



MATERIAL SAFETY DATA SHEET

Narox

IDENTIFICATION OF THE SUPPLIER:

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PRODUCT IDENTIFICATION:

Common Name: S-Metolachlor 915 g/l
Trade Name: Narox
Uses category: Herbicide
Type of formulation: Emulsifiable Concentrate (EC)
Chemical Name: Mixture of: (aRS, 1 S)-2-chloro-N-(6-ethyl-o-tolyl)-N-(2-methoxy-1-methylethyl) acetamide (80-100%) and: (aRS, 1 R)-2-chloro-N-(6-ethyl-o-tolyl)-N-(2-methoxy-1-methylethyl)acetamide (20-0%)
Chemical Formula: C₁₅H₂₂ClNO₂
Molecular Weight: 283.8

PRODUCT COMPOSITION:

<i>Active Ingredient:</i>	<i>g/l</i>	<i>CAS #</i>
S-Metolachlor	915	87392-12-9 (S-isomer) 178961-20-1 (R-isomer)





Inert ingredient: up to 1liter

HAZARDS IDENTIFICATION:

Classifications

Inhalation: Category 4

Specific Target Organ Toxicity: Repeated Category 2

Specific Target Organ Toxicity: Drowsiness Category 3

Specific Target Organ Toxicity: Respiratory Irritation Category 3

Aspiration Hazard: Category 1

Eye Damage/Irritation: Category 2B

Carcinogenicity: Category 1B

Signal Word (OSHA): Danger

Hazard Statements:

May be fatal if swallowed and enters airways

Causes eye irritation Harmful if inhaled

May cause respiratory irritation

May cause drowsiness or dizziness

May cause 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.

Wear protective gloves, protective clothing, eye protection

If swallowed: Immediately call a poison center, doctor or Syngenta.

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

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 exposed or concerned: Get medical advice/attention.

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

Do NOT induce vomiting. Store locked up.

Dispose of contents and container in accordance with local regulations.

Other Hazard Statements: None





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

Drowsiness or dizziness

Respiratory irritation

Indication of immediate medical attention and special treatment needed:

There is no specific antidote if this product is ingested.

Treat symptomatically.





Contains petroleum distillate - vomiting may cause aspiration pneumonia.

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:

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

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.

ACCIDENTAL RELEASE MEASURE:

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.





PERSONAL PROTECTION/SAFTETY:

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
Benoxacor	Not Established	Not Established	1 mg/m ³ TWA	Syngenta
Petroleum Solvent	Not Established	Not Established	50 mg/m ³ (8 ppm) TWA	Manufacturer
Other ingredients	Not Applicable	Not Applicable	Not Applicable	Not Applicable
S-Metolachlor	Not Established	Not Established	5 mg/m ³ TWA	Syngenta

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 chemical splash 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 gloves (such as barrier laminate, butyl rubber, nitrile rubber or Viton), coveralls, socks and chemical-resistant footwear.

Inhalation:

A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits. In case of emergency spills, use a NIOSH approved respirator with any N, R, P or HE filter

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.

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: None known.

PHYSICAL AND CHEMICAL PROPERTIES:

Appearance: Dark brown liquid

Odor: Petroleum odor

Odor Threshold: Not Available

PH: 7.2 (1% solution in H₂O @ 77°F (25°C))

Melting point/freezing point: Not Applicable

Initial boiling point and boiling range: Not Available

Flash Point (Test Method): > 200°F (Setaflash)

Flammable Limits (% in Air): Not Available

Flammability: Not Applicable

Vapor Pressure: S-Metolachlor 2.8 x 10⁽⁻⁵⁾ mmHg @ 77°F (25°C)

Vapor Density: Not Available

Relative Density: 1.11 g/cm³ @ 68°F (20°C)

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

Partition coefficient: n-octanol/water: Not Available

Autoignition Temperature: Not Available

Decomposition Temperature: Not Available

Viscosity: Not Available

Other: None

TOXICOLOGICAL INFORMATION:

Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Eye irritation, Drowsiness or dizziness, Respiratory irritation





Delayed, immediate and chronic effects of exposure: Possible carcinogenicity, Eye irritation, Drowsiness or dizziness, Respiratory irritation

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

Ingestion: Oral (LD50 Female Rat): 2149 mg/kg body weight

Dermal: Dermal (LD50 Rabbit): > 2020 mg/kg body weight

Inhalation: Inhalation (LC50 Rat): > 3.8 mg/l air - 4 hours

Eye Contact: Moderately Irritating (Rabbit)

Skin Contact: Slightly Irritating (Rabbit)

Skin Sensitization: Not a Sensitizer (Guinea Pig)

Reproductive/Developmental Effects

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

Chronic/Subchronic Toxicity Studies

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

Carcinogenicity

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

Chemical Name	NTP/IARC/OSHA Carcinogen
Naphthalene	See "Toxicity", Sec. 11
2H-1,4-Benzoxazine, 4-(dichloroacetyl)-3,4-dihydro-3-methyl-	No
Petroleum Solvent	No

Other ingredients	No
Acetamide, 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl)-, (S)	No

Other Toxicity Information None

Toxicity of Other Components

Benoxacor

Results in stomach, liver, and kidney toxicity at high doses. Caused tumors in nonglandular portion of stomach of rodents (hitomorphologic region not





found in humans). Exposure may cause slight eye irritation. Repeated skin contact may cause a sensitization (allergic) reaction in sensitive individuals.

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 Applicable

Petroleum Solvent

Repeated exposure may cause skin dryness or cracking. If swallowed, may be aspirated and cause lung damage. May be irritating to the eyes, nose, throat and lungs. Breathing of high vapor concentrations may cause central nervous system (CNS) depression resulting in dizziness, light-headedness, headache, nausea and loss of coordination.

Target Organs

Active Ingredients

S-Metolachlor: Liver

Inert Ingredients

Benoxacor: Gastrointestinal tract, liver, kidney

Naphthalene: Eye, liver, kidney, respiratory tract, blood, CNS

Other ingredients: Not Applicable

Petroleum Solvent: Respiratory tract, stomach, liver, thyroid, urinary bladder, CNS, skin

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

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).

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: Under certain circumstances, discarded product may exhibit TCLP hazardous characteristics. A hazardous waste determination should be done on a case by case basis.

Listed Waste: Not Applicable

