



MATERIAL SAFETY DATA SHEET

PRINT40 % SC

IDENTIFICATION OF THE SUPPLIER:

Agro Chemical Industries LTD (ACI)
Amman – Jordan
P.O.Box 183020 Amman 11118 Jordan
Tel. +962 6 5548224/5
Fax. +962 6 5548220
Website / E-mail: www.aci.com.jo / info@aci.com.jo

PRODUCT IDENTIFICATION:

Common Name: Cyazofamid
Trade Name: Print 40% SC
Uses category: Fungicide
Type of formulation: suspension concentrate(SC)
Chemical Name: 4-chloro-2-cyano-N,N-dimethyl-5-β-tolyimidazole-1-sulfonamide
Chemical Formula: C₁₂H₁₃ClN₄O₂S
Molecular Weight: 324.8

PRODUCT COMPOSITION:

Active Ingredient:	% w/v	CAS #
cyazofamid	40%	[120116-88-3]
Inert ingredient: Up to 1Liter		



HAZARDS IDENTIFICATION:

Hazard Classification:

Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 1)

Signal Word:

WARNING

Hazard Symbols:



Hazard Statements:

Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

Avoid release to the environment. Collect spillage. Dispose of contents and container in accordance with the product label.

FIRST-AID MEASURES:

Skin Contact:

Take off contaminated clothing.

Rinse skin immediately with plenty of soap and water for 15-20 minutes.

Call a poison control center or doctor for treatment advice.

Eye Contact:

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.





Call a poison control center or doctor for treatment advice.

Ingestion:

Call a poison control center or doctor immediately for treatment advice.

Have person sip a glass of water if able to swallow.

Do not induce vomiting unless told to do so by the poison control center or doctor.

Do not give anything by mouth to an unconscious person.

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 treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

FIRE-FIGHTING MEASURES: -

Extinguishing Media:

SMALL FIRE: Use water spray, dry chemicals, foam or carbon dioxide.

LARGE FIRE: Use water spray, dry chemicals, foam or carbon dioxide.

DO NOT use water jet.

Unusual Fire and Explosion

Hazards:

May decompose under fire conditions emitting gases and vapors, which

may be toxic and irritating to the respiratory tract.

Fire Fighting Instructions:

Wear full firefighting turn-out gear and self-contained breathing apparatus.





ACCIDENTAL RELEASE MEASURE:

Precautionary Measures:

Use protective equipment and engineering controls identified in section 8 of this document.

Containment and Clean-Up:

Contain spill. Remove as much as possible and remove any contaminated soil.

Place in closed, labeled container and store in a safe place to await proper disposal.

Do not contaminate water while cleaning equipment or disposing of wastes.

PERSONAL PROTECTION/SAFTETY:

The recommendations in this section for exposure controls and Personal Protection are intended for industrial settings (such as formulation or packaging facilities) or for other non-application situations.

For commercial applications and/or on-farm applications of this product refer to the precautions/warnings on the product label. Always follow the label instructions when handling and applying this product.

Exposure Limits:

Not established.

Engineering Controls:

Ensure adequate ventilation, especially in confined areas.

Personal Protection:

Ingestion:

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.





Eye Contact:

Where eye contact is likely, use protective eyewear (such as chemical splash goggles).

Skin Contact:

Applicators and other handlers must wear long-sleeved shirt and long pants, socks, shoes, and chemical resistant gloves made of any waterproof material.

Inhalation:

A respirator is not normally required when handling sealed containers. Use effective engineering controls to comply with facility occupational exposure limits.

In case of emergency spills, use a NIOSH approved respirator with any N, R,P or HE filter.

HANDLING AND STORAGE:

Precautions:

Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before use.

Storage:

Store in original container, in a secure, dry place separate from food and feed. Keep out of reach of children and domestic animals.

STABILITY AND REACTIVITY:

Reactivity:

No evidence of reactivity.





Stability:

This product is stable under normal use and storage conditions.
Possibility of Hazardous

Reactions:

None known.

Conditions to Avoid:

Avoid contact with heat or open flame.

Incompatible Materials:

Active ingredient degrades with iron, aluminum, iron acetate or aluminum acetate at 54°C.

Hazardous Decomposition Products:

May decompose under fire conditions to release vapors or gases which are toxic and irritating to the respiratory tract.

PHYSICAL AND CHEMICAL PROPERTIES:

Physical Appearance:

Light tan/beige liquid

Odor:

Slight odor; "musty latex paint"

pH:

6.2 (1% dilution in water)

Boiling Point:

Not determined

Melting Point:

152.7°C (based on active ingredient)

Freezing Point:

-5°C





Flash Point:

None observed

Evaporation Rate:

Not available

Flammability:

Non-flammable

Flammable Limits:

Not established

Vapor Pressure:

<1 x 10⁻⁷ mm Hg @ 25°C (1.33x10⁻⁵ Pascal) (based on active ingredient)

Vapor Density:

Not available

Density:

1.154 g/ml @ 25°C

Solubility:

0.107 mg/L in water @ 20°C (pH 7) (based on active ingredient)

N-Octanol/Water:

Log Pow = 3.2 (based on active ingredient)

Auto-Ignition Temperature:

503°C (937°F) using 100 µl.

Decomposition Temperature:

Not available

Volatility:

Not available





TOXICOLOGICAL INFORMATION:

Acute Toxicity:

Acute oral toxicity (LD50): >5000 mg/kg [Rat].

Acute dermal toxicity (LD50): >5000 mg/kg [Rabbit].

Acute inhalation toxicity (LC50): >5.854 mg/L [actual airborne concentration]; >16.2 mg/L (nominal) 4 hour(s) [Rat].

Skin Irritation:

Non-irritating; Primary dermal irritation index = 0.0 [Rabbit]

Eye Irritation:

Non-irritating; No positive effects were observed in exposed animals [Rabbit]

Sensitization:

Not a sensitizer

Mutagenicity:

No evidence of mutagenicity.

Carcinogenicity:

No evidence of carcinogenicity was observed in mice exposed to the active ingredient via ingestion at doses up to 7000 ppm or in rats at doses up to 20,000 ppm.

Reproductive Toxicity:

Animal studies show no evidence of toxicity resulting from exposure to the active ingredient.

Target Organ Effects:

Increased kidney weights and/or lesions were observed in rats ingesting at least 5000 ppm of the active ingredient daily over a period of 13 weeks.





Aspiration:

No data available.

ECOLOGICAL INFORMATION: -

Summary of Effects:

As with all crop protection products, take precautions when handling and applying so as to prevent contamination of areas surrounding the application site.

Do not apply directly 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 wash waters or rinsate.

Ecotoxicity Data (Cyazofamid):

Fish (Rainbow Trout & Bluegill) 96-hour LC50 > 1.4 mg/L (No effects up to the limit of solubility)

Invertebrate (Daphnia magna) 48-hour EC50 > 1.4 mg/L (No effects up to the limit of solubility)

Green Algae 96 hour EC50 = 0.025 mg/L Bobwhite Quail Acute LD50 > 2000 mg/kg body weight (practically non-toxic)

Mallard Duck Acute LD50 > 2000 mg/kg body weight (practically non toxic)

Sub-Acute Dietary Bird LD50 > 5000 ppm in diet for both Quail and Mallard

Bee contact > 100 ug/bee (practically non-toxic)

Persistence / Degradability:

Cyazofamid degrades rapidly in soil (maximum DT50 < 6 days at 20°C, DT90 < 40 days in aerobic soils).





In a water/sediment study, cyazofamid degraded rapidly, with an average DT50 in the water phase of about 6.1 days and a DT90 for the system of 13.6 days.

Bioaccumulative Potential:

Tests with rainbow trout show that cyazofamid biodegrades extensively and demonstrates a very low potential for bioaccumulation in fish.

Mobility in Soil:

Cyazofamid and its metabolites have low mobility in soil.

DISPOSAL CONSIDERATIONS:

Waste Disposal:

Pesticide wastes are toxic. Improper disposal of excess pesticide, pesticide spray or rinsate is a violation of Federal law.

If these wastes cannot be disposed of by use according to label instructions, contact your regional pesticide or environmental control agency for guidance.

Container Disposal:

Nonrefillable container. DO NOT reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank.

Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times.

Turn the container over onto its other end and tip it back and forth several times.





Empty rinsate into application equipment or a mix tank or store rinsate for later use or disposal.

Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

(Since triplerinse instructions will vary slightly depending upon the size of the container, refer to the label of your container for specific instructions.)

