

**Syngenta Crop Protection, Inc.**  
**Post Office Box 18300**  
**Greensboro, NC 27419**

**In Case of Emergency, Call**  
**1-800-888-8372**

**1. PRODUCT IDENTIFICATION**

Product Name: **TALON G** Product No.: A10976C  
 EPA Signal Word: Caution  
 Active Ingredient(%): Brodifacoum Technical (0.005%) CAS No.: 56073-10-0  
 Chemical Name: 3-[3-(4'-bromo[1,1'-biphenyl]-4-yl)-1,2,3,4-tetrahydro-1-naphthalenyl]-4-hydroxy-2H-1-benzopyran-2-one  
 Chemical Class: A coumarin-type anticoagulant rodenticide  
 EPA Registration Number(s): 100-1050, 1051, 1052, 1057 (formerly 10182-334, 335, 336, 341) **Section(s) Revised: 2, 3, 4, 5, 6, 8, 12, 13, 14**

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Crystalline Silica, Quartz	10 mg/m <sup>3</sup> /(%SiO <sub>2</sub> +2) (respirable dust)	0.1 mg/m <sup>3</sup> (respirable silica)	Not Established	IARC Group 2A
Kaolin Clay	15 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (respirable dust)	2 mg/m <sup>3</sup> TWA (respirable dust)	10 mg/m <sup>3</sup> TWA (total dust); 5 mg/m <sup>3</sup> TWA (respirable dust)**	No
Cereal Ingredients	Not Established	Not Established	Not Established	No
Green Pigment	Not Established	Not Established	Not Established	No
Brodifacoum Technical (0.005%)	Not Established	Not Established	0.002 mg/m <sup>3</sup> TWA***	No

\*\* recommended by NIOSH

\*\*\* Syngenta Occupational Exposure Limit (OEL)

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

**3. HAZARDS IDENTIFICATION**
Symptoms of Acute Exposure

Slightly irritating to the eyes. The active ingredient is designed to cause bleeding after repeated ingestion

Hazardous Decomposition Products

Can decompose at high temperatures forming toxic gases.

Physical Properties

Appearance: Green pellets

Odor: Faint grain-like

Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

**4. FIRST AID MEASURES**

Have the product container, label or Material Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison

control center or doctor, or going for treatment.

**Ingestion:** If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Have the person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**Eye Contact:** If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.

**Skin Contact:** If on skin or clothing: Take off contaminated clothing. Wash skin with soap and water.

**Inhalation:** Not applicable.

#### Notes to Physician

This product may reduce the clotting ability of the blood and cause hemorrhaging. If poisoning occurs, intramuscular and oral administration of Vitamin K1 are indicated, as in poisoning from overdose of bishydroxy coumarin. For human cases, Vitamin K1 is antidotal at doses of 10 - 20 mg (not mg/kg). For animal cases, Vitamin K1 is antidotal at 2 - 5 mg/kg. Repeated doses may need to be given up to two weeks (based on monitoring of prothrombin time). In severe cases, blood transfusions may be necessary.

#### Medical Condition Likely to be Aggravated by Exposure

None known.

## **5. FIRE FIGHTING MEASURES**

### Fire and Explosion

Flash Point (Test Method): > 375°F (paraffin wax) Method: PMCC  
Flammable Limits (% in Air): Lower: % Not Applicable Upper: % Not Applicable  
Autoignition Temperature: Not Available  
Flammability: Not Flammable

### Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

### In Case of Fire

Use dry chemical, foam or CO2 extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated.

## **6. ACCIDENTAL RELEASE MEASURES**

### In Case of Spill or Leak

Control the spill at its source. Clean up spills immediately, observing precautions outlined in Section 8. Sweep up material and place in a compatible disposal container. Once all material is collected, seal container and arrange for disposition.

## **7. HANDLING AND STORAGE**

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.**

**FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.**

**Ingestion:** Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye Contact: Eye protection is not required for normal handling. Where eye contact is likely, wear tight-fitting chemical goggles.

Skin Contact: Gloves are not required for normal handling. Where heavy contact is likely, wear chemical resistant (such as nitrile or butyl) gloves.

Inhalation: Respiratory protection is not required for normal handling. In the event of an unusual dust exposure, use engineering controls or a NIOSH-certified particulate respirator (N, P, R or HE filter) to keep exposure below the Occupational Exposure Limit.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Green pellets

Odor: Faint grain-like

Melting Point: Not Available

Boiling Point: 442 - 446°F (Brodifacoum)

Specific Gravity/Density: 40.00 lbs./cu.ft.

pH: Not Available

### Solubility in H<sub>2</sub>O

Brodifacoum Technical: Insoluble

### Vapor Pressure

Brodifacoum Technical: 6 x 10<sup>(-6)</sup> mmHg @ 68°F (20°C)

## 10. STABILITY AND REACTIVITY

Stability: Stable under normal use and storage conditions.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: None known.

Materials to Avoid: None known.

Hazardous Decomposition Products: Can decompose at high temperatures forming toxic gases.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity/Irritation Studies (Finished Product)

Ingestion: Practically Non-Toxic  
Oral (LD50 Rat) : > 5,000 mg/kg body weight

Dermal: Moderately Toxic  
Dermal (LD50 Rabbit) : > 500 mg/kg body weight

Inhalation: Not Available  
Inhalation (LC50 Rat) : See "Other Toxicity Information", Sec. 11

Eye Contact: See "Other Toxicity Information", Sec. 11

Skin Contact: See "Other Toxicity Information", Sec. 11

Skin Sensitization: Not Available

### Reproductive/Developmental Effects

Brodifacoum Technical: Not teratogenic, embryotoxic or fetotoxic in rats or rabbits at doses up to 0.02 mg/kg/day - the dose causing excessive maternal toxicity.  
Non-genotoxic in a range of assays.

### Chronic/Subchronic Toxicity Studies

Brodifacoum Technical: The biological half-life for brodifacoum in body tissue in rats is 150-200 days. Adverse clinical effects can develop from body accumulation. Prolonged prothrombin time, depression, pallor, subcutaneous hemorrhage, bleeding of nose or gums, gastrointestinal hemorrhage, cerebral hemorrhage, shock and death can develop following exposures. No neurotox studies have been conducted.

### Carcinogenicity

Brodifacoum Technical: Unlikely to be carcinogenic.

### Other Toxicity Information

Systemically toxic concentrations of this product will probably not be absorbed through human skin.  
No toxic effects are known to be associated with inhalation of dust from this material.  
No irritation is likely to develop following contact with human eyes.  
Irritation will probably not develop following contact with human skin.

Effects of overexposure are those of anticoagulant overdose, i.e., reduced blood clotting ability with spontaneous bleeding in various organs. Body accumulation can result from repeated exposures since the half-life of brodifacoum is estimated to be 120 days. Individuals with blood clotting disorders may be more susceptible to overexposure effects.

### Toxicity of Other Components

#### Cereal Ingredients

Not applicable

#### Crystalline Silica, Quartz

Chronic inhalation exposure to crystalline silica is known to cause silicosis and pulmonary fibrosis in humans. Experimental animals exposed to crystalline silica developed respiratory tract cancers.

#### Green Pigment

Not applicable

#### Kaolin Clay

Long term exposure to high concentrations of this dust may produce x-ray evidence of dust in the lungs. Continued long term overexposure may affect respiratory function in some individuals.

### Target Organs

#### Active Ingredients

Brodifacoum Technical: Blood

#### Inert Ingredients

Cereal Ingredients: Not applicable

Crystalline Silica, Quartz: Respiratory tract

Green Pigment: Not applicable

Kaolin Clay: Lung

## **12. ECOLOGICAL INFORMATION**

### Summary of Effects

#### Brodifacoum Technical:

The risk of this formulation to most non-target organisms is low. However, if this product is misused or stored improperly, birds and non-target animals may be at higher risk.

### Eco-Acute Toxicity

#### Brodifacoum Technical:

##### Brodifacoum Technical:

Fish (Trout) 96-hr LC50 0.04 ppm

Invertebrates (Daphnia) 48-hr EC50 0.06 ppm

Birds (8-day dietary - Bobwhite Quail) 40-day LC50 0.8 ppm

Birds (8-day dietary - Mallard Duck) 40-day LC50 2.7 ppm

##### Formulation (predicted):

Fish (Trout) 96-hr LC50 800 ppm

Invertebrates (Daphnia) 48-hr EC50 1,200 ppm

Birds (8-day dietary - Bobwhite Quail) LC50 16,000 ppm

Birds (8-day dietary - Mallard Duck) LC50 54,000 ppm

Eco-Chronic Toxicity

Brodifacoum No applicable studies available.

Technical:

Environmental Fate

Brodifacoum Technical:

No data available for the formulation. The information presented here is for the active ingredient, brodifacoum. A thorough review of environmental information is not possible in this document.

Persistence (Half-Life): Soil: 157 days. Water: Stable.

Leaching/Mobility: Immobile (Koc = 50,000).

Action in Water (after 24 hrs.): Sinks.

**13. DISPOSAL CONSIDERATIONS**

Disposal

Do not reuse empty container except for holding additional product.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

**14. TRANSPORT INFORMATION**

DOT Classification

Not regulated by DOT.

B/L Freight Classification

Exterminator, Vermin, O/T Poison

Comments

International Transportation

Environmentally Hazardous Substance, Solid, N.O.S. (brodifacoum), Class 9, UN3077, PGIII

**15. REGULATORY INFORMATION**

EPCRA SARA Title III Classification

Section 311/312 Hazard Classes: Acute Health Hazard  
Chronic Health Hazard

Section 313 Toxic Chemicals: Not Applicable

California Proposition 65

Not Applicable

CERCLA/SARA 302 Reportable Quantity (RQ)

None

RCRA Hazardous Waste Classification (40 CFR 261)

Not Applicable

TSCA Status

Exempt from TSCA, subject to FIFRA

**16. OTHER INFORMATION**

NFPA Hazard Ratings

Health: 1  
Flammability: 1  
Instability: 0

HMIS Hazard Ratings

Health: 1  
Flammability: 1  
Reactivity: 0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 09/20/2000

Revision Date: 01/27/2003

Replaces: 05/14/2002

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

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End of MSDS