



## SAFETY DATA SHEET

Arrivo 50EC

SDS #: FO003481-1-A

Revision date: 2021-11-08

Format: AP

Version 3

### Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Arrivo 50EC
Product Code(s)	FO003481-1-A
Synonyms	CYPERMETHRIN (FMC 30980); (RS)- $\alpha$ -cyano-3-phenoxybenzyl (1RS,3RS;1RS,3SR)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate (IUPAC name); cyano(3-phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate (CAS name)
Active Ingredient(s)	Cypermethrin
Chemical Family	Pyrethroid Pesticide
Recommended Use:	Insecticide
Restrictions on Use:	See section 16 for more information.
Manufacturer/Supplier	FMC Corporation 2929 Walnut Street Philadelphia, PA 19104 (215) 299-6000 (General Information) SDS-Info@fmc.com (E-Mail General Information)
Emergency telephone	Medical Emergencies: 0800 140 1447 For leak, fire, spill or accidents: 001-803-017-9114 (CHEMTREC Indonesia) 1 703 741-5970 (CHEMTREC – International)

### Section 2: HAZARDS IDENTIFICATION

#### GHS Classification

Aspiration toxicity	Category 1
Acute toxicity - Oral	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1B
Carcinogenicity	Category 2
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

H301 - Toxic if swallowed  
 H304 - May be fatal if swallowed and enters airways  
 H317 - May cause an allergic skin reaction  
 H318 - Causes serious eye damage  
 H332 - Harmful if inhaled  
 H351 - Suspected of causing cancer  
 H373 - May cause damage to organs through prolonged or repeated exposure  
 H410 - Very toxic to aquatic life with long lasting effects  
 H335 - May cause respiratory irritation  
 H336 - May cause drowsiness or dizziness  
 H226 - Flammable liquid and vapor

#### Precautionary Statements - Prevention

P201 - Obtain special instructions before use  
 P202 - Do not handle until all safety precautions have been read and understood  
 P281 - Use personal protective equipment as required  
 P264 - Wash face, hands and any exposed skin thoroughly after handling  
 P270 - Do not eat, drink or smoke when using this product  
 P271 - Use only outdoors or in a well-ventilated area  
 P272 - Contaminated work clothing should not be allowed out of the workplace  
 P280 - Wear protective gloves  
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
 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  
 P241 - Use explosion-proof equipment  
 P242 - Use only non-sparking tools  
 P243 - Take precautionary measures against static discharge  
 P235 - Keep cool

#### Precautionary Statements - Response

P308 + P313 - If exposed or concerned: Get medical advice/attention  
 P321 - Specific treatment (see .? on this label)  
 P321 - Specific treatment (see supplemental first aid instructions on this label)  
 P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
 P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention  
 P363 - Wash contaminated clothing before reuse  
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P310 - Immediately call a POISON CENTER or doctor  
 P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor  
 P331 - Do NOT induce vomiting

P330 - Rinse mouth  
P370 + P378 - In case of fire: Use CO2, dry chemical, or foam for extinction  
P391 - Collect spillage

**Precautionary Statements - Storage**

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

**Precautionary Statements - Disposal**

P501 - Dispose of contents/container to an approved waste disposal plant

**Other Information**

May be fatal if swallowed and enters airways

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**Synonyms** CYPERMETHRIN (FMC 30980); (RS)- $\alpha$ -cyano-3-phenoxybenzyl  
(1RS,3RS;1RS,3SR)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate (IUPAC name); cyano(3-phenoxyphenyl)methyl  
3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate (CAS name)

Chemical name	CAS-No	Weight %
Cypermethrin	52315-07-8	5.6
Naphtha (petroleum), heavy aromatic	64742-94-5	80-90
Naphthalene*	91-20-3	5-10
1,2,4-Trimethylbenzene	95-63-6	1-5

**Section 4: FIRST AID MEASURES**

<b>Inhalation</b>	Remove person to fresh air. If breathing is difficult or if discomfort occurs and persists, obtain medical attention.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists.
<b>Eye Contact</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate medical attention/advice.
<b>Ingestion</b>	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.
<b>Most important symptoms and effects, both acute and delayed</b>	Central nervous system effects. Allergic skin reactions.

Use personal protective equipment. See Section 8 for more detail.

<b>Indication of immediate medical attention and special treatment needed, if necessary</b>	Contains petroleum distillate. Vomiting may cause aspiration pneumonia. This product contains aromatic hydrocarbons that can produce a severe pneumonitis if aspirated during vomiting. Consideration should be given to gastric lavage with endotracheal tube in place. If large amounts have been ingested, milk, cream, and other digestible fats and oils may increase absorption and so should be avoided. Treatment is otherwise controlled removal of exposure followed by symptomatic and supportive care.
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**Section 5: FIRE FIGHTING MEASURES**

<b>Flammable properties</b>	Moderately combustible. The product may form flammable mixtures with air when heated above the flash point.
<b>Suitable Extinguishing Media</b>	Foam, Dry chemical or CO2. Soft stream or water fog only if necessary. Contain all runoff.
<b>Unsuitable extinguishing media</b>	No information available

<b>Specific Hazards Arising from the Chemical</b>	Keep product and empty container away from heat and sources of ignition.
<b>Hazardous Combustion Products</b>	Thermal decomposition can lead to release of irritating and toxic gases and vapors: Carbon oxides (COx), Hydrogen cyanide, Chlorine, Hydrogen chloride.
<b>Protective equipment and precautions for firefighters</b>	Isolate fire area. Evaluate upwind. Wear self-contained breathing apparatus and protective suit. Do not breathe smoke, vapors or gases generated.

## Section 6: ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Isolate and post spill area. Remove all sources of ignition. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.
<b>Other</b>	For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.
<b>Environmental Precautions</b>	Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains.
<b>Methods for Containment</b>	Dike to confine spill and absorb with non-combustible absorbent such as clay, sand or soil. Vacuum, shovel or pump waste into a drum and label contents for disposal.
<b>Methods for cleaning up</b>	To clean and neutralize a contaminated area, scrub area with a solution of detergent (e.g. commercial product such as SuperSoap™, Tide®, Spic and Span®, or other high pH detergent) and water. Let solution sit for 5 minutes. Use a stiff brush to scrub affected area. Repeat if necessary to remove visible staining. Additional decontamination can be made by applying bleach (Clorox® or equivalent) to affected area. Absorb, as above, any excess liquid and add to the drums of waste already collected. Dispose of waste as indicated in Section 13.

## Section 7: HANDLING AND STORAGE

<b>Handling</b>	Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.
<b>Storage</b>	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.
<b>Materials to avoid</b>	None known

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Limits

Component	China	Japan	Korea	Australia	Taiwan
Naphthalene* 91-20-3 ( 5-10 )	TWA: 50 mg/m <sup>3</sup> STEL: 75 mg/m <sup>3</sup> S* C1 C3	C2B ISHL/ACL: 10 ppm	S* STEL: 15 ppm TWA: 10 ppm	STEL 15 ppm STEL 79 mg/m <sup>3</sup> TWA 10 ppm TWA 52 mg/m <sup>3</sup>	STEL 15 ppm STEL 78 mg/m <sup>3</sup>
1,2,4-Trimethylbenzene 95-63-6 ( 1-5 )		OEL: 25 ppm OEL: 120 mg/m <sup>3</sup>			

<b>Engineering measures</b>	Provide mechanical local exhaust ventilation to prevent release of mist into the work area. If release is expected, use respiratory protection. Ventilate all transport vehicles prior to unloading.
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### Personal protective equipment

<b>Respiratory Protection</b>	For dust, splash, mist or spray exposures wear a elastomeric full-face or half mask respirator with appropriate cartridges and/or filters which is approved for pesticides (U.S. NIOSH/MSHA, EU CEN or comparable certification organization).
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<b>Hand Protection</b>	Wear protective gloves tested to relevant standards (e.g. Europe: EN374, US: F739, AS/NZA: 2161). Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity, and specific local conditions. Always seek advice from glove suppliers. Contaminated gloves should be replaced. For prolonged contact, gloves with at least 0.7 mm in thickness and breakthrough time of more than 480 minutes are recommended. For short-term contact, gloves with at least 0.4 mm in thickness and breakthrough time of more than 30 minutes are recommended. Recommended glove material includes butyl rubber, fluorocarbon rubber, nitrile rubber, chloroprene rubber or neoprene.
<b>Eye/Face Protection</b>	Tightly fitting safety goggles. Face-shield.
<b>Skin and Body Protection</b>	Minimize skin contamination by following good industrial hygiene practices. Wear suitable protective clothing. Protective shoes or boots.
<b>Hygiene measures</b>	Handle in accordance with good industrial hygiene and safety practice.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Liquid
<b>Appearance</b>	Amber Liquid
<b>Odor</b>	Aromatic Solvent
<b>Color</b>	Amber
<b>Odor threshold</b>	No information available
<b>pH</b>	No information available
<b>Melting point/freezing point</b>	No information available
<b>Boiling Point/Range</b>	No information available
<b>Flash point</b>	43.3 °C / °F Tag Closed Cup
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid, gas)</b>	No information available
<b>Flammability Limit in Air</b>	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
<b>Vapor pressure</b>	No information available
<b>Vapor density</b>	No information available
<b>Specific gravity</b>	0.8932
<b>Water solubility</b>	Emulsifies
<b>Solubility(ies)</b>	No information available
<b>Partition coefficient</b>	No information available
<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Viscosity, kinematic</b>	No information available
<b>Viscosity, dynamic</b>	No information available
<b>Molecular weight</b>	416.3 (cypermethrin)
<b>Relative density</b>	No information available
<b>Bulk density</b>	7.41 lb/gal
<b>K<sub>st</sub></b>	>0 bar m/s

## Section 10: STABILITY AND REACTIVITY

<b>Reactivity</b>	Not applicable
<b>Stability</b>	Stable under recommended storage conditions
<b>Hazardous reactions</b>	None under normal processing.
<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.
<b>Conditions to Avoid</b>	Heat, flames and sparks.
<b>Incompatible products</b>	No information available.

**Hazardous Decomposition Products** Thermal decomposition can lead to release of irritating and toxic gases and vapors: Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Hydrogen cyanide, Chlorine, Hydrogen chloride,

## Section 11: TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Numerical measures of toxicity - Product Information

LD50 Oral 137 mg/kg (rat)  
 LD50 Dermal > 2,000 mg/kg (rabbit)  
 LC50 Inhalation (dust) 2.18 mg/L 4 hr (rat)

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation (vapor)
Calcium dodecylbenzene sulfonate (26264-06-2)	1300 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	
Naphtha (petroleum), heavy aromatic (64742-94-5)	300-2000 mg/kg	> 2 mL/kg ( Nyúl )	>5,2 mg/L
Isobutyl alcohol (78-83-1)	2500 mg/kg ( Rat )	2500 mg/kg ( Rat )	> 6.5 mg/L ( Rat ) 4 h
Naphthalene* (91-20-3)	= 1110 mg/kg ( Rat ) = 490 mg/kg ( Rat )	= 1120 mg/kg ( Rabbit ) > 20 g/kg ( Rabbit )	> 340 mg/m <sup>3</sup> ( Rat ) 1 h
1,2,4-Trimethylbenzene (95-63-6)	= 3280 mg/kg ( Rat )	> 3160 mg/kg ( Rabbit )	= 18 g/m <sup>3</sup> ( Rat ) 4 h

**Skin corrosion/irritation** Non-irritating.  
**Serious eye damage/eye irritation** Moderately irritating (rabbit).  
**Sensitization** May cause sensitization by skin contact.

#### 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 respiratory irritation. See listed target organs below.  
**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** Cypermethrin: Central Nervous System.  
**Neurological effects** Cypermethrin: Cause clinical signs of neurotoxicity (body tremors, decreased motor activity and impaired gait) following acute, subchronic or chronic exposure.  
**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** Potential for aspiration if swallowed. May be fatal if swallowed and enters airways.

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

## Section 12: ECOLOGICAL INFORMATION

### Ecotoxicity

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

Very toxic to aquatic life with long lasting effects.

<b>Cypermethrin (52315-07-8)</b>				
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

<b>Persistence and degradability</b>	Cypermethrin: Moderately persistent. Does not readily hydrolyze. Not readily biodegradable.
<b>Bioaccumulation</b>	Cypermethrin: The substance has a potential for bioconcentration.
<b>Mobility</b>	Cypermethrin: Immobile; Not expected to reach groundwater.
<b>Other Adverse Effects</b>	No information available.

### Section 13: DISPOSAL CONSIDERATIONS

<b>Waste disposal methods</b>	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.
<b>Contaminated containers and packages</b>	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	UN3351
Proper Shipping Name	Pyrethroid pesticide, liquid, toxic, flammable (Cypermethrin)
Hazard class	6.1
Subsidiary Hazard Class	3
Packing Group	III
EmS No.	F-E, S-D
Environmental Hazards	Cypermethrin

#### ICAO/IATA

UN/ID no	UN3351
Proper Shipping Name	Pyrethroid pesticide, liquid, toxic, flammable (Cypermethrin)
Hazard class	6.1
Subsidiary Hazard Class	3
Packing Group	III
Environmental Hazards	Cypermethrin

### 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
Naphtha (petroleum), heavy aromatic 64742-94-5	X	X	X		X	X	X	X
Naphthalene* 91-20-3	X	X	X	X	X	X	X	X
1,2,4-Trimethylbenzene 95-63-6	X	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** SDS sections updated.

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**End of Safety Data Sheet**