



SAFETY DATA SHEET

Arrivo 5 EC

SDS # : FO004309-A
Revision date: 2019-02-12
Format: AP
Version 1

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name Arrivo 5 EC
Product Code(s) FO004309-A
Recommended Use: Insecticide.
Restrictions on Use: Use as recommended by the label.

Manufacturer/Supplier

FMC Corporation
2929 Walnut Street,
Philadelphia,
Pennsylvania 19104
USA
General Information:
Phone: (215) 299-6000
E-Mail: msdsinfo@fmc.com

Importer

FMC VIETNAM COMPANY LIMITED
No. 12 lot B, Thong Nhat Road
Song Than 2 Industrial Zone
Di An Ward, Di An Town
Binh Duong Province
Vietnam
Phone: (+84) 02835207622
Fax: (+84) 02835207763

Emergency telephone

Medical Emergencies:
1 800 / 331-3148 (U.S.A. & Canada)
1 651 / 632-6793 (All Other Countries - Collect)

For leak, fire, spill or accident emergencies, call:
1 800 / 424-9300 (CHEMTREC - U.S.A.)
1 703 / 741-5970 (CHEMTREC - International)
1 703 / 527-3887 (CHEMTREC - Alternate)
1 202 / 483-7616 (CHEMTREC - Alternate International)

Section 2: HAZARDS IDENTIFICATION

GHS Classification

Aspiration toxicity	Category 1
Serious eye damage/eye irritation	Category 2A
STOT - single exposure	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1
Flammable liquids	Category 3

Label Elements



Signal Word

Danger

Hazard Statements

H304 - May be fatal if swallowed and enters airways
 H319 - Causes serious eye irritation
 H335 - May cause respiratory irritation
 H336 - May cause drowsiness or dizziness
 H373 - May cause damage to organs through prolonged or repeated exposure
 H410 - Very toxic to aquatic life with long lasting effects
 H226 - Flammable liquid and vapor

Precautionary Statements - Prevention

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
 P264 - Wash hands thoroughly after handling
 P201 - Obtain special instructions before use
 P202 - Do not handle until all safety precautions have been read and understood
 P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P271 - Use only outdoors or in a well-ventilated area
 P273 - Avoid release to the environment
 P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
 P233 - Keep container tightly closed
 P240 - Ground/bond container and receiving equipment
 P242 - Use only non-sparking tools
 P243 - Take precautionary measures against static discharge
 P280 - Wear eye protection/ face protection

Precautionary Statements - Response

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor
 P331 - Do NOT induce vomiting
 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
 P308 + P313 - If exposed or concerned: Get medical advice/attention
 P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
 P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
 P312 - Call a POISON CENTER or doctor if you feel unwell
 P391 - Collect spillage
 P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
 P370+P378: In case of fire, use foam or carbon dioxide for extinction.

Precautionary Statements - Storage

P405 - Store locked up
 P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
 P403 + P235 - Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

P501 - Dispose of contents/container according to label directions

Other Information

None known.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS-No	Weight %
Cypermethrin	52315-07-8	5.8
Petroleum naphtha, light aromatic	64742-95-6	80-90
Calcium dodecylbenzene sulfonate	26264-06-2	1-5
Oxirane, methyl-, polymer with oxirane, monobutyl ester	9038-95-3	1-5

Section 4: FIRST AID MEASURES

Inhalation	Move to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.
Eye Contact	Flush eyes with water for at least 15 minutes. Get medical attention if eye irritation develops or persists.
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 give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	Central nervous system effects.
Protection of first-aiders	Use personal protective equipment. See Section 8 for more detail.
Indication of immediate medical attention and special treatment needed, if necessary	This product contains aromatic hydrocarbons that can produce a severe pneumonitis if aspirated during vomiting. Treatment is otherwise controlled removal of exposure followed by symptomatic and supportive care.

Section 5: FIRE FIGHTING MEASURES

Explosive properties	Not explosive.
Flammable properties	Flammable liquids.
Suitable Extinguishing Media	Dry chemical, CO ₂ , water spray or alcohol-resistant foam.
Unsuitable extinguishing media	Avoid heavy hose streams.
Specific Hazards Arising from the Chemical	Thermal decomposition can lead to release of irritating gases and vapors, nitrogen oxides (NO _x), hydrogen cyanide, and hydrogen chloride.
Protective equipment and precautions for firefighters	Isolate fire area. Evaluate upwind. As in any fire, wear self-contained breathing apparatus and full protective gear.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions	Isolate and post spill area. Remove all sources of ignition. Wear protective gloves/clothing and eye/face protection. For personal protection see section 8.
Other	For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

Environmental Precautions	Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains. Keep out of waterways.
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 water and soap. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Dispose of waste as indicated in Section 13.

Section 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. Keep/store only in original container.
Materials to avoid	Strong oxidizing agents, Strong acids, Strong bases.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Engineering measures	Apply technical measures to comply with the occupational exposure limits. 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

Respiratory Protection	The product does not automatically present an airborne exposure concern during normal handling. In the event of an accidental discharge of the material which produces a heavy vapour or mist, workers should put on officially approved respiratory protection equipment with a universal filter type including particle filter.
Hand Protection	Wear chemical protective gloves made of materials such as nitrile or neoprene.
Eye/Face Protection	For dust, splash, mist or spray exposure, wear chemical protective goggles.
Skin and Body Protection	Minimize skin contamination by following good industrial hygiene practices. Wear suitable protective clothing. Protective shoes or boots.
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.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Clear Light yellow
Odor	No information available
Color	Light yellow
Odor threshold	No information available
pH	7.06 (5% solution, 342 ppm water)
Melting point/freezing point	Not applicable
Boiling Point/Range	No information available
Flash point	55.5 °C
Evaporation Rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available

Lower flammability limit:	No information available
Vapor pressure	Low vapor pressure.
Vapor density	No information available
Specific gravity	No information available
Water solubility	Emulsifies
Solubility(ies)	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity, kinematic	No information available
Viscosity, dynamic	No information available
Explosive properties	Not explosive
Relative density	No information available
Bulk density	No information available

Section 10: STABILITY AND REACTIVITY

Reactivity	None under normal use conditions
Stability	Stable under recommended storage conditions
Hazardous reactions	None under normal processing.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to Avoid	Heat, flames and sparks.
Incompatible products	Strong oxidizing agents, Strong acids, Strong bases.
Hazardous Decomposition Products	Thermal decomposition can lead to release of irritating gases and vapors: Carbon oxides (COx), Hydrogen cyanide, Chlorine, Hydrogen chloride.

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Numerical measures of toxicity - Product Information

LD50 Oral	> 5000 mg/kg (rat) Estimated
LD50 Dermal	> 5000 mg/kg (rat) Estimated
LC50 Inhalation	No data available for the formulation.
Skin corrosion/irritation	Mildly irritating (rabbit). (Based on a similar product).
Serious eye damage/eye irritation	Moderately irritating (rabbit). (Based on a similar product).
Sensitization	Guinea pig: Non-sensitizing. (based on a similar formulation).

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Mutagenicity	Cypermethrin: Not genotoxic in laboratory studies.
Carcinogenicity	Cypermethrin caused an increase in benign lung tumors in mice, but not in rats. EPA has classified cypermethrin as a possible human carcinogen based on this information, but does not regulate based on its low cancer risk.
Reproductive toxicity	Cypermethrin. No toxicity to reproduction in animal studies.
Developmental toxicity	Cypermethrin: Not teratogenic in animal studies.
STOT - single exposure	May cause drowsiness and dizziness. May cause respiratory irritation.
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure. See listed target organs below.
Chronic toxicity	Cypermethrin. Long-term exposure caused neurotoxicity (body tremors, decreased motor activity), decreased body weight and increased liver and spleen weight.
Target organ effects	Central Nervous System (CNS).
Symptoms	Signs of toxicity in laboratory animals included hypertonicity, ataxia, lethargy, convulsions, gasping, salivation, dyspnea, and alopecia, Large doses of cypermethrin ingested by

laboratory animals produced signs of toxicity including loss of motor control, tremors, decreased activity, urinary incontinence, incoordination, increased sensitivity to sound and convulsions.

Aspiration hazard

This product presents an aspiration pneumonia hazard.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Cypermethrin (52315-07-8)				
Active Ingredient(s)	Duration	Species	Value	Units
	72 h EC50	Algae	> 0.1	mg/L
	21 d NOEC	Crustacea	0.04	µg/L
	21 d NOEC	Fish	0.03	µg/L
	96 h NOEC	Algae	1.3	mg/L
	96 h LC50	Rainbow trout	0.92	µg/L
	48 h EC50	Daphnia magna	1.86	µg/L

Persistence and degradability

Cypermethrin. Moderately persistent. Not readily biodegradable. Does not readily hydrolyze.

Bioaccumulation

Cypermethrin. The substance has a potential for bioconcentration.

Mobility

Cypermethrin: Immobile. Not expected to reach groundwater.

Other Adverse Effects

No information available.

Section 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. Proper personal protective equipment, as described in Sections 7 and 8, must be worn while handling materials for waste disposal.

Contaminated Packaging

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

Section 14: TRANSPORT INFORMATION

IMDG/IMO

UN/ID no	1268
Proper Shipping Name	Petroleum distillates, n.o.s (Naphtha petroleum)
Hazard class	3
Packing Group	III
EmS No.	F-E, S-E
Marine Pollutant	Petroleum Naphtha

ICAO/IATA

UN/ID no	1268
Proper Shipping Name	Petroleum distillates, n.o.s (Naphtha petroleum)
Hazard class	3

Packing Group
 Marine Pollutant

III
 Petroleum Naphtha

Section 15: REGULATORY INFORMATION

International Inventories

A food, food additive, drug, cosmetic, or device, when manufactured, processed or distributed in commerce for use as a food, food additive, drug, cosmetic, or device may not be subject to local notification requirements. Check local regulations for more information.

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Cypermethrin 52315-07-8			X		X	X	X	X
Petroleum naphtha, light aromatic 64742-95-6	X	X	X		X	X	X	X
Oxirane, methyl-, polymer with oxirane, monobutyl ester 9038-95-3	X	X		X	X	X	X	X

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

Section 16: OTHER INFORMATION

Prepared By:

FMC Corporation

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Revision note

Initial Release.

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End of Safety Data Sheet