



Material Safety Data Sheet HUSKIE® COMPLETE HERBICIDE

MSDS Number: 102000020211

MSDS Version 1.0

Revision Date: 02/02/2012

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SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name	HUSKIE® COMPLETE HERBICIDE
MSDS Number	102000020211
Product code (UVP)	79380356
EPA Registration No.	264-1135
Product Use	Herbicide

Bayer CropScience
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
For Product Information call: 1-866-99BAYER (1-866-992-2937)

SECTION 2. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview Danger! Corrosive - causes irreversible eye damage. May be fatal if swallowed. Harmful if absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Physical State	liquid
Odor	aromatic
Appearance	dark brown
Exposure routes	Skin contact, Eye contact, Inhalation
Immediate Effects	
Eye	Corrosive - causes irreversible eye damage. Do not get in eyes.
skin	Harmful if absorbed through skin. Irritating to skin. May cause sensitization by skin contact. Avoid contact with skin, eyes and clothing.
Ingestion	May be fatal if swallowed. May cause irritation. Do not take internally.
Inhalation	May cause nose, throat, and lung irritation. Do not breathe vapours or spray mist.



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Chronic or Delayed Long-Term This product contains ingredients that are considered to be probable or suspected human carcinogens (see Section 11 - Chronic). This product or its components may have target organ effects.

Potential Environmental Effect This product may cause adverse effects on non-target plants. Toxic to fish and aquatic invertebrates.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Bromoxynil	1689-84-5	15.77
Pyrasulfotole	365400-11-9	2.82
Thiencarbazone-methyl	317815-83-1	0.45
Isotridecanol, ethoxylated	9043-30-5	15.00
Stearylamine, ethoxylated	26635-92-7	5.00
Tetrapropylene benzene sulfonate, calcium salt	11117-11-6	3.00
Fatty alcohol polyglycol ether		2.00
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	30.00
Naphthalene	91-20-3	0.50

SECTION 4. FIRST AID MEASURES

General Move out of dangerous area. When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye 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 eye. Call a physician or poison control center immediately.

skin Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

Ingestion Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Inhalation Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Notes to physician
Signs and Symptoms Headache
 Nausea
 Dizziness
 Somnolence



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Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
Aspiration may cause pulmonary oedema and pneumonitis.
Inhalation may provoke the following symptoms:
Cough
Shortness of breath
Cyanosis
Fever

Hazards	Contains hydrocarbon solvents. May pose an aspiration pneumonia hazard.
Treatment	Treat symptomatically. Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate. In case of aspiration intubation and bronchial lavage should be considered. Monitor: kidney, liver and pancreas function. There is no specific antidote. Contraindication: derivatives of adrenaline.

SECTION 5. FIRE FIGHTING MEASURES

Flash point	> 100 °C / > 212 °F
Autoignition temperature	410 °C / 770 °F
Lower Flammability Limit	no data available
Upper Flammability Limit	no data available
Explosiveness	Not explosive 92/69/EEC, A.14 / OECD 113
Fire and Explosion Hazards	Dangerous gases are evolved in the event of a fire.
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Fire Fighting Instructions	Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by diking area with sand or earth. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES



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Personal precautions	Keep people away from and upwind of spill/leak. Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke.
Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated surface thoroughly.
Additional advice	Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13. Check also for any local site procedures.

SECTION 7. HANDLING AND STORAGE

Handling procedures	Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner as to prevent spillage. Keep away from heat and sources of ignition.
Storing Procedures	Keep away from direct sunlight. Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from freezing.
Work/Hygienic Procedures	When using, do not eat, drink or smoke. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection	Avoid contact with skin and eyes. Do not breathe dust or spray mist. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water.
Eye/Face Protection	Safety glasses with side-shields
Hand protection	Chemical resistant nitrile rubber gloves
Body Protection	Wear long-sleeved shirt and long pants and shoes plus socks.
Respiratory protection	When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Exposure Limits

Bromoxynil	1689-84-5	OES BCS* TX ESL	TWA ST ESL	0.21 mg/m3 100 ug/m3
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Pyrasulfotole Solvent Naphtha (petroleum), heavy aromatic	365400-11-9 64742-94-5	TX ESL	AN ESL	10 ug/m3
		OES BCS*	TWA	0.3 mg/m3
		TX ESL	ST ESL	460 ppm
Naphthalene	91-20-3	TX ESL	AN ESL	46 ppm
		ACGIH	TWA	10 ppm
		ACGIH	STEL	15 ppm
		NIOSH	REL	10 ppm
		NIOSH	STEL	15 ppm
		OSHA Z1	PEL	10 ppm
		OSHA Z1A	TWA	10 ppm
		OSHA Z1A	STEL	15 ppm
		US CA OEL	TWA PEL	10 ppm
		US CA OEL	STEL	15 ppm
		TX ESL	ST ESL	440 ug/m3
		TX ESL	AN ESL	50 ug/m3
		OES BCS*	TWA	10 ppm
		TX ESL	ST ESL	90 ppb
		TX ESL	AN ESL	10 ppb
		TN OEL	TWA	10 ppm
TN OEL	STEL	15 ppm		
ACGIH NIC	TWA	2 ppm		

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	dark brown
Physical State	liquid
Odor	aromatic
pH	6.0 - 8.0 (10 %) at 23 °C
Vapor Pressure	no data available
Vapor Density (Air = 1)	no data available
Density	ca. 1.11 g/cm ³ at 20 °C
Evaporation rate	no data available
Boiling Point	no data available
Melting / Freezing Point	no data available



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Partition coefficient: n-octanol/water	no data available
Viscosity	150 - 250 mPa.s at 20 °C Velocity gradient 20 /s
	50 - 150 mPa.s at 20 °C Velocity gradient 100 /s

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	Extremes of temperature and direct sunlight.
Hazardous reactions	No hazardous reactions when stored and handled according to prescribed instructions.
Chemical Stability	Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on this product as formulated. The non-acute information pertains to the technical-grade active ingredients.

Acute oral toxicity	rat: 300 - 2,000 mg/kg
Acute dermal toxicity	rat: > 2,000 mg/kg
Acute inhalation toxicity	rat: LC50: > 3,209 mg/m ³ Exposure time: 4 h Highest attainable concentration. Determined in the form of a respirable aerosol. During intended and foreseen applications, no respirable aerosol is formed.
Skin irritation	rabbit: Irritating to skin.
Eye irritation	rabbit: Corrosive - causes irreversible eye damage.
Sensitisation	mouse: Non-sensitizing. OECD Test Guideline 429, local lymph node assay (LLNA)
Chronic toxicity	Bromoxynil caused specific target organ toxicity in the liver in experimental animal studies. The observed effects do not appear to be relevant for humans. Pyrasulfotole did not cause specific target organ toxicity in experimental animal studies. Thiencarbazone-methyl did not cause specific target organ toxicity in experimental animal studies.



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Assessment Carcinogenicity

Bromoxynil has been classified by EPA as a Group C (possible human carcinogen) chemical based on an increased incidence of liver tumors observed in mice.

Pyrasulfotole caused an increased incidence of tumours in the cornea, bladder. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.

Thiencarbazone-methyl was not carcinogenic in a lifetime feeding study in rats. Thiencarbazone-methyl caused an increased incidence of tumours in the bladder of mice at high dose levels. The tumours seen with Thiencarbazone-methyl were caused through the chronic irritation due to the presence of bladder stones.

ACGIH

Naphthalene 91-20-3 Group A4

NTP

Naphthalene 91-20-3

IARC

Naphthalene 91-20-3 Overall evaluation: 2B

OSHA

None.

Reproductive toxicity Bromoxynil did not cause reproductive toxicity in a two-generation study in rats.

Pyrasulfotole did not cause reproductive toxicity in a two-generation study in rats.

Thiencarbazone-methyl did not cause reproductive toxicity in a two-generation study in rats.

Developmental Toxicity Pyrasulfotole did not cause developmental toxicity in rats and rabbits.

Thiencarbazone-methyl did not cause developmental toxicity in rats and rabbits.

Assessment neurotoxicity Pyrasulfotole was not a neurotoxicant in acute, subchronic and developmental neurotoxicity screening studies in rats.

Mutagenicity Bromoxynil was not mutagenic or genotoxic based on the overall weight of evidence in a battery of mutagenicity studies.

Pyrasulfotole was not genotoxic in a battery of in vitro and in vivo tests.

Thiencarbazone-methyl was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to fish Oncorhynchus mykiss (rainbow trout)
 LC50: < 1 mg/l



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Exposure time: 96 h

Toxicity to aquatic plants Lemna gibba (duckweed)
 Growth rate
 EC50: < 0.1 mg/l
 Exposure time: 7 d

Acute Toxicity to Aquatic Invertebrates Water flea (Daphnia magna)
 EC50: < 1 mg/l
 Exposure time: 48 h

Environmental precautions Do not allow to get into surface water, drains and ground water. If the product contaminates rivers and lakes or drains inform respective authorities.

Ecological Information No ecological testing was carried out on the product. Data are based on the properties of the individual components.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines. In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.

Container Disposal Triple rinse containers. Add washings to sprayer at time of filling. Rinsed packaging may be acceptable for landfill, otherwise incineration will be required in accordance with local regulations. Follow advice on product label and/or leaflet. Dispose of empty and cleaned packaging safely.

RCRA Information Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14. TRANSPORT INFORMATION

49CFR	
UN-Number	3082
Class	9
Packaging group	III
Marine pollutant	Marine pollutant
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (BROMOXYNIL, THIENCARBAZONE-METHYL, NAPHTHALENE)
RQ	Reportable Quantity is reached with 20,000 lb of product.



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IMDG

UN-Number **3082**
 Class 9
 Packaging group III
 Marine pollutant YES
 Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 (BROMOXYNIL, THIENCARBAZONE-METHYL SOLUTION)

IATA

UN-Number **3082**
 Class 9
 Packaging group III
 Environm. Hazardous Mark YES
 Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 (BROMOXYNIL, THIENCARBAZONE-METHYL SOLUTION)

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

SECTION 15. REGULATORY INFORMATION

EPA Registration No. 264-1135

US Federal Regulations

TSCA list

Isotridecanol, ethoxylated 9043-30-5
 Stearylamine, ethoxylated 26635-92-7
 Fatty alcohol polyglycol ether
 Solvent Naphtha (petroleum), heavy aromatic 64742-94-5
 Naphthalene 91-20-3

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

Naphthalene 91-20-3

SARA Title III - Section 302 - Notification and Information

None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

Bromoxynil 1689-84-5 1.0%
 Naphthalene 91-20-3 0.1%

US States Regulatory Reporting

CA Prop65

This product contains a chemical known to the State of California to cause cancer.
 Naphthalene 91-20-3

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

Bromoxynil 1689-84-5 CA, NJ
 Naphthalene 91-20-3 CA, CT, IL, MN, NJ, RI



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Canadian Regulations

Canadian Domestic Substance List

Isotridecanol, ethoxylated	9043-30-5
Stearylamine, ethoxylated	26635-92-7
Tetrapropylene benzene sulfonate, calcium salt	11117-11-6
Fatty alcohol polyglycol ether	
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5
Naphthalene	91-20-3

Environmental

CERCLA

Naphthalene	91-20-3	100 lbs
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Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)

Bromoxynil	1689-84-5
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5
Naphthalene	91-20-3

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 1 Flammability - 1 Instability - 0 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 1 Flammability - 1 Physical Hazard - 0 PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: New Material Safety Data Sheet.

Revision Date: 02/02/2012

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