SAFETY DATA SHEET

Date: January 17, 2019 Serial No.: AGG10049C2B_01

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME Penthiopyrad 20SC

SYNONYMS APHET, APHET 20%SC, APHET 20SC, AFFET, Affet SC

AFFET 20%SC, AFFET 20SC, Aphet, Aphet 20%SC

Aphet 20SC, Affet, Affet 20%SC, Affet 20SC, AFFET 200 SC Affet 200 SC, Penthiopyrad 200 g/l, Penthiopyrad 20% SC

USE OF PRODUCT Fungicide

COMPANY IDENTIFICATION

Mitsui Chemicals Agro, Inc.

1-19-1, Nihonbashi, Chuo-ku, Tokyo

103-0027, JAPAN

Telephone: +81-3-5290-2810 Telefax: +81-3-3231-1183

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Acute toxicity

Oral Not classified.

Dermal Not classified
Skin corrosion/irritation Not classified
Serious eye damage/eye irritation Category 2B
Skin sensitization Not classified

Aquatic hazards

Acute Category 2 Chronic Category 2

GHS LABEL ELEMENTS
Hazard Pictograms



Signal Word Warning

Hazard Statements

H320: Causes eye irritation H401: Toxic to aquatic life

H411: Toxic to aquatic life with long lasting effects

Precautionary Statements

Prevention

P264: Wash hands and face thoroughly after handling.

P273: Avoid release to the environment.

Response

P305+P351+P338:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing.

P337+P313

If eye irritation persists: Get medical advice/attention.

P391: Collect spillage.

Disposal

P501: Dispose of contents or container in accordance with local, regional, national and

international regulations.

OTHER HAZARDS

Not available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | %w/w (g/L) | CAS No. |
|--------------------|------------|-------------|
| Penthiopyrad(*) | 19.5 (200) | 183675-82-3 |
| Surfactant / Water | 80.5 | - |

^{* (}RS)-N-[2-(1,3-dimethylbutyl)-3-thienyl]-1-methyl-3-(trifluoromethyl)pyrazole-4-carboxamide

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

4. FIRST AID MEASURES

INGESTION

Rinse mouth with water. Get medical attention immediately. Induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious or convulsing person.

INHALATION

If you feel unwell, move to fresh air immediately. Get medical attention if cough or other symptoms develop. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

SKIN CONTACT

Immediately remove contaminated clothing and shoes. Flush skin and clean off with large amounts of water. Get medical attention if symptoms develop.

EYE CONTACT

Immediately flush with plenty of water. Part eyelids with fingers to assure complete flushing. Check for and remove contact lenses if easily possible. Get medical attention if irritation persists.

5. FIREFIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA

Foam, dry chemical, CO₂, water fog, sand.

UNSUITABLE EXTINGUISHING MEDIA

Not available

GENERAL HAZARD

No unusual fire or explosion hazard for normal industrial or commercial handling.

HAZARDOUS COMBUSTION PRODUCTS

Nitrogen oxides, sulfur oxides, halogenated compounds.

FIREFIGHTING INSTRUCTIONS

Keep unnecessary and unprotected personnel away. Shut off supply if possible. Remove containers to safe place if possible. Keep containers and surroundings cool by spraying with water. Fight fire from an upwind position.

FIREFIGHTING EQUIPMENT

Respiratory and eye protection is required for firefighting personnel.

Full protective equipment and self-contained breathing apparatus (SCBA) should be used for all indoor fires and any significant outdoor fires.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS AND EMERGENCY PROCEDURES

Warn and evacuate in the neighborhood as necessary. Keep unnecessary and unprotected personnel away. Wear appropriate personal protective equipment as specified in Section 8. Remove all sources of ignition. Stop leak if possible without personal risk.

ENVIRONMENTAL PRECAUTIONS

Do not let this product enter the environment.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Absorb or cover the spilled product with dry earth, sand or other non-combustible material, and transfer to sealable containers. Large spills: Dike far ahead of liquid spill for later disposal.

7. HANDLING AND STORAGE

HANDLING

Technical Measures

Use only with adequate ventilation.

Where there may be potential of fire or explosion hazard, use explosion-proof electrical equipment and take precautions against build-up of electrostatic charges.

Wear appropriate personal protective equipment. Keep away from heat, sparks, open flames hot surfaces and all sources of ignition.

Precautions

Handle with care. Do not breathe mist. Avoid contact with eyes, skin and clothing.

Take precautionary measures against static discharge.

Advice on general occupational hygiene

Provide hand and eye wash station near work area. Wash hands thoroughly after use. Take off contaminated protective equipment before entering rest areas. Do not eat, drink or smoke when using this product.

STORAGE

Storage Conditions

Keep away from heat and all sources of ignition. Store in a cool, dark and well- ventilated area. Keep container tightly closed and sealed until ready for use.

Do not contaminate other pesticides, fertilizers, water, foodstuffs or feed by storage and disposal.

Packaging Materials

Plastics

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMIT VALUES

Not established for this substance/product.

ENGINEERING CONTROLS

Provide general ventilation. Using closed system or local exhaust ventilation is recommended. Provide safety shower and eye wash station near work area.

PERSONAL PROTECTION

Eye/face protection: Safety glasses, goggles, face shield.

Skin Protection:

Hand protection: Chemical resistant (impermeability) gloves.
Body Protection: Safety helmet, protective clothing, safety boots.

Respiratory protection: Chemical cartridge respirator

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Milky white liquid Odor: Mild sweet Odor threshold: Not available

pH (1%, 25°C): 7.11

Melting point:

Not available
Initial boiling point and boiling range:

Not available

Flash point: > 230°F (>110°C) [Not classified]

Evaporation rate: Not available Flammability: Not available

Upper/lower flammability or explosive limits:

Vapor pressure: Not available Bulk density (23°C): 1.054 g/cm³

Solubilities: Suspended in water

Partition coefficient; n-octanol/water: Not available

Viscosity (shear rate 0.5-100): 6560-197.6 cps at 23°C, 4720-156.8 cps at 40°C

Auto-ignition temperature: Not available

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY

Stable under normal conditions.

HAZARDOUS REACTIONS

No hazardous reaction when handled and stored according to provisions.

CONDITIONS TO AVOID

Not available

INCOMPATIBLE MATERIALS

Not available

HAZARDOUS DECOMPOSITION PRODUCTS

Nitrogen oxides, halogenated compounds.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Oral: Rat $LD_{50} > 5000 \text{ mg/kg}$ [Not classified] Dermal: Rat $LD_{50} > 5000 \text{ mg/kg}$ [Not classified] Inhalation: Rat $LC_{50} > 2.87 \text{ mg/L/4hr}$ [Classification not possible]

Skin Corrosion/Irritation

Rabbit Non-Irritant [Not classified]

Serious Eye Damage/Irritation

Rabbit Mild irritant [Category 2B]

Respiratory Sensitization

Not available [Classification not possible]

Skin Sensitization

Guinea pig Not a skin sensitizer. [Not classified]

Germ Cell Mutagenicity Not available. [Classification not possible]

Carcinogenicity Not available. [Classification not possible]

Reproductive Toxicity Not available. [Classification not possible]

Specific Target Organ Toxicity

Single Exposure: Not available. [Classification not possible]

Repeated Exposure: Not available. [Classification not possible]

Aspiration Hazard Not available. [Classification not possible]

12. ECOLOGICAL INFORMATION

HAZARDOUS TO THE AQUATIC ENVIRONMENT

Acute: Classified as category 2 based on the LC₅₀ for Bluegill. [Category 2] Chronic: Contains Penthiopyrad (Category 1, M=1). [Category 2]

ECOTOXICITY

Bluegill LC_{50} (96hr) 5.7 mg/L $Daphnia\ magna$ EC_{50} (48hr) 12 mg/L

Algae (Pseudokirchneriella subcapitata)

ErC₅₀ (0-72Hr) 28.7 mg/L

[Penthiopyrad]

Carp LC_{50} (96hr) 0.568 mg/L

HAZARDOUS TO THE OZONE LAYER

This product does not contain \geq 0.1% of at least one ingredient listed in the Annexes to the Montreal Protocol. [Classification not possible]

13. DISPOSAL CONSIDERATIONS

WASTE FROM RESIDUES

Waste must be disposed of in accordance with federal, state, local, national and international regulations.

CONTAMINATED PACKAGING

Empty the container completely before disposal.

14. TRANSPORT INFORMATION

UN

Hazard Class: 9

UN Number: UN3082

Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE.

LIQUID, N.O.S. (Penthiopyrad mixture)

Packing Group: III
Marine Pollutant: Yes

SPECIAL PRECAUTIONS FOR TRANSPORT

Make sure that the containers have no puncture or leakage. Avoid rough handling and dropping. Prevent collapse of cargo piles.

15. REGULATORY INFORMATION

This product is a fungicide.

Responsibility for compliance with applicable laws and regulations is with the user.

16. OTHER INFORMATION

References: In-house data

To the best of our knowledge, the information contained herein is accurate.

However, we cannot assume any liability whatsoever for the accuracy or completeness of the

information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.