MATERIAL SAFETY DATA SHEET

Syngenta Crop Protection, LLC
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.: A10976W

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, 100-1051, 100-1052, 100-1057 **Section(s) Revised: 3**

2. HAZARDS IDENTIFICATION

Health and Environmental

Harmful in contact with skin. The active ingredient is designed to cause bleeding after repeated ingestion.

Hazardous Decomposition Products

None known.

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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Crystalline Silica, Quartz and Cristobalite	10 mg/m³/(%SiO2+2) (respirable dust)	0.025 mg/m³ (respirable silica)	0.05 mg/m³ (respirable dust) **	IARC 1; ACGIH 1
Kaolin Clay	15 mg/m³ TWA (total); 5 mg/m³ TWA (respirable)	2 mg/m³ TWA (respirable)	10 mg/m³ TWA (total); 5 mg/m³ TWA (respirable) **	No
Brodifacoum Technical (0.005%)	Not Established	Not Established	0.002 mg/m³ TWA ***	No

** recommended by NIOSH

*** Syngenta Occupational Exposure Limit (OEL)

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.
Syngenta Hazard Category: A

4. FIRST AID MEASURES

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

contol 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:	If inhaled: Move person to fresh 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.

Further information is available from the Syngenta emergency number provided in this document.

Medical Condition Likely to be Aggravated by Exposure

As stated above this product contains anticoagulants with an effect similar to that of warfarin. The anticoagulant interferes with the synthesis of prothrombin. Significant exposure (e.g. ingestion) can cause anticoagulation effects and could aggravate existing blood clotting disorders.

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 Applicable	

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 AND PACKAGING 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 lbs/ft³
pH:	Not Available

Solubility in H2O

Brodifacoum Technical: Insoluble

Vapor Pressure

Brodifacoum Technical: 6 x 10(-6) 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:	None known.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:

Oral (LD50 Rat) : > 5000 mg/kg body weight

Dermal:

Dermal (LD50 Rat) : > 500 mg/kg body weight

Inhalation:

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 > 100 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

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 > 100 days. Individuals with blood clotting disorders may be more susceptible to overexposure effects.

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.

Toxicity of Other Components

Crystalline Silica, Quartz and Cristobalite

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.

Kaolin Clay

May cause eye and respiratory tract irritation.
Long-term exposure to high concentrations of this dust may produce x-ray evidence of dust in the lungs.
Continued long-term exposure may affect respiratory function in some individuals.

Target Organs

Active Ingredients

Brodifacoum Technical: Blood

Inert Ingredients

Crystalline Silica, Quartz and Cristobalite: Respiratory tract

Kaolin Clay: Eye, respiratory tract, lung

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects

Brodifacoum Technical:

Fish (Rainbow Trout) 96-hour LC50 0.02 ppm

Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 0.98 ppm

Bird (Mallard Duck) 21-day LD50 0.26 mg/kg

Environmental Fate

Brodifacoum Technical:

The information presented here is for the active ingredient, brodifacoum.
Not persistent in soil. Stable in water. Immobile in soil. Sinks in water (after 24 h).

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

Ground Transport - NAFTA
Not regulated.

Comments

Water Transport - International
Not regulated.

Air Transport
Not regulated.

15. REGULATORY INFORMATION

EPCRA SARA Title III Classification

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: Not Applicable

California Proposition 65

Not Applicable

CERCLA/SARA 302 Reportable Quantity (RQ)

Not Applicable

RCRA Hazardous Waste Classification (40 CFR 261)

Not Applicable

TSCA Status

Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

NFPA Hazard Ratings		HMIS Hazard Ratings	
Health:	1	Health:	1
Flammability:	1	Flammability:	1
Instability:	0	Reactivity:	0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme

For non-emergency questions about this product call:

1-800-334-9481

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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.

End of MSDS