

# Tempo<sup>®</sup> 20 WP

9.5-Gram Packets

## Insecticide In Packets

For Commercial Use Only.

For broad-spectrum control of crawling, flying, and wood destroying insect pests for indoor and outdoor surfaces

### ACTIVE INGREDIENT:

Cyfluthrin,  
cyano(4-fluoro-3-phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)- 2,2-dimethylcyclopropane-carboxylate..... 20%

INERT INGREDIENTS:..... 80%  
100%

EPA Reg. No. 3125-377

Twenty-Four 9.5-Gram Packets Per Carton  
Twelve Cartons Per Cases

**STOP - Read the label before use.  
Keep out of reach of children.**

## CAUTION

PRECAUCION AL USUARIO: Si usted no puede leer o entender inglés, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

(TO THE USER: If you cannot read or understand English, do not use this product until the label has been fully explained to you.)

### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Causes moderate eye irritation. Harmful if swallowed inhaled or absorbed through the skin. Do not get into eyes, on skin, or on clothing. Avoid breathing dust or spray mist. If clothing becomes contaminated, remove and wash before reuse. Wash hands thoroughly with soap and warm water after handling. Wear safety glasses, goggles or face shield when handling the undiluted material and wear a respirator when making general surface overhead treatment.

Keep out of reach of children. Do not allow children or pets to contact treated surfaces until surfaces are dry.

Do not contaminate feed or food.

### SYMPTOMS OF POISONING

**In case of poisoning,** call physician or Poison Control Center immediately. Have patient lie down and remain quiet.

### STATEMENTS OF PRACTICAL TREATMENT

**If in eyes:** Hold eyelids open and flush with plenty of water. Call a physician if irritation persists. **If swallowed:** Call a physician or Poison Control Center. Administer water freely and induce vomiting by giving one dose (1/2 oz or 15 mL) of syrup of ipecac. If vomiting does not occur within 10 to 20 minutes, administer second dose. If syrup of ipecac is not

available, induce vomiting by sticking finger down throat. Repeat until vomit fluid is clear. Never give anything by mouth to an unconscious person. Avoid alcohol. **If on skin:** Wash thoroughly with soap and water. Get medical attention if irritation occurs. **If inhaled:** Move victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

**To Physician:** No specific antidote is available. Treat the patient symptomatically.

### ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and aquatic invertebrates. Remove from premises or tightly cover fish tanks and disconnect aerators when applying indoors where such containers are present. For terrestrial uses, 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 apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash waters. Apply this product only as specified on this label.

This pesticide is highly toxic to bees exposed to direct treatment or residues on crops or weeds. Do not apply TEMPO 20 WP insecticide or allow it to drift onto crops or weeds on which bees are actively foraging. Additional information may be obtained by consulting your Cooperative Extension Service.

### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

**IMPORTANT:** Read these entire **Directions for Use** and **Conditions of Sale** before using TEMPO 20 WP Insecticide.

**CONDITIONS OF SALE:** THE DIRECTIONS ON THIS LABEL WERE DETERMINED THROUGH RESEARCH TO BE APPROPRIATE FOR THE CORRECT USE OF THIS PRODUCT. THIS PRODUCT HAS BEEN TESTED UNDER DIFFERENT ENVIRONMENTAL CONDITIONS BOTH INDOORS AND OUTDOORS SIMILAR TO THOSE THAT ARE ORDINARY AND CUSTOMARY WHERE THE PRODUCT IS TO BE USED. INSUFFICIENT CONTROL OF PESTS OR PLANT INJURY MAY RESULT FROM THE OCCURRENCE OF EXTRAORDINARY OR UNUSUAL CONDITIONS, OR FROM FAILURE TO FOLLOW LABEL DIRECTIONS. IN ADDITION, FAILURE TO FOLLOW LABEL DIRECTIONS MAY CAUSE INJURY TO ANIMALS, MAN, AND DAMAGE TO THE ENVIRONMENT. BAYER OFFERS, AND THE BUYER ACCEPTS AND USES, THIS PRODUCT SUBJECT TO THE CONDITIONS THAT EXTRAORDINARY OR UNUSUAL ENVIRONMENTAL CONDITIONS, OR FAILURE TO FOLLOW LABEL DIRECTIONS ARE BEYOND THE CONTROL OF BAYER AND ARE, THEREFORE, THE RESPONSIBILITY OF THE BUYER.

**Do not formulate this product into other end-use products.**

**GENERAL INFORMATION**

TEMPO 20 WP Insecticide contains 20% active ingredient, which will provide effective knockdown and residual control of the pests listed in this label.

**One (1) packet contains 9.5 grams of TEMPO 20 WP.**

TEMPO 20 WP is intended for use as a general surface, spot, or crack and crevice application in and around buildings and structures and their immediate surroundings and on various modes of transport. Permitted areas of use include, **but are not limited to**, apartment buildings, bakeries, bottling facilities, breweries, cafeterias, candy plants, cereal processing and manufacturing plants, correctional facilities, dairies and dairy product processing plants, frozen food plants, grain mills, granaries, greenhouses, hospitals, hotels, houses, industrial buildings, kitchens, laboratories, livestock housing structures, pet kennels, manufacturing establishments, mausoleums, poultry houses, meat, poultry and egg processing and packing plants, meat and produce canneries, nursing homes, pickle factories, restaurants, schools, spice plants, stores, warehouses, wineries and similar structures as well as aircraft, buses, trucks, trailers, rail cars, and marine vessels.

Do not use in aircraft cabins.

Hospital and/or nursing home patients must be removed from their rooms while treatment is being applied and must not be allowed to return until all treated surfaces have dried. School classrooms must be treated only when students are not present, and all treated surfaces must be dry before the students are allowed to return.

TEMPO 20 WP is intended to be mixed with water and applied with hand pressurized or power operated sprayers. Spray pressure should not exceed 50 PSI at the nozzle tip when used indoors. Add the appropriate amount of product when filling sprayer tank with water, shake or agitate as necessary to mix. Diluted spray mixture can be stored overnight and applied the following day; however, mixture should be agitated prior to application to prevent uneven distribution of product. Before leaving spray mixture unagitated for an extended period of time, release tank pressure and elevate nozzle and hose above tank outlet, activate trigger and drain all suspension from hose back into spray tank. Re-tighten spray tank lid and do not re-pressurize until starting spray again.

TEMPO 20 WP will not stain or cause damage to any painted or varnished household surface, plastic, fabric or other surface where water applied alone causes no damage.

**TANK MIXING:** The user, at his discretion, can tank mix pesticides currently registered for similar use patterns, unless the product labels specifically prohibit such use. See Extended Cockroach Control with Insect Growth Regulators. It is always recommended that a small jar compatibility test using proper proportions of chemicals and water be run to check for physical compatibility prior to tank mixing.

**GENERAL SURFACE APPLICATION**

**Use one (1) packet of TEMPO 20 WP per 1,000 sq ft (see Note 1) in sufficient water to adequately cover the area being treated, but which will not allow dripping or run-off to occur (see Note 2).** Use a low pressure system with a fan type nozzle to uniformly apply the suspension. Applications can be made to walls, floors, ceilings, in and around cupboards, between, behind and beneath equipment,

appliances, around floor drains, window and door frames, and on the underside of shelves, drawers and in similar areas. Applications may be made to floor surfaces along

walls and around air ducts, however, do not treat entire area of floor or floor coverings. In the home, all food processing surfaces and utensils should be covered or thoroughly washed following treatment. Cover exposed food or remove from area being treated. Re-application can be made at 10-day intervals, if necessary. Do not apply where electrical short circuits could occur. Use a dust or dry bait in these areas. It is recommended to wear safety glasses, goggles or face shield and a respirator when making a general surface treatment to overhead areas.

**Note 1:** Under conditions of severe pest infestation or when quicker knock-down and/or longer residual control is needed, use two (2) packets of TEMPO 20 WP per 1,000 sq ft.

**Note 2: Volume of Water Sprays Applied To A Vertical Surface to Attain Appropriate Coverage**

Type of Surface	Quarts/ 1000 Sq Ft	Gallons/ 1000 Sq Ft
Ceramic tile (glazed)	0.75	0.2
Stainless steel	0.75	0.2
Latex painted plywood (semigloss)	4.0	1.0
Masonite (smooth)	6.3	1.5
Unpainted plywood	11.0	2.7
Unpainted particle board	11.7	3.0
Cement block (semigloss latex)	12.5	3.2
Cement block (unfinished)	145.5	36.3

**SPOT, OR CRACK AND CREVICE APPLICATIONS**

**Mix one (1) packet of TEMPO 20 WP in 1 gallon of water to make a 0.05% active ingredient concentration (see Note 3).** Use a low pressure system with a pin-point or variable pattern nozzle to apply the suspension in specific areas such as: cracks and crevices in or behind baseboards, in floors, walls, expansion joints, areas around water and sewer pipes, wall voids, or voids in table legs and equipment where pests can hide as well as other similar areas. Spot treatments may also be made to areas **including but not limited to** storage areas, closets, doors and windows, behind

and under refrigerators, cabinets, sinks, stoves and other equipment, the underside of shelves, drawers and similar areas. TEMPO 20 WP can be reapplied at 10-day intervals, if necessary. Do not apply where electrical short circuits could occur. Use a dust or dry bait in these areas.

**Note 3:** Under conditions of severe pest infestation or when quicker knock-down and/or longer residual control is needed, mix two (2) packets of TEMPO 20 WP in one gallon of water to make a 0.1% active ingredient concentration.

## EXTENDED COCKROACH CONTROL WITH INSECT GROWTH REGULATORS

Use TEMPO 20 WP in a tank mix combination with an Insect Growth Regulator (IGR) for extended control of American, Asian, German, oriental, brown-banded, smoky brown and other species of cockroaches. Use in food areas of food handling establishments only if all products in tank mix are registered for such use.

Make applications in accordance with those label instructions which are the same for each product. Prepare the tank mix using the recommended rate of TEMPO 20 WP and the IGR of choice by adding the TEMPO 20 WP first and making sure it is well mixed and in suspension, then adding the correct amount of IGR according to its label instructions. Follow all label instructions for use patterns and spray intervals from the IGR label to achieve maximum benefit.

Refer to the appropriate sections of the label for TEMPO 20 WP and the label for the IGR of choice for additional precautions, restrictions, limitations, and application information.

## FOOD/FEED HANDLING ESTABLISHMENT APPLICATIONS

TEMPO 20 WP applications are permitted in both food/feed and non-food areas of food/feed handling establishments as a general surface, spot, or crack and crevice treatment. Food/feed handling establishments are defined as places other than private residences in which exposed food/feed is held, processed, prepared or served. Included also are areas for receiving, storing, packing (canning, bottling, wrapping, boxing), preparing, edible waste storage and enclosed processing systems (mills, dairies, edible oils, syrups) of food. Serving areas where food is exposed and the facility is in operation are also considered food areas.

TEMPO 20 WP is authorized by the USDA for use in federally inspected meat and poultry plants. This product is acceptable for use in edible product areas of official establishments operating under the Federal meat, poultry, shell egg grading, and egg products inspection programs, as a crack and crevice treatment.

**General Surface Application:** Do not apply as a general surface application in the food handling areas of the facility, when the facility is in operation or foods are exposed. Do not apply directly to food products. Cover or remove all food processing and/or handling equipment during application. After application in food processing plants, bakeries, cafeterias and similar facilities, wash all equipment, benches, shelving and other surfaces which food will contact. Clean food handling or processing equipment and thoroughly rinse with clean, fresh water.

**Spot, Crack and Crevice Application:** Spot or crack and crevice applications cannot be made in food areas while the facility is in operation. Food should be covered or removed from area being treated. Do not apply directly to food or food-handling surfaces.

## INDOOR PEST CONTROL

### CRAWLING INSECT PEST CONTROL:

For **general household pests** and **occasional invaders** make applications in a manner as previously described under General Surface, Spot, or Crack and Crevice Application. Particular attention should be given to treating entry points and harborage areas.

For **pantry pest control** of exposed adult and immature stages of insects, make application to cupboards, shelving and storage areas. Particular attention should be given to treating cracks and crevices and other harborage areas. Remove all utensils, uncovered foodstuffs (or any with package opened), shelf paper and other objects before spraying. Allow treated surfaces to dry and cover shelves with clean paper before replacing any utensils, foodstuff or other items. Any foodstuff accidentally contaminated with spray solution should be discarded.

For **stored product pest control** of exposed adult and immature stages of insect pests, apply to cracks, crevices, and other surfaces where the pests have been seen or has harborage. Treat warehouses, production facilities, storage areas, rail cars, truck beds and other areas where products are stored before filling with the product. TEMPO 20 WP may be used by pest control operators and grain producers to treat grain storage facilities and other areas noted above for stored product pest control. Cleaning of all areas prior to use of TEMPO 20 WP will increase levels of control. Any foodstuffs infested with pests should be removed and destroyed.

For **premise pest control** make application to rugs, carpeting beneath furniture, in closets and storage areas where these pests normally feed or hide. Do not apply to entire floor area. Applications to furniture should be

restricted to those areas where no prolonged contact by humans will occur. Avoid contact with treated surfaces until dry. Remove or tightly cover fish tanks and disconnect aerators during application. Pets should be removed from the area being treated during application and until treated surfaces are completely dry.

For **aircraft pest control** apply to cracks, crevices and other surfaces where the pests have been seen or have harborage. Applications can be made to carpet and upholstered surfaces where no prolonged contact by human skin will occur. Applications should not be made when passengers or non-essential personnel are present in the immediate or treated area. All surfaces should be dry prior to re-entry by passengers or other personnel.

For **use by pest control operators or livestock producers in livestock housing structures (including poultry houses) and pet kennels** to control crawling and flying insect pests. Apply as a general surface and/or a crack and crevice spray. Control will be enhanced when facilities are cleaned and interior applications are supplemented with exterior perimeter treatments. Do not make interior applications of TEMPO 20 WP in areas of facility where animals are present. Do not make applications to animal feedstuffs or watering equipment.

### FLYING INSECT PEST CONTROL (General Surface Spray)

For **control of flying insects indoors** make application to surfaces as directed under Directions For Use, where the pests collect or rest. **Do not apply as a "space spray" application.**

## OUTDOOR PEST CONTROL

For control of **flying insects outdoors** use a 0.05% to 0.1% suspension and make applications to outside surfaces of buildings, porches, patios, garages and other areas where these pests have been seen or found. Use a 0.1% suspension and make pin stream applications directly to the nests of wasps, yellow-jackets and hornets.

For **perimeter pest control**, make a general surface application to outside surfaces of buildings, porches, patios, garages and other adjacent areas where pests have been seen or found. To help prevent infestations of buildings by occasional invaders, treat soil, turf or other substrates adjacent to buildings, the building foundation, walls, around doors and windows, soffit areas where these pests are active and may find entrance or harborage. Apply a minimum of one (1) packet of TEMPO 20 WP per 1,350 sq ft in sufficient water to provide adequate coverage.

For aid in control of the **imported red fire ant**, use a 0.1% suspension of TEMPO 20 WP and thoroughly drench or inject the entire mound area. Treat all areas of the mound showing activity to provide contact control of the adult fire ants. TEMPO 20 WP will provide contact activity and residual repellency in the active mound.

When using the injection treatment method for control of the imported red fire ant, it is essential that treatment be made to the bottom of the active mound. Apply suspension throughout the downward and upward motion of the injector tool. Multiple injection sites may be needed to ensure complete distribution of the suspension throughout the active mound.

Do not use TEMPO 20 WP to treat fire ant mounds in any food crop production area, pasture or area where food crop production may occur.

## CONTROL OF WOOD INFESTING PESTS

For control of **wood infesting beetles** on surfaces in homes and other structures, apply a 0.1% suspension of TEMPO 20 WP. For treatment of small areas, apply by brushing or spraying the suspension evenly on wood surfaces. For large or overhead areas of homes, apartment buildings, etc. apply as a coarse spray to thoroughly cover the area. Cover all surfaces below the area being sprayed with plastic sheeting or other material which can be disposed of by placing in trash if contamination from dripping occurs. Sprayed surfaces should be avoided until the treated area is completely dry.

For control of **above-ground termites and wood-infesting beetles** in localized areas, apply a 0.1% suspension of TEMPO 20 WP to voids and galleries in damaged wood, and in spaces between wooden structural members and between the sill plate and foundation where wood is vulnerable. Applications may be made to inaccessible areas by drilling, and then injecting the suspension with a suitable directional injector into the damaged wood or wall voids. Termite carton nests in building voids may be injected with 0.1% suspension using a pointed injection tool. Multiple injection points to varying depths may be necessary. It is desirable to physically remove carton nest material from building voids when such nests are found. Application to attics, crawl spaces, unfinished basements, or man-made voids may be made with a coarse fan spray of 0.1% suspension to control exposed worker and winged reproductive forms of termites. This type of application is intended to be a supplemental

treatment for control of drywood and above-ground subterranean termites and other wood-infesting insects. For control of **swarming or reproductive stages of termites**, apply a 0.1% suspension to the swarm or area on which they collect.

For control of **above-ground termites** inside trees, utility poles, fencing and decking materials and similar structural members, drill to find the interior infested cavity and inject 0.1% suspension using an appropriate treatment tool with a splashback guard.

Termite carton nests in trees may be injected with 0.1% suspension using a pointed injection tool. Multiple injection points to varying depths may be necessary. It is desirable to physically remove carton nest material from trees when such nests are found.

For protection of **firewood from carpenter ants and termites**, treat soil beneath firewood prior to stacking with a 0.1% suspension at 1 gallon per 8 square feet to prevent carpenter ant or termite infestation.

For control of **carpenter ants** in houses and other structures, use a 0.1% suspension and apply as a general surface, spot, crack and crevice or wall void application. Repeat treatments when necessary. Apply around doors and windows and other places where carpenter ants may enter the premises. Spray into cracks and crevices or through small drilled holes into voids where these ants or their nests are present. Use a sufficient amount of coarse spray to cover the area. Do not exceed 1 gallon of dilute suspension per 1000 square feet of treated surface.

For control of **carpenter ants** inside trees, utility poles, fencing and decking materials and similar structural members, drill to find the interior infested cavity and inject 0.1% suspension using an appropriate treatment tool with a splashback guard. Retreat as needed.

For control of **tunneling carpenter ants in soil**, apply a 0.1% suspension as a drench or inject the suspension at intervals of 8 to 12 inches, using 1 quart of the suspension per linear foot. Establish a uniform vertical barrier at the edge of walls, driveways or other hard surfaces where ants are tunneling beneath the surfaces.

For control of **carpenter bees in structures**, use a 0.1% suspension and spray the liquid directly into gallery entrance holes. Following treatment, the entrance holes may be left open 24 hours to be certain that returning adult bees are killed. When there is no activity, the hole may be sealed with a suitable sealant.

# Tempo® 20 WP Packets

PESTS CONTROLLED BY TEMPO*		
I. INDOOR PREMISE PESTS		
<b>1. Crawling Pests</b> Ants (except Pharaoh) Bedbugs Carpet beetles Centipedes Cockroaches American Asian German Oriental brown-banded smoky brown Crickets Darkling beetles Earwigs Firebrats Millipedes Pillbugs Silverfish Sowbugs Spiders	<b>2. Flying Pests</b> Clothes moths Flies Gnats Midges Mosquitoes Moths Wasps Yellow jackets	<b>3. Pantry &amp; Stored Product Pests</b> Beetles (exposed adults & immature stages) Cadelle Cigarette Confused Flour Dermestid Drug-store Granary weevil Hide Larder Leather Lesser grain borer Lesser mealworm Merchant grain Mealworm Red flour Rice weevil Sawtoothed grain Warehouse Moths Indian meal Mediterranean flour
<b>(continued in next column)</b>		

PESTS CONTROLLED BY TEMPO* (continued)		
II. FOOD PROCESSING PESTS		
(Same crawling & flying pests, pantry & stored product pests as for INDOOR PREMISE) and Fruitflies, Phoridflies and Sciaridflies		
III. WOOD INFESTING PESTS		
Beetles Ambrosia Deathwatch False powderpost Old house borer Powderpost	Carpenter ants Carpenter bees	Termites Subterranean Formosan Drywood
IV. OUTDOOR /PERIMETER PESTS		
Ants Bees Boxelder bugs Carpenter ants Cecidflies Centipedes Clusterflies Cockroaches Crickets Elm leaf beetle	Fire ants Firebrats Flies Fleas Gnats Ground beetles Hornets Imported red fire ants Midges	Millipedes Mosquitoes Moths Scorpions Silverfish Spiders Ticks Wasps Yellow jackets
<p>* For GENERAL SURFACE APPLICATION, use one (1) packet of TEMPO 20 WP per 1,000 square feet in sufficient water to adequately cover the area being treated. Under conditions of severe pest infestation or when quicker knockdown and/or longer residual control is needed, use two (2) packets of TEMPO 20 WP per 1,000 sq. ft.</p> <p>For SPOT, OR CRACK AND CREVICE APPLICATIONS, mix one (1) packet of TEMPO 20 WP in one gallon of water to make a 0.05% active ingredient concentration. Under conditions of severe pest infestation or when quicker knockdown and/or longer residual control is needed, mix two (2) packets of TEMPO 20 WP in one gallon of water to make a 0.1% active ingredient concentration.</p>		

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. **Not For Storage In or Around the House**

**Pesticide Storage:** Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original containers and out of the reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If the container is leaking or material spilled for any reason or cause, carefully sweep material into a pile. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Dispose of pesticide as directed below. In spill or leak incidents, keep unauthorized people away. You may contact the Bayer Emergency Response Team for decontamination procedures or any other assistance that may be necessary. The Bayer Kansas City Emergency Response Telephone Number is 800-414-0244 or contact Chemtrec at 800-424-9300.

**Pesticide Disposal:** Pesticide wastes are hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**Container Disposal:** Do not use container in connection with food, feed, or drinking water. Completely empty packets into application equipment. Wrap empty packets in several layers of newspaper and discard in trash.

**M-8942-1 4/22/94**

Bayer Corporation  
Professional Care  
Box 4913  
Kansas City, MO 64120-0013  
(800) 842-8020  
<http://bayerprocentral.com>  
TE 0237 GPC Printed in U.S.A.

### IMPORTANT

Before using this product, read and carefully observe the directions, cautionary statements and other information appearing on the product packaging label. This product is sold subject to the Conditions of Sale set forth on the container label.





# MATERIAL SAFETY DATA SHEET

**BAYER CORPORATION**  
**AGRICULTURE DIVISION**  
P.O. Box 4913 Hawthorn Road  
Kansas City, MO 64120-001

### TRANSPORTATION EMERGENCY:

CALL CHEMTREC: (800) 424-9300  
DISTRICT OF COLUMBIA: (202) 483-7616

### NON-TRANSPORTATION:

BAYER EMERGENCY PHONE: (800) 414-0244  
BAYER INFORMATION PHONE: (800) 842-8020

### 1. CHEMICAL PRODUCT IDENTIFICATION:

**PRODUCT NAME:** TEMPO 20% Wettable Powder  
**PRODUCT CODE:** 21642  
**CHEMICAL FAMILY:** Pyrethroid Insecticide  
**CHEMICAL NAME:** Cyano(4-fluoro-3-phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate  
**SYNONYMS:** Cyfluthrin  
**FORMULA:** C22 H18 Cl2, F N O3

### 2. COMPOSITION/INFORMATION ON INGREDIENTS:

INGREDIENT NAME	EXPOSURE LIMITS	CONCENTRATION (%)
***** HAZARDOUS INGREDIENTS *****		
<b>TEMPO (cyfluthrin)</b>		20 %
68359-37-5	OSHA : Not Established ACGIH: Not Established	
<b>Ingredient 1968</b>		1-5 %
Specific chemical identity is withheld as a trade secret.		
	OSHA : Not Established ACGIH: Not Established	
<b>Total crystalline silica (quartz)</b>		<1 - 7 %
14808-60-7	OSHA : .10 mg/m3 TWA (respirable) ACGIH: .10 mg/m3 TWA (respirable)	

### 3. HAZARDS IDENTIFICATION:

#### EMERGENCY OVERVIEW CAUTION!

**Color:** Tan      **Form:** Solid; Powder      **Odor:** Slightly aromatic  
Harmful if inhaled; Harmful if absorbed through skin; Causes eye irritation;  
Harmful if swallowed.

#### POTENTIAL HEALTH EFFECTS:

**ROUTE(S) OF ENTRY:** Inhalation; Skin Contact; Skin Absorption; Eye Contact

#### HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE:

**ACUTE EFFECTS OF EXPOSURE:** Mild eye or skin irritation may occur from contact with the powder or spray mixture. Paresthesia (a tingling or burning sensation on the surface of the skin) may also result from skin contact. This is a frequently reported symptom associated with sufficient dermal exposure to alpha-cyano (Type II) synthetic pyrethroids and normally subsides without treatment within 24 hours. The onset of these symptoms usually occurs 2-12 hours after exposure. Mucous membrane irritation involving the nose, throat and upper respiratory tract may occur from inhalation of aerosols during end use of the product such as during a spray application.

### HAZARDS IDENTIFICATION continued:

**CHRONIC EFFECTS OF EXPOSURE:** Based on animal studies, no adverse effects or symptoms would be expected from chronic exposure to the active ingredient in this product during normal use. This product may contain an amount of total crystalline silica which ranges from less than 1% to approximately 7%. However, the amount of respirable crystalline silica is expected to be significantly lower based on data provided by the raw material manufacturer. Excessive long-term exposure to respirable crystalline silica may cause silicosis, a form of progressive pulmonary fibrosis. Severe and permanent lung damage may result.

**CARCINOGENICITY:** This product is not listed as a carcinogen by NTP or IARC, or regulated as a carcinogen by OSHA. However, it may contain crystalline silica (quartz), a substance which is classified by NTP as a Group 2 carcinogen and by IARC as a Group 1 carcinogen. Crystalline silica is a naturally-occurring mineral component of many sands and clays. Although controversial, the carcinogenic potential of crystalline silica must be considered if it is inhaled under excessive exposure conditions. However, the respirable portion of the silica which may be contained in this product is small, such that excessive inhalation exposure during normal conditions of use is unlikely.

**NTP:** Crystalline silica is classified as an NTP Anticipated Human Carcinogen - "Substances or groups of substances that may reasonably be anticipated to be carcinogens."

**IARC:** IARC has classified crystalline silica as a Group 1 carcinogen. "There is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica (quartz) from occupational sources."

**OSHA:** Not regulated

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** No specific medical conditions are known which may be aggravated by exposure to the active ingredient in this product. As with all materials which can cause upper respiratory tract irritation, persons with a history of asthma, emphysema, or hyperreactive airways disease may be more susceptible to a response at low concentration. In addition, pulmonary and respiratory diseases may be aggravated by exposure to respirable crystalline silica.

### 4. FIRST AID MEASURES:

**FIRST AID FOR EYES:** Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

**FIRST AID FOR SKIN:** Wash skin immediately with soap and warm water. Get medical attention if irritation persists.

**FIRST AID FOR INHALATION:** If a person is overcome by excessive exposures to dusts or aerosols of this material, remove to fresh air or uncontaminated area. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention as soon as possible.

**FIRST AID FOR INGESTION:** If ingestion is suspected, call a physician or poison control center. Drink one or two glasses of water and induce vomiting by touching back of throat with finger, or, if available, by administering syrup of ipecac. If syrup of ipecac is available, administer 1 tablespoonful (15 mL) of syrup of ipecac followed by 1 to 2 glasses of water. If vomiting does not occur within 20 minutes, repeat the dose once. Do not induce vomiting or give anything by mouth to an unconscious person.



# MATERIAL SAFETY DATA SHEET

**BAYER CORPORATION**  
**AGRICULTURE DIVISION**  
P.O. Box 4913 Hawthorn Road  
Kansas City, MO 64120-001

### TRANSPORTATION EMERGENCY:

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DISTRICT OF COLUMBIA: (202) 483-7616

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BAYER INFORMATION PHONE: (800) 842-8020

<b>1. CHEMICAL PRODUCT IDENTIFICATION:</b>	
<b>PRODUCT NAME:</b>	TEMPO 20% Wettable Powder
<b>PRODUCT CODE:</b>	21642
<b>CHEMICAL FAMILY:</b>	Pyrethroid Insecticide
<b>CHEMICAL NAME:</b>	Cyano(4-fluoro-3-phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate
<b>SYNONYMS:</b>	Cyfluthrin
<b>FORMULA:</b>	C22 H18 Cl2, F N O3

<b>2. COMPOSITION/INFORMATION ON INGREDIENTS:</b>			
INGREDIENT NAME			
/CAS NUMBER	EXPOSURE LIMITS	CONCENTRATION (%)	
***** HAZARDOUS INGREDIENTS *****			
<b>TEMPO (cyfluthrin)</b>		20 %	
68359-37-5	OSHA : Not Established ACGIH: Not Established		
<b>Ingredient 1968</b>		1-5 %	
Specific chemical identity is withheld as a trade secret.			
	OSHA : Not Established ACGIH: Not Established		
<b>Total crystalline silica (quartz)</b>		<1 - 7 %	
14808-60-7	OSHA : .10 mg/m3 TWA (respirable) ACGIH: .10 mg/m3 TWA (respirable)		

<b>3. HAZARDS IDENTIFICATION:</b>		
<b>EMERGENCY OVERVIEW CAUTION!</b>		
<b>Color:</b> Tan	<b>Form:</b> Solid; Powder	<b>Odor:</b> Slightly aromatic
Harmful if inhaled; Harmful if absorbed through skin; Causes eye irritation; Harmful if swallowed.		
<b>POTENTIAL HEALTH EFFECTS:</b>		
<b>ROUTE(S) OF ENTRY:</b> Inhalation; Skin Contact; Skin Absorption; Eye Contact		
<b>HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE:</b>		
<b>ACUTE EFFECTS OF EXPOSURE:</b> Mild eye or skin irritation may occur from contact with the powder or spray mixture. Paresthesia (a tingling or burning sensation on the surface of the skin) may also result from skin contact. This is a frequently reported symptom associated with sufficient dermal exposure to alpha-cyano (Type II) synthetic pyrethroids and normally subsides without treatment within 24 hours. The onset of these symptoms usually occurs 2-12 hours after exposure. Mucous membrane irritation involving the nose, throat and upper respiratory tract may occur from inhalation of aerosols during end use of the product such as during a spray application.		

<b>HAZARDS IDENTIFICATION continued:</b>	
<b>CHRONIC EFFECTS OF EXPOSURE:</b> Based on animal studies, no adverse effects or symptoms would be expected from chronic exposure to the active ingredient in this product during normal use. This product may contain an amount of total crystalline silica which ranges from less than 1% to approximately 7%. However, the amount of respirable crystalline silica is expected to be significantly lower based on data provided by the raw material manufacturer. Excessive long-term exposure to respirable crystalline silica may cause silicosis, a form of progressive pulmonary fibrosis. Severe and permanent lung damage may result.	
<b>CARCINOGENICITY:</b> This product is not listed as a carcinogen by NTP or IARC, or regulated as a carcinogen by OSHA. However, it may contain crystalline silica (quartz), a substance which is classified by NTP as a Group 2 carcinogen and by IARC as a Group 1 carcinogen. Crystalline silica is a naturally-occurring mineral component of many sands and clays. Although controversial, the carcinogenic potential of crystalline silica must be considered if it is inhaled under excessive exposure conditions. However, the respirable portion of the silica which may be contained in this product is small, such that excessive inhalation exposure during normal conditions of use is unlikely.	
<b>NTP:</b> Crystalline silica is classified as an NTP Anticipated Human Carcinogen - "Substances or groups of substances that may reasonably be anticipated to be carcinogens."	
<b>IARC:</b> IARC has classified crystalline silica as a Group 1 carcinogen. "There is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica (quartz) from occupational sources."	
<b>OSHA:</b> Not regulated	
<b>MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:</b> No specific medical conditions are known which may be aggravated by exposure to the active ingredient in this product. As with all materials which can cause upper respiratory tract irritation, persons with a history of asthma, emphysema, or hyperreactive airways disease may be more susceptible to a response at low concentration. In addition, pulmonary and respiratory diseases may be aggravated by exposure to respirable crystalline silica.	

<b>4. FIRST AID MEASURES:</b>	
<b>FIRST AID FOR EYES:</b> Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.	
<b>FIRST AID FOR SKIN:</b> Wash skin immediately with soap and warm water. Get medical attention if irritation persists.	
<b>FIRST AID FOR INHALATION:</b> If a person is overcome by excessive exposures to dusts or aerosols of this material, remove to fresh air or uncontaminated area. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention as soon as possible.	
<b>FIRST AID FOR INGESTION:</b> If ingestion is suspected, call a physician or poison control center. Drink one or two glasses of water and induce vomiting by touching back of throat with finger, or, if available, by administering syrup of ipecac. If syrup of ipecac is available, administer 1 tablespoonful (15 mL) of syrup of ipecac followed by 1 to 2 glasses of water. If vomiting does not occur within 20 minutes, repeat the dose once. Do not induce vomiting or give anything by mouth to an unconscious person.	



**TOXICOLOGICAL INFORMATION continued:**

**MUTAGENICITY:**

Numerous in vitro and in vivo mutagenicity studies have been conducted on cyfluthrin, all of which are negative.

**DEVELOPMENTAL TOXICITY:**

In developmental toxicity studies using rats, cyfluthrin was administered during gestation by oral gavage at doses ranging from 1 to 30 mg/kg. The overall NOEL from these studies for maternal toxicity was 3 mg/kg. No developmental effects were observed at any of the doses tested. In each study, the NOEL for developmental toxicity was equivalent to the highest dose tested. The NOELs for developmental toxicity for the initial study and the subsequent study were 30 and 10 mg/kg, respectively. Rabbits were administered cyfluthrin during gestation by oral gavage at doses ranging from 5 to 180 mg/kg. At maternally toxic levels, there was an increased incidence of post-implantation losses. The overall NOEL derived from these studies for both maternal and developmental toxicity was 20 mg/kg. In an inhalation study, rats were exposed during gestation to cyfluthrin at aerosol concentrations of 0.46, 2.55 or 11.9 mg/m<sup>3</sup> for 6 hours/day. NOELs for maternal and developmental toxicity were less than 0.46 and 0.46 mg/m<sup>3</sup>, respectively.

**REPRODUCTION:**

In a reproduction study, cyfluthrin was administered to rats for 3 generations at dietary concentrations of 50, 150 and 450 ppm. Reproductive effects observed at parentally toxic levels included reductions in viability, lactation, litter size, feed consumption, and pup birth weights and body weight gains. Coarse tremors were observed in some offspring at 450 ppm. The NOEL for both parental and reproductive effects was 50 ppm. In another reproduction study, cyfluthrin was administered to rats for 2 generations at dietary concentrations of 50, 125 or 400 ppm. Coarse tremors occurring in conjunction with parental toxicity were observed in the offspring in the mid- and high-dose groups. Based on this finding, the neonatal NOEL was 50 ppm. The NOELs for parental and reproductive toxicity were 50 and 400 ppm, respectively.

**NEUROTOXICITY:**

Numerous neurotoxicity studies have been conducted on cyfluthrin. Oral gavage studies using hens have indicated that at extremely high dose levels (5000 mg/kg), minimal nerve damage occurs. When rats were administered cyfluthrin daily at oral doses of 40 to 80 mg/kg for 14 days, minimal nerve effects were seen. These effects were completely reversible within a 3 month recovery period. In dermal and inhalation studies which are more relevant to field exposure, there was no evidence of delayed neurotoxicity in hens. In a special investigative study, litters of neonatal mice (10 days of age) and their mothers were exposed to cyfluthrin via inhalation (whole body exposure). Mice were exposed to aerosol concentrations of 5, 15, or 50 mg/m<sup>3</sup> for 6.3 hours/day for 7 successive days. Motor activity was measured in th offspring at 4 months of age (approximately 3.5 months post-exposure). At 50 mg/m<sup>3</sup>, all of the offspring died or were sacrificed in a moribund state following the first exposure. Mortalities were not observed at any of the other levels. Clinical symptoms were observed immediately after exposure in young mice at 15 mg/m<sup>3</sup>, and included decreased motility, temporary scratching, and tonic convulsions. There was an increase in motor activity in mice at 15 mg/m<sup>3</sup>. Histopathological investigations did not reveal any treatment-related findings in mice at the age of 4 months.

**12. ECOLOGICAL INFORMATION:**

This material is toxic to fish and highly toxic to bees when exposed to direct treatment or residues. Bayer will provide a summary of specific data upon written request. As with any pesticide, this product should be used according to label directions and should be kept out of streams, lakes and other aquatic habitats of concern. In event of a spill emergency, call 1-800-414-0244.

**13. DISPOSAL CONSIDERATIONS**

**WASTE DISPOSAL METHOD:** Follow all federal, state and local regulations. Bury material in EPA-approved landfill or burn in an incinerator approved for pesticide destruction. Do not reuse container.

**14. TRANSPORTATION INFORMATION:**

**TECHNICAL SHIPPING NAME:** Cyfluthrin  
**FREIGHT CLASS BULK:** Insecticides, NOI - NMFC 102120  
**FREIGHT CLASS PACKAGE:** Insecticides, NOI - NMFC 102120  
**PRODUCT LABEL:** Not Noted  
**DOT (DOMESTIC SURFACE):**  
**HAZARD CLASS OR DIVISION:** Non-Regulated  
**IMO / IMDG CODE (OCEAN):**  
**HAZARD CLASS DIVISION NUMBER:** Non-Regulated  
**ICAO / IATA (AIR):**  
**HAZARD CLASS DIVISION NUMBER:** Non-Regulated

**15. REGULATORY INFORMATION:**

**OSHA STATUS:** This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

**TSCA STATUS:** This product is exempt from TSCA Regulation under FIFRA Section 3 (2)(B)(ii) when used as a pesticide.

**CERCLA REPORTABLE QUANTITY:** No components listed.

**SARA TITLE III:**

**SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES:** No components listed.

**SECTION 311/312 HAZARD CATEGORIES:** Immediate Health Hazard

**SECTION 313 TOXIC CHEMICALS:** Cyfluthrin-CAS# 68359-37-5 (20%)

**RCRA STATUS:** If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24) The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

**COMPONENT NAME**

/CAS NUMBER	CONCENTRATION	STATE CODE
<b>Total crystalline silica (quartz)</b>		
14808-60-7	<1 - 7 %	CA

CA = California Proposition 65

An evaluation of TEMPO 20 WP indicates potential exposure to respirable crystalline silica during normal use poses no significant risk and therefore does not trigger warning requirements as specified under California Proposition 65.

**16. OTHER INFORMATION:****NFPA 704M RATINGS:**

Health: 2      Flammability: 1      Reactivity: 1      Other:  
0=Insignificant   1=Slight      2=Moderate      3=High      4=Extreme

Bayer's method of hazard communication is comprised of Product Labels and Material Safety Data Sheets. NFPA ratings are provided by Bayer as a customer service.

**REASON FOR ISSUE:** Revise Sections 3 (carcinogenicity & IARC statements); 8 (respirator requirements); 11 (update subchronic, chronic, carcinogenicity, reproduction, & neurotoxicity data); 15 (add state regulatory information); revise to ANSI format

**PREPARED BY:** V. C. Standart

**APPROVED BY:** D. C. Eberhart

**TITLE:** Product Safety Manager

**APPROVAL DATE:** 09/07/1999

**SUPERSEDES DATE:** 07/11/1995

**MSDS NUMBER:** 08265

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