Bayer CropScience

MSDS Number: 000000000203

SPIN-AID® HERBICIDE

MSDS Version 2.1

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name	SPIN-AID® HERBICIDE
Chemical Name	3-methoxycarbonylaminophenyl 3-methylcarbanilate (active ingredient)
Synonym	CP 137 (Spin-Aid)
MSDS Number	203
Chemical Family	
Chemical Formulation	Mixture (active ingredient: C16H16N2O4)
EPA Registration No.	264-616
Canadian Registrat. No.	21720

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

For Product Use Information: (866)-992-2937 Monday through Friday(CRLF) 8:00AM-4:30PM(CRLF) For Medical Emergency contact DART: (800) 334-7577 24 Hours/Day(CRLF) For Transportation Emergency CHEMTREC: (800) 424-9300 24 Hours/Day

Product Use Description SPIN-AID is a red beet and spinach herbicide.

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

Component Name	CAS No.	Concentration % by Weight	
		Minimum	Maximum
Phenmedipham	13684-63-4	15.9000	
Inert ingredients,including:		84.1000	
Isobutyl alcohol	78-83-1		
Isophorone	78-59-1		
AROMATIC HYDROCARBONS	64742-95-6		
Xylene	1330-20-7		< 1.0000

INERT INGREDIENTS (84.1%): Only the regulated ingredients are listed above. For additional information, see Section 15 (Regulatory Information).

SECTION 3. HAZARDS IDENTIFICATION

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

Emergency Overview	Warning! Combustible liquid. Harmful if swallowed. May produce severe irritation of eyes and irritation of the skin.
Physical State	liquid
Odor	Faint organic
Appearance	amber
Routes of Exposure	Skin contact. Vapor/mist inhalation.
Immediate Effects	
Eye	May produce severe eye irritation. The liquid is a moderate eye irritant. The vapor is a mild to moderate eye irritant. Not know to be corrosive to eyes.
Skin	Can cause moderate skin irritation. The liquid is a mild skin irritant. The vapor is a mild to moderate skin irritant. Not known to be a skin sensitizer in animal study.
Ingestion	Harmful if swallowed. Ingestion of significant amounts of liquid may cause increased salivation, general ataxia (confusion and lack of muscular coordination), weakness and tremors.
Inhalation	Prolonged inhalation of solvent vapor may cause respiratory tract irritation, narcosis (a state of feeling drunken), headache, and nausea.
Chronic or Delayed Long-Term	Isophorone has shown some evidence of carcinogenicity in male rats and equivocal evidence of carcinogenicity in male mice in NTP studies. No other components of Spin-Aid are listed as carcinogenic by NTP, IARC or OSHA. TARGET ORGAN EFFECTS: Results from 90-day animal studies suggest no target organ effects under conditions of normal handling and use.
Medical Conditions Aggravated by Exposure	Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis.
Signs and Symptoms	Solvent vapor may cause respiratory tract irritation, narcosis, headache and nausea. Ingestion and prolonged inhalation may cause increased salivation, general ataxia (confusion and lack of muscular coordination), weakness and tremors.

SECTION 4. FIRST AID MEASURES

Eye	Rinse immediately with plenty of water for at least 15 minutes. Get medical attention.

Skin	Remove contaminated clothing and wash exposed areas thoroughly with soap and water.
Ingestion	Call a physician or Poison Control Center. Do not induce vomiting.
Inhalation	Remove victim to fresh air. Support respiration if necessary. Seek medical advice.
Note to Physician	Empty stomach contents by gastric lavage. Avoid aspiration.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point	74 °C / 165 °F Method: Tagliabue Closed Cup Flammability class: II** **NOTE: NFPA Class-II; OSHA Liquid Class-IIIA Combustible.
Fire and Explosion Hazards	Evolution of toxic fumes including nitrogen oxides.
Suitable Extinguishing Media	foam, dry chemical, carbon dioxide (CO2), water
Fire Fighting Instructions	Persons fighting fire should wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

General and Disposal	Use proper protective equipment to minimize personal exposure (see Section 8). Take all necessary action to prevent and to remedy the effects of the spill. Ensure that the disposal is in compliance with Federal or local disposal regulations. Notify the appropriate authorities immediately. See Section 13 for any applicable Reportable Quantity (RQ) and other federal regulatory information.
Land Spill or Leaks	Keep unnecessary people away. Contain and absorb spillage with absorbant material. Wash area with water containing detergent and ammonia. Inform authorities immediately if material enters sewer or watercourses.

SECTION 7. HANDLING AND STORAGE

Handling Procedures	Warning! Harmful if swallowed. May produce severe irritation of eyes and irritation of the skin. Avoid breathing spray mist. Avoid contact with skin and eyes.
Storing Procedures	Store in original container. Keep container tightly closed. Keep in a dry, cool

place. Do not use or store near heat or open flame.

If exposed to subzero temperatures, SPIN-AID gradually thickens. The liquid returns to its original consistency when placed in a room (over 50°F) for several days.

Work/Hygienic Procedures

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this products concentrate. Follow manufacturer's instructions for cleaning/maintaining Personal Protective Equipment (PPE). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Do not apply when weather conditions favor drift from treated areas. Do not apply this product through any type of irrigation system. Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Control airborne concentrations below the exposure guidelines. Use with adequate ventilation. Local exhaust ventilation may be necessary, when used in a confined area.

Eye/Face Protection

splash goggles face-shield

Body Protection

Nitrile protective gloves.

Respiratory Protection

Ensure good ventilation. If not adequate, wear suitable organic-vapor respirator for protection.

General Protection

Although general guidance has been provided, the degree of protection required in a particular situation depends on factors such as concentration and duration. More detailed advice on protective devices is available from Bayer CropScience.

FOR APPLICATORS AND HANDLERS (AGRICULTURAL USES):
The personal protective equipment (PPE) for agricultural uses are specified under the Subtitile: "Note to Applicators and Handlers of Agricultural Products."

NOTE TO APPLICATORS AND HANDLERS OF AGRICULTURAL PRODUCTS:
For agricultural products which are within the scope of the EPA Worker Protection Standards (WPS) (40 CFR Part 170), all users must refer to the statement below or the Product Label for WPS-specified Personal Protective Equipment (PPE), Restricted Entry Interval (REI), and other Precautionary Statements.

PERSONAL PROTECTIVE EQUIPMENT FOR APPLICATORS AND

HANDLERS:
Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category B on an EPA chemical resistance category selection chart.

Applicators and handlers must wear:
Long-sleeved shirts and long pants
Chemical-resistant gloves such as barrier laminate or butyl rubber
Shoes plus socks

PERSONAL PROTECTIVE EQUIPMENT REQUIRED FOR EARLY ENTRY INTO TREATED AREAS:
For entry into treated area during the restricted entry interval (REI) of 24 hours that involves contact with anything that has been treated such as plants, soil, or water, the PPE required is:
Coveralls
Chemical-resistant gloves such as barrier laminate or butyl rubber
Shoes plus socks

FOR MANUFACTURING AND PACKAGING EMPLOYEES:
The personal protective equipment (PPE) in accordance with OSHA standards are recommended above.

Exposure Limits

Isobutyl alcohol	78-83-1	ACGIH	TWA		50 ppm
		NIOSH	REL	50 ppm	150 mg/m3
		OSHA Z1	PEL	100 ppm	300 mg/m3
		OSHA Z1A	TWA	50 ppm	150 mg/m3
		US CA OEL	TWA PEL	50 ppm	150 mg/m3
Isophorone	78-59-1	ACGIH	Ceiling		5 ppm
		NIOSH	REL	4 ppm	23 mg/m3
		OSHA Z1	PEL	25 ppm	140 mg/m3
		OSHA Z1A	TWA	4 ppm	23 mg/m3
		US CA OEL	TWA PEL	4 ppm	23 mg/m3
Xylene	1330-20-7	OSHA Z1	PEL	100 ppm	435 mg/m3
		OSHA Z1A	TWA	100 ppm	435 mg/m3
		OSHA Z1A	STEL	150 ppm	655 mg/m3
		US CA OEL	TWA PEL	100 ppm	435 mg/m3
		US CA OEL	Ceiling		300 ppm
		US CA OEL	STEL	150 ppm	655 mg/m3
		NIOSH	REL	100 ppm	435 mg/m3
		NIOSH	STEL	150 ppm	655 mg/m3
		NIOSH	REL	100 ppm	435 mg/m3
		NIOSH	STEL	150 ppm	655 mg/m3
		NIOSH	REL	100 ppm	435 mg/m3
		NIOSH	STEL	150 ppm	655 mg/m3
		ACGIH	TWA		100 ppm
		ACGIH	STEL		150 ppm

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	amber
Physical State	liquid
Odor	Faint organic
Vapor Pressure	Isophorone: < 1.0 mm Hg at 20 °C
Density	0.99 g/cm3
Boiling Point	Not available
Solubility (in water)	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Hazardous Polymerization (Conditions to avoid)	Will not occur

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	Rat: LD50: 4,000 mg/kg Low toxicity. Harmful if swallowed.
Acute Dermal Toxicity	Rabbit: LD50: > 8,700 mg/kg Low toxicity. Rat: LD50: 2,000 mg/kg Low toxicity.
Acute Inhalation Toxicity	Rat: LC50: > 6.2 mg/l 4 h The highest attainable aerosol concentration. No mortality was observed in rats exposed to this maximum dose.
Skin Irritation	Mild to moderate skin irritation.
Eye Irritation	Can cause severe eye irritation under conditions of prolonged contact.

The toxicity studies reported below were carried out with the Phenmedipham technical (> 96%), the active ingredient, and isophorone, the inert ingredient

Sub-Chronic Toxicity	Results from 90-day animal studies suggest no target organ effects under the

conditions of normal handling and use.

Chronic Toxicity

Phenmedipham:
In two-year feeding studies with phenmedipham in rats, mice and dogs, no organotoxic effects were observed; the only effects noted at the high experimental doses (500-1,000 ppm) were reduced weight gain (rats) and increased kidney weight (mice).

Isophorone:
When administered to mice or rats, by stomach tube in corn oil, at dosage levels of 250 or 500 mg/kg of body weight, isophorone was found to associate with a slightly increased incidence of renal and prepuitial tumors in male rats and of liver tumors in male mice. However, isophorone did not exhibit similar potential in either female rats or female mice. Thus, under the conditions of this bioassay, isophorone appeared to exhibit weak carcinogenic activity in these animal studies. The significance of this data is uncertain with regard to potential human health hazards under the realistic exposure conditions, i.e., exposure by inhalation or dermal contact during normal product handling and use. Isophorone is also listed as a NTP Testing Program Substance.

Assessment Carcinogenicity

ACGIH		
Isophorone	78-59-1	Group A3
Xylene	1330-20-7	Group A4
NTP		
None		
IARC		
Xylene	1330-20-7	3
OSHA		
None		

Reproductive & Developmental Toxicity

Phenmedipham showed no adverse effects on fertility or reproduction in a three-generation rat reproduction studies at dose levels up to 1,250 mg/kg/day.

Teratogenicity

Phenmedipham showed no embryotoxic or teratogenic effects in a rabbit or rat teratology study at dose levels up to 500 and 1,250 mg/kg/day, respectively.

Mutagenicity

Phenmedipham was not mutagenic or genotoxic when tested in the Ames gene mutation assay and in seven other mutagenesis systems.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions

This pesticide is toxic to fish and aquatic organisms. For terrestrial uses, do not apply directly to water, or to areas where surface water is present, or to intertidal areas below mean high water mark. Drift and runoff from treated areas may be hazardous to fish/aquatic organisms in adjacent sites. Do not contaminate water by cleaning of equipment or disposal of equipment wastewaters.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance

Waste, including spills or rinsates, and leftover pesticide that cannot be used according to label instructions must be disposed of according to applicable federal, state or local procedures.

RCRA Classification

78-83-1 Isobutyl alcohol

US. EPA Resource Conservation and Recovery Act (RCRA) U List of Hazardous Wastes (40 CFR 261.33(f) and 40 CFR 302 [CERCLA]): U140

1330-20-7 Xylene

US. EPA Resource Conservation and Recovery Act (RCRA) U List of Hazardous Wastes (40 CFR 261.33(f) and 40 CFR 302 [CERCLA]): U239

SECTION 14. TRANSPORT INFORMATION

PROPER SHIPPING NAME: None

DOT SHIPPING LABEL: None

SECTION 15. REGULATORY INFORMATION

US Federal

EPA Registration No. 264-616

TSCA list

Isobutyl alcohol	78-83-1
Isophorone	78-59-1
AROMATIC HYDROCARBONS	64742-95-6
Xylene	1330-20-7

TSCA 12b export notification

None

SARA Title III - section 302 - notification and information

None

SARA Title III - section 313 - toxic chemical release reporting

Xylene	1330-20-7	1.0%

US States Regulatory

CA Prop65

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

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

US State right-to-know ingredients

Isobutyl alcohol	78-83-1	CA, CT, IL, MN, NJ, PA, RI
Isophorone	78-59-1	CA, CT, IL, MN, NJ, PA, RI
Xylene	1330-20-7	CA, CT, IL, MI, MN, NJ, PA, RI

Canadian Regulations

Canadian Registrat. No. 21720

Canadian Domestic Substance List

Isobutyl alcohol	78-83-1
Isophorone	78-59-1
AROMATIC HYDROCARBONS	64742-95-6
Xylene	1330-20-7

Environmental

CERCLA

Isobutyl alcohol	78-83-1	5,000 lbs
Isophorone	78-59-1	5,000 lbs
Xylene	1330-20-7	100 lbs

Clean Water Section 307 Priority Pollutants

Isophorone	78-59-1

Safe Drinking Water Act Maximum Contaminant Levels

Xylene	1330-20-7

International Regulations

EU Classification

Xylene	1330-20-7	Harmful
R Phrases	Flammable. Harmful by inhalation and in contact with skin. Irritating to skin.	
S Phrases	Keep out of the reach of children. Avoid contact with the eyes.	

European Inventory of Existing Commercial Substances (EINECS)

Phenmedipham	13684-63-4
Isobutyl alcohol	78-83-1
Isophorone	78-59-1
AROMATIC HYDROCARBONS	64742-95-6
Xylene	1330-20-7

SECTION 16. OTHER INFORMATION

	Health	Flammability	Reactivity	Others
HMIS	2	2	0	H
NFPA	2	2	0	none

REVISED SECTIONS:
MSDS REVISION INDICATOR: Company name change.
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Phone: (306) 721-0310

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