MASTER SAFETY DATA SHEET

3/2/12

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Name: **GF-1387 EC HERBICIDE**

LV70: 108061 Issue Date: Oct 05 Ref: PSO16
Revised: New

2. COMPOSITION/INFORMATION ON INGREDIENTS

Dangerous components (see section 16 for complete R-phrases):

			CAS	EC No
2,4-D 2-ethylhexyl ester	81.7 %	Xn; R22, R43 N: R50/53	001928-43-4	217-673-3
Distillates (petroleum), hydrotreated light	<20 %	Xn; R65, R66,	064742-47-8	265-149-8
Alkyl benzenesulfonic acid, calcium salts	<5%	Xi; R38-41	090194-36-8	290-646-1
2-ethylhexan-1-ol	<5%	Xi; R36/38	000104-76-7	203-234-3
Inert ingredients	Balance			
Composition Code	GF1387			

3. HAZARDS IDENTIFICATION

Irritating to skin. May cause sensitisation by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST-AID MEASURES

Never give fluids or induce vomiting if patient is unconscious or is having convulsions.

Ingestion
Do not induce vomiting. Call a physician and/or transport to emergency facility immediately. The decision of whether to induce vomiting or not should be made by a physician.

Eye Contact
Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an opthalmologist.

Skin Contact
Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Consult a physician if irritation persists.

Inhalation
Remove to fresh air. Consult a physician.

Note to Physician
Supportive care. Treatment based on judgement of physician in response to symptoms of patient. If lavage is performed, suggest endotracheal and/or oesophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach.

5. FIRE-FIGHTING MEASURES

Extinguishing Media
Water fog or fine spray. Carbon dioxide. Dry chemical powder. Foam.

Hazardous Combustion Products
During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/ or irritating.

Protection of Firefighters
Wear protective clothing and use self-contained breathing apparatus.

Additional Information
Keep containers cool by spraying with water. Contain runoff to prevent entry into water or drainage systems.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Wear appropriate safety clothing and eye/face protection (see Section 8).

Environmental Precautions
Do not wash into sewers or into any body of water. Advise water authority if spillage has entered water course or drainage system.

Methods of Cleaning Up
Soak up with sand or other non-combustible absorbent material and place into containers for disposal. For large spills, barricade area and consult manufacturer. If further assistance is required, telephone the emergency contact number.

7. HANDLING AND STORAGE

Handling
Use good personal hygiene. Avoid eye and skin contact. Do not consume or store food in the work area. Wash hands and exposed skin before eating, drinking or smoking and after work.

Storage
Product should be stored in compliance with local regulations. Store in a cool, dry, well-ventilated place in the original container. Protect from excessive heat and cold. Do not store near food, drink, animal feeding stuffs, pharmaceuticals, cosmetics or fertilisers. Keep out of reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines
None established.

Engineering Controls
Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

Respiratory Protection
For most conditions, no respiratory protection should be needed. However, when airborne exposure guidelines and/or comfort levels may be exceeded use an approved air-purifying respirator.
For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

Hand/Skin Protection
For brief contact, no precautions other than clean body-covering clothing and chemical resistant gloves should be needed. Use chemical resistant gloves classified under standard EN 374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Nitrile. Examples of acceptable glove barrier materials include:Polyvinyl chloride ("PVC" or"vinyl"). Neoprene. Avoid gloves made of: Natural rubber ("latex").

When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.

NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all requisite workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), as well as the instructions/specifications provided by the glove supplier.

When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material.
For emergency conditions: Use protective clothing impervious to this material. Selection of specific items will depend on operation.

Eye/Face Protection
Use safety glasses. Where contact with the liquid is likely, chemical goggles are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: amber
Rel. density (water=1)	: 1.11 g/mL (20 deg.C) (approx.)
Water solubility	: emulsifiable
Flash point	: 126 deg.C
Kinematic viscosity	: 19.83 cSt @ 40 deg C
Explosivity	: Not explosive
Oxidising	: Not oxidising
Autoflammability	: 275 deg C
pH	: 3.90 (1% aq.soln)

10. STABILITY AND REACTIVITY

Chemical Stability
Is stable under normal storage conditions.

Conditions to Avoid
Excessive heat.

Materials to Avoid
Strong basic, acidic or oxidising materials.

Hazardous Decomposition Products
None under normal conditions of storage and use.

11. TOXICOLOGICAL INFORMATION

Ingestion
Low toxicity if swallowed. The oral LD50 for rats is >2000 mg/kg.

Skin Contact
The dermal LD50 for rats is >5000 mg/kg. Prolonged skin contact is unlikely to result in absorption of harmful amounts. Short single exposure may cause skin irritation.

Sensitisation
May cause sensitisation by skin contact.

Eye Contact
May cause moderate and prolonged irritation.

Inhalation
No adverse effects anticipated by this route of exposure, but excessive exposure should be avoided.

Additional Information
Not carcinogenic. Not mutagenic. Not toxic for reproduction.

12. ECOLOGICAL INFORMATION

Assessment largely or completely based on data for active ingredient.

Persistence and Degradability
2,4-D 2-ethylhexyl ester: Rapidly hydrolysed in soil and water (with a half-life of less than 1 day) to the parent acid, which undergoes further degradation. Half-life of the parent acid in soil is dependent on conditions and is approximately 5-15 days.

Aquatic Toxicity
Based on data for similar formulation.
Material is not harmful to fish on an acute basis (LC50>100mg/L).
Material is not harmful to aquatic invertebrates on an acute basis (EC50>100mg/L).
Material is not harmful to algae (IC50 >100mg/L).
Based on data for the formulation. Material is very toxic to aquatic plant.(EC50 <1mg/L)

Avian Toxicity
Material is slightly toxic to birds on an acute basis (500mg/kg <LD50 <2000mg/kg).

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13. DISPOSAL CONSIDERATIONS

Very toxic to aquatic organisms. Do not contaminate ponds, waterways or ditches with chemical or used container. Wash out thoroughly. Container and washings must be disposed of safely and in accordance with applicable regulations. The preferred options are to send to licensed reclaimer or to permitted incinerators. Do not re-use container for any purpose.

14. TRANSPORT INFORMATION

Road & Rail

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(2,4-D Ethylhexyl Ester)
Truck/Rail ADR/RID : 9 Label : 9
Classification Code : M6
Packing Group : III

Kemler Code : 90 UN Number : 3082
Tremcard Nr. CEFIC : 90GM6-III

Sea

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-D Ethylhexyl Ester)
Sea - IMO/IMDG Class: 9 UN Nr : 3082 Label: 9
Packing Group : III EMS : F-A,S-F
Marine Pollutant : Y (Y/N)

Air

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-D Ethylhexyl Ester)
Air-ICAO/IATA Class : 9 UN Nr : 3082 Label: 9
Sub Class :
Packing Group : III Pack Instr. Passenger : 914
Pack Instr. Cargo : 914

Remarks : Sample shipment not allowed by mail.

15. REGULATORY INFORMATION

Hazard Symbol : Xi – Irritant
N - Dangerous for the environment

Risk Phrases : Irritating to skin (R38).
May cause sensitisation by skin contact (R43).
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment (R50/53).

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Safety Phrases : Avoid contact with skin and eyes (S24/25).
This material and its container must be disposed of in a safe way (S35).
Wear suitable gloves (S37).
Use appropriate containment to avoid environmental Contamination (S57).

16. OTHER INFORMATION

Risk-phrases in Section 2
R22 - Harmful if swallowed.
R36/38 – Irritating to eyes and skin
R38 – Irritating to skin.
R41 – Risk of serious damage to eyes.
R43 - May cause sensitisation by skin contact.
R50/53 – Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65 - Harmful: may cause lung damage if swallowed.
R66 - Repeated exposure may cause skin dryness or cracking.