Safety Data Sheet

BROADAXE® XC

Date: 7/22/2015
Replaces: 2/27/2015

1. PRODUCT IDENTIFICATION

Product identifier on label: **BROADAXE® XC**
Product No.: A21394B
Use: Herbicide
Manufacturer: Syngenta Crop Protection, LLC
Post Office Box 18300
Greensboro NC 27419
Manufacturer Phone: 1-800-334-9481

Emergency Phone: 1-800-888-8372

2. HAZARDS IDENTIFICATION

Classifications:
Inhalation: Category 4
Skin Sensitizer: Category 1B
Carcinogenicity: Category 2
Specific Target Organ Toxicity: Repeated Category 2
Eye Damage/Irritation: Category 2B

Signal Word (OSHA): Danger

Hazard Statements:
May cause an allergic skin reaction
Causes eye irritation
Harmful if inhaled
Suspected of causing cancer
May cause damage to organs through prolonged or repeated exposure

Hazard Symbols:



Precautionary Statements:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe mist, vapors, spray.
Wash hands and face thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves, protective clothing, eye protection.
If on skin: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

If exposed or concerned: Get medical advice/attention.

Call a poison center, doctor or Syngenta if you feel unwell.

See Section 4 First Aid Measures.

Wash contaminated clothing before reuse.

Store locked up.

Dispose of contents and container in accordance with local regulations.

Other Hazard Statements: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Common Name	CAS Number	Concentration
Naphthalene	Naphthalene	91-20-3	>0.1%
Other ingredients	Other ingredients	Trade Secret	>19.1%
Solvent Naptha (Petroleum), Heavy Aromatic	Aromatic Solvent	64742-94-5	<5%
Acetamide, 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl]-,(S)	S-Metolachlor	87392-12-9	68.25%
N-[2,4-dichloro-5-(4-difluoromethyl-3-methyl-5-oxo-4,5-dihydro-[1,2,4]triazol-1-yl)phenyl]methane sulfonamide	Sulfentrazone	122836-35-5	7.55%

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

Have the product container, label or Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison control 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. Do not give any liquid to the person. 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. Rinse skin immediately with plenty of water for 15-20 minutes. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.

Inhalation: If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

Most important symptoms/effects:

Eye irritation

Allergic skin reaction

Indication of immediate medical attention and special treatment needed:

There is no specific antidote if this product is ingested.

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Use dry chemical, foam or CO2 extinguishing media. If water is used to fight fire, dike and collect runoff.

Specific Hazards:

None known.

Special protective equipment and precautions for firefighters:

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures:

Follow exposure controls/personal protection outlined in Section 8.

Methods and materials for containment and cleaning up:

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Precautions for safe handling:

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.

Conditions for safe storage, including any incompatibilities:

Store locked up.

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.

Occupational Exposure Limits:

Chemical Name	OSHA PEL	ACGIH TLV	Other	Source
Naphthalene	10 ppm TWA	10 ppm TWA (skin)	10 ppm TWA	NIOSH
Other ingredients	Not Established	Not Established	Not Established	Not Applicable
Aromatic Solvent	Not Established	Not Established	50 mg/m3 (8 ppm) TWA	Manufacturer

S-Metolachlor	Not Established	Not Established	5 mg/m³ TWA	Syngenta
Sulfentrazone	Not Established	Not Established	Not Established	Not Applicable

Appropriate engineering controls:

Use effective engineering controls to comply with occupational exposure limits (if applicable).

Individual protection measures:

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:

Where eye contact is likely, use splash-proof chemical goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Skin Contact:

Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear.

Inhalation:

A combination particulate/organic vapor respirator should be used until effective engineering controls are installed to comply with occupational exposure limits, or until exposure limits are established. Use a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P or HE filter.

Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Amber liquid

Odor: Mild

Odor Threshold: Not Applicable

pH: 4.78

Melting point/freezing point: Not Available

Initial boiling point and boiling range: Not Applicable

Flash Point (Test Method): 208°F

Flammable Limits (% in Air): NotAvailable

Flammability: Not Available

Vapor Pressure: S-Metolachlor 2.8 x 10(-5) mmHg @ 77°F (25°C)
Sulfentrazone 1.3 x 10(-4) mPa @ 77°F (25°C)

Vapor Density: Not Available

Relative Density: 1.11 g/ml

Solubility (ies): S-Metolachlor 0.48 g/l @ 77°F (25°C)
Sulfentrazone 0.11 (pH 6)

Partition coefficient: n-octanol/water: Not Available

Autoignition Temperature: Not Available

Decomposition Temperature: Not Available

Viscosity: Not Available

Other: None

10. STABILITY AND REACTIVITY

Reactivity: Not reactive.

Chemical stability: Stable under normal use and storage conditions.

Possibility of hazardous reactions: Will not occur.

Conditions to Avoid: None known.

Incompatible materials: None known.

Hazardous Decomposition Products: Not Available

11. TOXICOLOGICAL INFORMATION

Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Eye irritation, Skin irritation

Delayed, immediate and chronic effects of exposure: Possible carcinogenicity, Eye irritation, Allergic skin reaction

Numerical measures of toxicity (acute toxicity/irritation studies (finished product))

Ingestion:	Oral (LD50 Rat) :	3129 mg/kg body weight
Dermal:	Dermal (LD50 Rat) :	> 5000 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	> 2.02 mg/l
Eye Contact:	Moderately Irritating (Rabbit)	
Skin Contact:	Moderately Irritating (Rabbit)	
Skin Sensitization:	May cause sensitization by skin contact.	

Reproductive/Developmental Effects

S-Metolachlor: Did not show reproductive effects in animal experiments.

Sulfentrazone: In a reproduction study, sulfentrazone produced adverse effects on the growth and survival of the offspring, decreased male fertility and oligospermia at 25 mg/kg/day, and 35 mg/kg/day. Sulfentrazone was found to be fetotoxic in oral and dermal developmental toxicity studies; the fetal NOELS were 10 mg/kg/day and 100 mg/kg/day, respectively. At labeled use rates and practices of mixing and applying, expected exposure is several hundred times lower than the doses that produced effects in laboratory animals.

Chronic/Subchronic Toxicity Studies

S-Metolachlor: No adverse effect has been observed in chronic toxicity tests.

Sulfentrazone: Not Available

Carcinogenicity

S-Metolachlor: Did not show carcinogenic effects in animal experiments.

Sulfentrazone: Not carcinogenic in lifetime feeding studies with laboratory animals, nor was it found to be mutagenic in a battery of tests.

Chemical Name	NTP/IARC/OSHA Carcinogen
Naphthalene	See "Toxicity", Sec. 11
Other ingredients	No
Solvent Naptha (Petroleum), Heavy Aromatic	No
Acetamide, 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl]-,(S)	No
N-[2,4-dichloro-5-(4-difluoromethyl-3-methyl-5-oxo-4,5-dihydro-[1,2,4]triazol-1-yl)phenyl]methane sulfonamide	Not Available

Other Toxicity Information

Not Available

Toxicity of Other Components

Aromatic Solvent

May cause irritation to the eyes, skin and respiratory system.
May cause dizziness or drowsiness. Aspiration hazard.

Naphthalene

Exposure to naphthalene can cause cataracts, liver damage, kidney failure, respiratory failure, hematuria, anemia, damage to red blood cells, leukocytosis, or coma.
Carcinogen Status:
NTP: Anticipated Carcinogen
IARC: Group 2B Possible Human Carcinogen

Other ingredients

Not Established

Target Organs

Active Ingredients

S-Metolachlor:	Liver
Sulfentrazone:	Not Available

Inert Ingredients

Aromatic Solvent:	Eye, skin, respiratory system, nervous system
Naphthalene:	Eye, liver, kidney, respiratory tract, blood, CNS
Other ingredients:	Not Established

12. ECOLOGICAL INFORMATION

Eco-Acute Toxicity

S-Metolachlor:

Fish (Rainbow Trout) 96-hour LC50 1.23 mg/l

Green Algae 96-hour ErC50 0.077 mg/l

Invertebrate (Water Flea) 48-hour EC50 11.24 mg/l

Sulfentrazone:

Fish and aquatic arthropods LC50 Values range from 60.4 mg/l to > 130 mg/l

Birds (Game) Oral LD50 > 2,250 mg/kg

Environmental Fate

S-Metolachlor:

The information presented here is for the active ingredient, S-Metolachlor.
Low bioaccumulation potential. Not persistent in soil. Stable in water. Sinks in water (after 24 h).

Sulfentrazone:

The information presented here is for the active ingredient, sulfentrazone.
Stable in soil (half-life = 18 months). In water, material is stable to hydrolysis over the pH range of 5 to 9, however, it will readily undergo photolysis (half-life <0.5 day). Material has a low affinity for organic matter (Koc = 43), but is mobile only in soils with high sand content. The potential for the material to bioaccumulate is very low, having a Log Pow of 1.48 and a bioconcentration factor of 1.1 - 2.0.

13. DISPOSAL CONSIDERATIONS

Disposal:

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

14. TRANSPORT INFORMATION

DOT Classification

Ground Transport - NAFTA
Not regulated

Comments

Water Transport - International
Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (S-Metolachlor), Marine Pollutant
Hazard Class: Class 9
Identification Number: UN 3082
Packing Group: PG III

Air Transport
Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (S-Metolachlor)
Hazard Class: Class 9
Identification Number: UN 3082
Packing Group: PG III

15. REGULATORY INFORMATION

Pesticide Registration:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Caution: Harmful if swallowed. Avoid contact with skin, eyes or clothing. Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

EPA Registration Number(s):

279-3442-100

EPCRA SARA Title III Classification:

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: Naphthalene >0.1% (CAS No. 91-20-3)
Aromatic Solvent <5% (CAS No. 64742-94-5)

CERCLA/SARA 304 Reportable Quantity (RQ):
Not Applicable

RCRA Hazardous Waste Classification (40 CFR 261):
Not Applicable

TSCA Status:
TSCA R & D Exempt

16. OTHER INFORMATION

NFPA Hazard Ratings		HMIS Hazard Ratings	
Health:	2	Health:	2
Flammability:	1	Flammability:	1
Instability:	0	Reactivity:	0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme
*	Chronic

Syngenta Hazard Category: D,S

For non-emergency questions about this product call:

1-800-334-9481

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