aspiration hazard

Not available.

### Information on the likely routes of exposure

Not available.

### Potential acute health effects

<b>Eye contact</b>	Causes serious eye damage.
<b>Inhalation</b>	Fatal if inhaled. May cause respiratory irritation.
<b>Skin contact</b>	No known significant effects or critical hazards.
<b>Ingestion</b>	Toxic if swallowed.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Eye contact</b>	Adverse symptoms may include the following: pain watering redness
<b>Inhalation</b>	Adverse symptoms may include the following: respiratory tract irritation coughing
<b>Skin contact</b>	Adverse symptoms may include the following: pain or irritation redness blistering may occur
<b>Ingestion</b>	Adverse symptoms may include the following: stomach pains

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

<b>Potential immediate effects</b>	Not available.
<b>Potential delayed effects</b>	Not available.

#### Long term exposure

<b>Potential immediate effects</b>	Not available.
<b>Potential delayed effects</b>	Not available.

#### Potential chronic health effects

Not available.

<b>General</b>	Causes damage to organs through prolonged or repeated exposure.
<b>Carcinogenicity</b>	No known significant effects or critical hazards.
<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.



## Section 11. Toxicological information

**Fertility effects** No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Not available.

**Other information** Not available.

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
Phosphonium, triphenyl (phenylmethyl)-, chloride (1:1)	Acute EC50 0.59 mg/l	Algae	72 hours
	Acute EC50 1 mg/l	Daphnia	48 hours

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Phosphonium, triphenyl (phenylmethyl)-, chloride (1:1)	OECD 301D	1 % - Not readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Phosphonium, triphenyl (phenylmethyl)-, chloride (1:1)	-	-	Not readily

### Bioaccumulative potential

Not available.

### Mobility in soil

**Soil/water partition coefficient ( $K_{oc}$ )** Not available.

**Other adverse effects** No known significant effects or critical hazards.

## Section 13. Disposal considerations

### Disposal methods











The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been

## Section 13. Disposal considerations

cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

## Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
<b>DOT Classification</b>	UN2811	TOXIC SOLID, ORGANIC, N.O.S. (Phosphonium, triphenyl (phenylmethyl)-, chloride (1:1))	6.1	III	 	<b>Remarks</b> Marine pollutant
<b>TDG Classification</b>	UN2811	TOXIC SOLID, ORGANIC, N.O.S. (Phosphonium, triphenyl (phenylmethyl)-, chloride (1:1))	6.1	III	 	<b>Remarks</b> Marine pollutant
<b>ADR/RID Class</b>	UN2811	TOXIC SOLID, ORGANIC, N.O.S. (Phosphonium, triphenyl (phenylmethyl)-, chloride (1:1))	6.1	III	 	<b>Remarks</b> Marine pollutant
<b>IMDG Class</b>	UN2811	TOXIC SOLID, ORGANIC, N.O.S. (Phosphonium, triphenyl (phenylmethyl)-, chloride (1:1))	6.1	III	 	<b>Remarks</b> Marine pollutant
<b>IATA-DGR Class</b>	UN2811	TOXIC SOLID, ORGANIC, N.O.S. (Phosphonium, triphenyl (phenylmethyl)-, chloride (1:1))	6.1	III	 	<b>Remarks</b> Marine pollutant

PG\* : Packing group

## Section 15. Regulatory information

[United States inventory \(TSCA 8b\)](#) All components are active or exempted.

### [U.S. Federal regulations](#)

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

### [SARA 302/304](#)

#### [Composition/information on ingredients](#)

No products were found.

### [SARA 304 RQ](#)

Not applicable.

### [SARA 311/312](#)

#### [Classification](#)

ACUTE TOXICITY (oral) - Category 3  
 ACUTE TOXICITY (inhalation) - Category 2  
 SERIOUS EYE DAMAGE - Category 1  
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

#### [Composition/information on ingredients](#)

Name	%	Classification
Phosphonium, triphenyl (phenylmethyl)-, chloride (1:1)	35	ACUTE TOXICITY (oral) - Category 2 ACUTE TOXICITY (inhalation) - Category 2 SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

### [State regulations](#)

#### [Massachusetts](#)

None of the components are listed.

#### [New York](#)

None of the components are listed.

#### [New Jersey](#)

None of the components are listed.

#### [Pennsylvania](#)

None of the components are listed.

#### [California Prop. 65](#)

None of the components are listed.

### [International regulations](#)

#### [Australia inventory \(AICS\)](#)

All components are listed or exempted.

#### [Canada inventory](#)

All components are listed or exempted.

#### [China inventory \(IECSC\)](#)

All components are listed or exempted.

#### [Europe inventory](#)

All components are listed or exempted.

#### [Japan inventory \(ENCS\)](#)

All components are listed or exempted.

#### [Korea inventory \(KECI\)](#)

All components are listed or exempted.

#### [New Zealand Inventory of Chemicals \(NZIoC\)](#)

All components are listed or exempted.

#### [Philippines inventory \(PICCS\)](#)

All components are listed or exempted.

#### [Taiwan Chemical Substances Inventory \(TCSI\)](#)

All components are listed or exempted.

## Section 16. Other information

### Hazardous Material Identification System (U.S.A.)

Health	3
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

### National Fire Protection Association (U.S.A.)



Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

### History

Date of printing	12/31/2020
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Date of previous issue	11/19/2020
Version	2

### Key to abbreviations

ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 UN = United Nations

### References

Not available.

### Information contact

**Vanderbilt Global Services, LLC**  
**Corporate Risk Management**  
**1-203-295-2143**

Visit [www.vanderbiltchemicals.com](http://www.vanderbiltchemicals.com) for more information.

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## Section 16. Other information