

Material Safety Data Sheet

Date prepared : August 22, 2002

Date revised : February 21, 2003

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1 Identification of the substance

Name of Product : **Priority Post-emerge Herbicide**
 Code No. : NC-603 WG
 Type of Formulation : Water dispersible granule (WG)

1.2 Company Identification

Tenkoz Inc.

100 North Point Center East, Alpharetta, GA 30022

Phone: 770-343-8509 Fax: 770-343-9736

Emergency Contact No. 1-800-424-9300 (in case of emergency endangering health or the environment)

2. COMPOSITION/INFORMATION OF INGREDIENTS

Chemical Composition :

Halosulfuron-methyl 50.0 wt/wt %
 Carfentrazone-ethyl..... 12.5 wt/wt %
 Kaolin Approx. 10 wt/wt %
 Other inert ingredients Approx. 12.5 wt/wt %

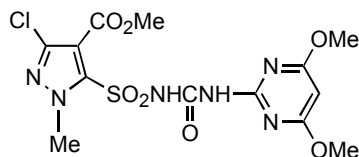
Halosulfuron-methyl (active ingredient)

Code No. : NC-319 or MON 12000

CAS No. : 100784-20-1

Chemical Name : Methyl 3-chloro-5-(4,6-dimethoxypyrimidin-2-ylcarbamoylsulfamoyl)-1-methylpyrazole-4-carboxylate

Structural Formula :

Empirical Formula : C₁₃H₁₅ClN₆O₇S

Molecular Weight : 434.8

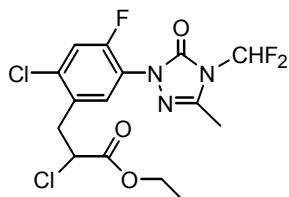
Carfentrazone-ethyl (active ingredient)

Code No. : F8426

CAS No. : 128639-02-1

Chemical Name : Ethyl 2-chloro-3-[2-chloro-5-(4-difluoromethyl-3-methyl-5-oxo-4,5-dihydro-1,2,4-triazol-1-yl)-4-fluoro-phenyl]propionate

Structural Formula :



Empirical Formula : C₁₅H₁₄Cl₂ F₃N₃O₃
Molecular Weight : 412.2

Kaolin (carrier)
CAS No. : 1332-58-7
Chemical Name : Hydrous Kaolin Powder

3. HAZARD IDENTIFICATION

Keep out of children.

CAUTION!

CAUSES MODERATE EYE IRRITATION.
HARMFUL IF SWALLOWED.

Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling.

4. FIRST AID MEASURES

Eye contact :

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.

Skin contact :

Remove all contaminated clothing, shoes and socks from the affected area. Immediately rinse with running water. Wash skin thoroughly with soap and water. If irritation persists, call a poison control center or doctor for treatment advice.

Inhalation :

If respiratory discomfort occurs, move the person to fresh air. If not breathing, give mouth-to-mouth resuscitation (or an artificial respiration). Call a poison control center or doctor for treatment advice.

Ingestion :

Call poison control center or doctor immediately for treatment advice. Remove visible particles from mouth. Have person rinse mouth thoroughly with water, spit out rinse water. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Flash Point : Not Applicable.
Extinguishing Media : Water, foam, dry chemicals or CO₂.
Special Fire Fighting Procedures : Use self-contained breathing apparatus and protective clothing. Move away this product from fire if there is no risk. Use water spray or fog nozzle to keep containers or surrounding area cool. Fight fire from upwind position.
Unusual Fire and Explosion Hazards : None. Keep away from heat and open flame.
Hazardous combustion products: : Normal combustion forms carbon dioxide, water vapor and may produce toxic gases (carbon monoxide, SO_x, NO_x, or chlorine compounds).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Wear suitable protective clothing, shoes, gloves and goggle. See Section 5 and 8.
Environmental precautions : Prevent spillage from entering the drainage systems or watercourses. Do not contaminate water when disposing of rinse waters.
Methods for cleaning : Keep unauthorized persons, children and animals away from the affected area.

Prevent further waste by closing the container properly, shifting its position to stop leakage or placing into another container. Carefully sweep up and collect the spilled material by absorbent such as sand or vermiculite and place in a closed container (drum) for disposal. Do not raise dust. Wash affected area with water. Minimize use of water to prevent environmental contamination.

7. HANDLING AND STORAGE

HANDLING

Wear suitable protective clothing, shoes, gloves and goggle. Do not eat, drink, or smoke during the work. Do not breathe dust. Avoid contact with skin, eyes and clothing. Wash hands after handling or contact. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Wash contaminated clothing before re-use. Protect containers against physical damage. Thoroughly clean equipment after use. Do not contaminate drains, sewers and water ways when disposing of equipment rinse water. Emptied containers retain vapour and product residue.

STORAGE

Store under cool, dry conditions (below 120° F). Do not store under moist conditions. Keep container **TIGHTLY** sealed to prevent moisture from damaging any unused product. Keep out of reach of children. Keep away from food, drink and animal feed.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Control Parameters :

Halosulfuron-methyl: No specific occupational exposure limit has been established.
Carfentrazone-ethyl: No specific occupational exposure limit has been established.
Kaolin : PEL(OSHA) : TWA = 10 mg/m³ (total dust), 5 mg/m³ (respirable dust)
TLV(ACGIH) : TWA = 2 mg/m³ (respirable fraction)
Kaolin is classified as a nuisance dust by ACGIH

Engineering Controls

Use only with adequate ventilation to keep airborne concentration below exposure limits.
Keep container tightly closed.

Personal Protection

Eye protection: If there is significant potential for contact, wear dust goggles.
Skin protection: If repeated or prolonged contact, wear chemical resistant gloves.
Respiratory protection: If airborne exposure is excessive, wear respirator. Respiratory protection programs must comply with all local, regional and national regulations.

9. PHYSICAL AND CHEMICAL PROPERTIES

The data are typical values based on a material tested. The values should not be constructed as specifications for this product.

Appearance	: Light brown
Odor	: Odorless
Tap density	: 0.66 g/ml
pH	: 6.5 (1% w/v suspension)
Oxidation/Reduction	: Compatible with monoammonium phosphate, potassium permanganate, zinc and water.
Explosibility	: Not explosive
Flash point	: Not applicable

10. STABILITY AND REACTIVITY

Stable under normal storage conditions.

Chemical Stability : Unstable at extreme pH's and temperatures.

Incompatibility : May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Hazardous Polymerization : Hazardous decomposition and polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Formulated Product : NC-603 WG

Acute oral toxicity LD50 (rat)	: 500-5000 mg/kg	FIFRA category III
Acute dermal toxicity LD50 (rat)	: > 5000 mg/kg	FIFRA category IV
Inhalation LC50 (rat)	: > 2.0 mg/L	FIFRA category IV
Eye irritation	: slightly irritating	FIFRA category III
Skin irritation	: slightly irritating	FIFRA category IV
Skin sensitization	: None	FIFRA category No

Halosulfuron-methyl (active ingredient)

Oral LD ₅₀ (Rat):	8865 mg/kg	
Dermal LD ₅₀ (Rabbit) :	> 2000 mg/kg	
Inhalation LC ₅₀ (Rat, 4hrs) :	> 6.0 mg/lit	
Eye irritation (Rabbit) :	Non irritating,	
Skin irritation (Rabbit) :	Non irritating	
Skin sensitization :	None	
Mutagenicity :	Not mutagenic(in vitro and in vivo)	
Rat, oral, 13 weeks :	NOEL; 400 mg/kg diet	
Dog, oral, 13 weeks :	NOEL; 10 mg/kg/day	
Rat, dermal, 21 days :	NOEL; >1000 mg/kg/day	
Dog, oral, 1 years :	NOEL; 10 mg/kg/day	
Mouse, oral, 18 months :	NOEL(tumour); >7000 mg/kg diet	NOEL(toxicity); 3000 mg/kg diet
Rat, oral, 2 years :	NOEL(tumour); >2500 mg/kg diet	NOEL(toxicity); 1000 mg/kg diet
Rat, oral, 2 generations :	NOEL(toxicity); 800 mg/kg diet	NOEL(reproduction); 800 mg/kg diet
Rat, teratogenicity :	NOEL(toxicity); 250 mg/kg/day	NOEL(development); 250 mg/kg/day
Rabbit, teratogenicity :	NOEL(toxicity); 50 mg/kg/day	NOEL(development); 50 mg/kg/day

Carfentrazone-ethyl (active ingredient)

Oral LD ₅₀ (Rat):	5143 mg/kg
Dermal LD ₅₀ (Rabbit) :	> 4000 mg/kg
Inhalation LC ₅₀ (Rat, 4hrs) :	> 5.09 mg/lit
Eye irritation (Rabbit) :	Minimally irritating.
Skin irritation (FHSA) (Rabbit) :	Non irritating
Skin sensitization :	None

Kaolin (carrier)

Ingestion :	Not available.
Inhalation :	Not available.
Eye contact :	Not available.
Skin contact :	Not available.
Sensitization :	Not available.

12. ECOLOGICAL INFORMATION

Formulated Product : NC-603 WG

Not Available.

Ecotoxicity data is available for the each active ingredients of this product.

<u>Halosulfuron-methyl</u> (active ingredient)_			
LC ₅₀ (Trout, 96 h)	: > 120 mg/l	LC ₅₀ (Earthworm)	: > 1,000 mg/kg
LD ₅₀ (Daphnia, 48 h)	: > 120 mg/l		

<u>Carfentrazone-ethyl</u> (active ingredient)			
LC ₅₀ (Algae)	: 5.7 to 17 µg/l	LC ₅₀ (Fish)	: 1.6 to 2.0 mg/l
LC ₅₀ (Aquatic crustacea)	: > 9.8 mg/l		
LD ₅₀ (Birds, oral)	: > 2,250 mg/kg	LC ₅₀ (Birds, diet)	: > 5,620 ppm

Kaolin (carrier) : None known

13. DISPOSAL CONSIDERATIONS

DISPOSAL: Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal in accordance with applicable Federal, state or local procedures, or in such other method as is approved under those procedures.

Empty container retains vapor and product residue. Observe all labeled safeguards until container is destroyed.

Do not reuse container. Triple rinse container, recycle if available or puncture and dispose of in a sanitary landfill, or by incineration, or by burning, if allowed by state and local authorities. If burned, stay out of smoke.

14. TRANSPORT INFORMATION

This product is not hazardous under IMDG regulations.

IMDG Class	: not applicable	Main Label	: not applicable
UN No.	: not applicable	Marine Pollutant Label	: not applicable
Proper Shipping Name	: not applicable	Packing Group	: not applicable

Follow the appropriate regulations to properly classify the shipment for transportation.

15. REGULATORY INFORMATION

People use this material must follow all applicable federal, state, and local regulations.

16. OTHER INFORMATION

Herbicide
References : none

The data given here is based on current knowledge and experience. This MSDS describes the product in terms of safety requirements and does not signify any warranty with regard to the product's properties.