

Material Safety Data Sheet
Ranman™ 400SC Agricultural Fungicide

SDS #: 6267-A
Revision Date: 2011-11-08
Version 1.02



This MSDS has been prepared to meet U.S. OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS) requirements.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	Ranman™ 400SC Agricultural Fungicide
Formula code	6267
Active Ingredient(s)	Cyazofamid
Synonyms	4-chloro-2-cyano-N,N-dimethyl-5-p-tolylimidazole-1-sulfonamide; 4-chloro-2-cyano-N,N-dimethyl-5-(4-methylphenyl)-1H-imidazole-1-sulfonamide
Chemical Family	Cyanoimidazole
Recommended use	Fungicide
Manufacturer FMC Corporation Agricultural Products Group 1735 Market Street Philadelphia, PA 19103 General Information: Phone: (215) 299-6000 E-Mail: msdsinfo@fmc.com	Emergency telephone number For leak, fire, spill or accident emergencies, call: +1 800.424.9300 (CHEMTREC - U.S.A.) +1 703.527.3887 (CHEMTREC - Collect - All Other Countries), Medical Emergencies: (800) 331-3148 (U.S.A. & Canada) +1 (651) 632-6793 (All Other Countries - Collect)

2. Hazards identification

Appearance	Light tan to tan
Physical State	liquid
Odor	slight musty
Potential health effects	
Acute effects	
Eyes	May cause slight irritation.
Skin	Does not pose a potential of skin irritation and sensitization. Prolonged or repeated contact may dry skin and cause irritation.
Inhalation	May cause irritation of respiratory tract.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Chronic effects	No known effect based on information supplied.
Environmental hazard	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. Composition/information on ingredients

Hazardous ingredients

Chemical Name	CAS-No	Weight %
Cyazofamid technical	120116-88-3	34.5

4. First aid measures

Eye contact	Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.
Skin contact	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Inhalation	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
Ingestion	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not induce vomiting or give anything by mouth to an unconscious person.
Notes to physician	Treatment is symptomatic and supportive.

5. Fire-fighting measures

Flash Point No information available

Special hazards arising from the substance or mixture

Sensitivity to Mechanical Impact not applicable

Sensitivity to Static Discharge not applicable

Extinguishing media

Suitable extinguishing media Foam. Carbon dioxide (CO₂). Dry chemical. Water spray or fog.

Advice for fire-fighters

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus and full protective gear. Isolate fire area. Evaluate downwind.

NFPA

Health Hazard	0
Flammability	1
Stability	0
Special Hazards	-

6. Accidental release measures

Personal precautions Isolate and post spill area. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.

Environmental precautions Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains.

Methods for containment Dike to prevent runoff. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up	Clean and neutralize spill area, tools and equipment by washing with bleach water and soap. Absorb rinsate and add to the collected waste. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13.
Other	For further clean-up instructions call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

7. Handling and storage

Handling	Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.
Storage	Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep out of reach of children and animals. Store in original container only.

8. Exposure controls/personal protection

<u>Exposure guidelines</u>	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
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Occupational exposure controls

Engineering measures	Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.
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Personal protective equipment

General Information	If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers, These recommendations apply to the product as supplied
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Respiratory protection	For dust, splash, mist or spray exposures wear a filtering mask.
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Eye/face protection	For dust, splash, mist or spray exposure, wear chemical protective goggles or a face-shield
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Skin and body protection	Wear long-sleeved shirt, long pants, socks, shoes, and gloves.
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Hand protection	Protective gloves
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Hygiene measures	Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Remove and wash contaminated clothing before re-use. Launder work clothing separately from regular household laundry.
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9. Physical and chemical properties

Appearance	Light tan to tan
Color	cream to tan
Physical State	liquid
Odor	slight musty
pH	6.2 (1% solution)
Melting Point/Range	152.7 °C (based on active ingredient)
Freezing point	-5 °C / 23 °F
Boiling Point/Range	No information available
Flash Point	No information available
Evaporation rate	No information available

Autoignition Temperature	503 °C / 937 °F (using 100 uL)
Vapor pressure	0.0000001 torr at 25 °C (based on active ingredient)
Vapor density	No information available
Specific Gravity	1.154 g/mL
Water solubility	0.107 mg/L at pH 7 @ 20 °C
Percent volatile	No information available
Partition coefficient:	not applicable
Viscosity	No information available
Oxidizing properties	not applicable

10. Stability and reactivity

Stability	Stable
Conditions to avoid	Excessive heat
Materials to avoid	Iron, Aluminum
Hazardous decomposition products	Thermal decomposition can lead to release of irritating and toxic gases and vapors.
Hazardous polymerization	Hazardous polymerization does not occur

11. Toxicological information

Eye contact	Non-irritating, species unknown.
Skin contact	Non-irritating during normal use (rabbit).
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Inhalation	May cause irritation of respiratory tract. > 2,000 mg/kg (rat)
LD50 Oral	> 5,000 mg/kg (rat)
LC50 Inhalation:	> 5.9 mg/L 4 hr (species unknown)
Sensitization	Did not cause sensitization on laboratory animals.
Chronic Toxicity - Other Ingredient(s)	
Chronic Toxicity	No known effect based on information supplied.
Carcinogenicity	Did not show carcinogenic effects in animal experiments. Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH).
Mutagenicity	Negative in the Ames test.

12. Ecological information

Ecotoxicity

Cyazofamid technical (120116-88-3)

Active Ingredient	Duration	Species	Value	Units
Cyazofamid	LC50	Fish	>1	mg/L
	LC50	Daphnia magna	>1.3	mg/L
	LC50	Mysid shrimp	0.089	mg/L

	EC50	Mollusk	0.015	mg/L
	LD50 Oral	Bird	>2000	mg/kg
	LD50	Bee	>100	µg/bee

Environmental Fate

Cyazofamid technical (120116-88-3)

Active Ingredient	Type of Test	Result
Cyazofamid	Soil degradation	3.7 - 6.4 days
	Stability in water	Half-life of 11.9 days, half-life depending on pH
	Mobility in soil	Limited mobility in soil due to its strong affinity for adsorption to organic matter.
	log Pow	3.2

13. Disposal considerations

Waste disposal methods Improper disposal of excess pesticide, spray mixture, or rinsate is prohibited. If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance.

Contaminated packaging Containers must be disposed of in accordance with local, state and federal regulations. Refer to the product label for container disposal instructions.

14. Transport information

DOT This material is not a hazardous material as defined by U.S. Department of Transportation at 49 CFR Parts 100 through 185.

Packaging Type Bulk, Non-Bulk

TDG Classification below is only applicable when shipped by vessel and is not applicable when shipped by road or rail only.

Proper shipping name Environmentally hazardous substance, liquid, n.o. s.
Hazard Class 9
UN/ID No UN3082
Packing group III

ICAO/IATA

UN/ID No UN3082
Proper shipping name Environmentally hazardous substance, liquid, n.o. s.
Hazard Class 9
Packing group III
Description Environmentally hazardous substance, liquid, n.o.s. (Cyazofamid), UN3082 + Marine Pollutant
Limited quantity 914 / 450 L

IMDG/IMO

Proper shipping name Environmentally hazardous substance, liquid, n.o. s.
Hazard Class 9
UN/ID No UN3082
Packing group III
Description Environmentally hazardous substance, liquid, n.o.s. (Cyazofamid), UN3082 + Marine Pollutant

15. Regulatory information

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

International Regulations

Mexico - Grade

No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

Non-controlled

16. Other information

Revision Date:

2011-11-08

Reason for revision:

(M)SDS sections updated.

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End of Material Safety Data Sheet

