



# Safety Data Sheet

Issue Date: 07-Jan-2013

Revision Date: 16-Oct-2015

Version 2

## 1. IDENTIFICATION

### Product Identifier

**Product Name** **Tailwind**

### Other means of identification

**SDS #** MANA-010

**Registration Number(s)** EPA Reg. No. 66222-245

### Recommended use of the chemical and restrictions on use

**Recommended Use** EPA registered pesticide.

### Details of the supplier of the safety data sheet

#### **Manufacturer Address**

Makhteshim Agan of North America, Inc.  
3120 Highwoods Blvd., Suite 100  
Raleigh, NC 27604  
1-919-256-9300

### Emergency Telephone Number

**Emergency Telephone (24 hr)** For fire, spill and/or leak contact INFOTRAC:  
1-800-535-5053 (North America) 1-352-323-3500 (International)  
For medical emergencies and health/safety inquiries, contact PROSAR:  
1-877-250-9291

## 2. HAZARDS IDENTIFICATION

This chemical is a product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-EPA registered chemicals. Please see Section 15 for additional EPA information.

**Appearance** Amber liquid

**Physical State** Liquid

**Odor** Moderate

### Classification

Acute toxicity- Oral	Category 4
Acute toxicity- Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Eye damage/ irritation	Category 2
Aspiration toxicity	Category 1
Flammable Liquids	Category 4

### Signal Word

**Danger**

**Hazard Statements**

Harmful if swallowed  
 Harmful if inhaled  
 Causes skin irritation  
 Causes serious eye irritation  
 May be fatal if swallowed and enters airways  
 Combustible liquid



**Precautionary Statements - Prevention**

Wash hands, face, and any exposed skin thoroughly after handling  
 Do not eat, drink, or smoke when using this product  
 Avoid breathing dust/mist  
 Use only outdoors or in a well-ventilated area  
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking  
 Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
 Do not induce vomiting  
 Rinse mouth  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing  
 Call a poison center/doctor if you feel unwell  
 IF ON SKIN: Wash with plenty of water  
 Take off contaminated clothing and wash before reuse  
 If skin irritation occurs: Get medical advice/attention  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing  
 If eye irritation persists: Get medical advice/attention  
 IN CASE OF FIRE: Use CO2, dry chemical, or foam for extinction

**Precautionary Statements - Storage**

Store locked up  
 Store in a well-ventilated place. Keep cool

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other Hazards**

Very toxic to aquatic life with long lasting effects

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS No	Weight-%
Metolachlor II	51218-45-2	56.76 - 60.28
Metribuzin	21087-64-9	13.23 - 14.63
Proprietary Solvent	Proprietary	balance

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

**4. FIRST-AID MEASURES**

**First Aid Measures**

- General Advice**                      When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
- Eye Contact**                        Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison control center or doctor for treatment advice.
- Skin Contact**                        IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Get medical attention if necessary.
- Inhalation**                         Remove victim to fresh air and keep at rest in a position comfortable for breathing. Give oxygen if breathing is difficult. If breathing has stopped, call 911, give artificial respiration. Seek medical advice.
- Ingestion**                         Immediately call a poison center or doctor/physician. Never give anything by mouth to an unconscious person. Obtain medical attention. Do not induce vomiting unless directed by medical personnel.

**Most important symptoms and effects**

- Symptoms**                         Liquid ingestion may result in vomiting; aspiration of liquid into the lungs must be avoided as liquid contact with the lungs can result in chemical pneumonitis and pulmonary edema/hemorrhage. May cause skin and eye irritation.

**Indication of any immediate medical attention and special treatment needed**

- Notes to Physician**                Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media**

Dry chemical. Foam. Carbon dioxide (CO2).

- Unsuitable Extinguishing Media** Not determined.

**Specific Hazards Arising from the Chemical**

Combustible liquid.

- Hazardous Combustion Products** Toxic gases may be formed by fire.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate area of unprotected personnel. Remain upwind of fire to avoid hazardous vapors and decomposition products. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

- Personal Precautions**                Wear protective clothing as described in Section 8 of this safety data sheet. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.
- Environmental Precautions**        Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

**Methods and material for containment and cleaning up**

- Methods for Containment** Prevent further leakage or spillage if safe to do so.
- Methods for Clean-Up** For small spills, absorb with sand, clay, or other inert absorbent. Place in appropriate containers for disposal. For large spills: recover free product. Dike for later disposal. Absorb with inert material, and then place in suitable container for chemical waste. Flush spill area with water, collect rinse water in containers for proper disposal.

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

- Advice on Safe Handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Wash face, hands, and any exposed skin thoroughly after handling. Do not contaminate water, food or feed by storage, disposal or by cleaning equipment. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Do not eat, drink or smoke when using this product. Use only with adequate ventilation.

**Conditions for safe storage, including any incompatibilities**

- Storage Conditions** Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep out of the reach of children. Store away from incompatible materials. Protect from excessive heat. Store locked up. Keep/store only in original container.
- Incompatible Materials** None known.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Guidelines** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Metribuzin 21087-64-9	TWA: 5 mg/m <sup>3</sup>	(vacated) TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>

**Appropriate engineering controls**

- Engineering Controls** Please refer to the product label. Use only with adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Individual protection measures, such as personal protective equipment**

- Eye/Face Protection** Use splash goggles or face shield when contact may occur.
- Skin and Body Protection** Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Viton or other impervious gloves are required. Long sleeve shirt, trousers, and safety shoes.
- Respiratory Protection** Ensure adequate ventilation, especially in confined areas. Wear an appropriate NIOSH/MSHA approved respirator if ventilation is inadequate.
- General Hygiene Considerations** Wash hands before eating, drinking, smoking and using the toilet. Remove contaminated clothing promptly and wash thoroughly before reused. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical State</b>	Liquid	<b>Odor</b>	Moderate
<b>Appearance</b>	Amber liquid	<b>Odor Threshold</b>	Not determined
<b>Color</b>	Amber		

<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>
<b>pH</b>	5.0 - 6.0	
<b>Melting Point/Freezing Point</b>	Not applicable	
<b>Boiling Point/Boiling Range</b>	Not determined	
<b>Flash Point</b>	82.2 °C / 180 °F	
<b>Evaporation Rate</b>	Not determined	
<b>Flammability (Solid, Gas)</b>	Liquid-not applicable	
<b>Upper Flammability Limits</b>	Not available	
<b>Lower Flammability Limit</b>	Not available	
<b>Vapor Pressure</b>	Not determined	(lambda-cyhalothrin technical)
<b>Vapor Density</b>	Not determined	
<b>Specific Gravity</b>	Not determined	
<b>Water Solubility</b>	Not determined	
<b>Solubility in other solvents</b>	Not determined	
<b>Partition Coefficient</b>	Not determined	
<b>Auto-ignition Temperature</b>	Not available	
<b>Decomposition Temperature</b>	Not determined	
<b>Kinematic Viscosity</b>	Not determined	
<b>Dynamic Viscosity</b>	50.7 @ 24°C; 23.2 @ 40°C	
<b>Explosive Properties</b>	Not determined	
<b>Oxidizing Properties</b>	Not determined	
<b>Bulk Density</b>	8.9 lb/gal - 9.1 lb/gal	

**10. STABILITY AND REACTIVITY**

**Reactivity**

Not reactive under normal conditions.

**Chemical Stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

<b>Hazardous Polymerization</b>	Not known to occur.
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**Conditions to Avoid**

Elevated temperatures.

**Incompatible Materials**

None known.

**Hazardous Decomposition Products**

May emit toxic fumes under fire conditions.

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

**Product Information**

- Eye Contact** Causes serious eye damage.
- Skin Contact** Causes skin irritation.
- Inhalation** Harmful if inhaled.
- Ingestion** Harmful if swallowed.

**Component Information**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Metolachlor II 51218-45-2	= 2200 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 1750 mg/m <sup>3</sup> ( Rat ) 4 h
Proprietary Solvent	> 5000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 590 mg/m <sup>3</sup> ( Rat ) 4 h
Metribuzin 21087-64-9	= 1100 mg/kg ( Rat )	= 2 g/kg ( Rat ) > 20 g/kg ( Rabbit )	> 860 mg/m <sup>3</sup> ( Rat ) 4 h

**Information on physical, chemical and toxicological effects**

- Symptoms** Please see section 4 of this SDS for symptoms.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

- Carcinogenicity** Not classifiable as a human carcinogen.
- Aspiration hazard** May be fatal if swallowed and enters airways.

**Product Information (Numerical measures of toxicity)**

- Acute Oral LD50 (Rat):** >1,098 mg/kg
- Acute Dermal LD50 (Rabbit):** >5,000 mg/kg
- Acute Inhalation LC50 (Rat):** >2.07 mg/L (4-hr)
- Eye Irritation:** Moderately irritating.
- Dermal Irritation:** Severely irritating.
- Dermal Sensitization:** Not a skin sensitizer.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Very toxic to aquatic life with long lasting effects. For terrestrial uses only. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters or rinsate. Do not apply when weather conditions favor drift from target area.

**Component Information**

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Metolachlor II 51218-45-2	57.1: 72 h Desmodesmus subspicatus mg/L EC50 static 0.0448 - 0.0568: 96 h Pseudokirchneriella subcapitata mg/L EC50 static	8.6 - 12: 96 h Lepomis macrochirus mg/L LC50 static 3.3 - 4.6: 96 h Oncorhynchus mykiss mg/L LC50 static 5.4 - 12: 96 h Pimephales promelas mg/L LC50 static 7.4 - 10.5: 96 h Poecilia reticulata mg/L LC50 static		25.1: 48 h Daphnia magna mg/L LC50 4.25: 48 h Daphnia magna mg/L EC50 13 - 18.4: 48 h Daphnia magna mg/L EC50 Static
Proprietary Solvent	2.5: 72 h Skeletonema costatum mg/L EC50	19: 96 h Pimephales promelas mg/L LC50 static 2.34: 96 h Oncorhynchus mykiss mg/L LC50 1740: 96 h Lepomis macrochirus mg/L LC50 static 45: 96 h Pimephales promelas mg/L LC50 flow-through 41: 96 h Pimephales promelas mg/L LC50		0.95: 48 h Daphnia magna mg/L EC50

**Persistence/Degradability**

Not determined.

**Bioaccumulation**

Not determined.

**Mobility**

Chemical Name	Partition Coefficient
Metolachlor II 51218-45-2	2.9
Proprietary Solvent	6.1

**Other Adverse Effects**

Not determined

**13. DISPOSAL CONSIDERATIONS**

**Waste Treatment Methods**

**Disposal of Wastes**

END USERS MUST DISPOSE OF ANY UNUSED PRODUCT AS PER THE LABEL RECOMMENDATIONS. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinse is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or Hazardous Waste representative at the nearest EPA regional office. Never place any unused product down an indoor or outdoor drain. Do not contaminate water, food or feed by disposal.

**Contaminated Packaging**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**14. TRANSPORT INFORMATION**

**DOT** Package less than 119 Gallons(450 Lt) : Not Regulated

Package over 119 Gallons (450 Lt):

**UN/ID No** NA1993  
**Proper Shipping Name** Combustible liquid, n.o.s. (hydrocarbon mixture)  
**Hazard Class** 3  
**Packing Group** III

**IATA**

**UN/ID No** UN3082  
**Proper Shipping Name** Environmentally hazardous substance, liquid, n.o.s. (Metolaclor)  
**Hazard Class** 9  
**Packing Group** III  
**Description** Marine Pollutant

**IMDG**

**UN/ID No** UN3082  
**Proper Shipping Name** Environmentally hazardous substance, liquid, n.o.s. (Metolaclor)  
**Hazard Class** 9  
**Packing Group** III  
**Marine Pollutant** This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO

**15. REGULATORY INFORMATION**

**International Inventories**

**TSCA** All ingredients are listed or exempt from listing on Chemical Substance Inventory

**Legend:**

*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*

**US Federal Regulations**

**SARA 311/312 Hazard Categories**

**Acute Health Hazard** Yes  
**Chronic Health Hazard** Yes  
**Fire Hazard** No  
**Sudden Release of Pressure Hazard** No  
**Reactive Hazard** No

**SARA 313**

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Metribuzin - 21087-64-9	21087-64-9	13.23 - 14.63	1.0

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania



Metolachlor II 51218-45-2	X		
Metribuzin 21087-64-9	X	X	X

**EPA Pesticide Registration Number** 66222-245

**EPA Statement**

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:

**EPA Pesticide Label**

Signal Word: Warning

Causes skin irritation. Harmful if swallowed. Causes moderate eye irritation. Do not get on skin or on clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

**Difference between SDS and EPA pesticide label**

	EPA	OSHA
<b>Signal Word</b>	Warning	Danger
Acute toxicity - Oral	Harmful if swallowed	harmful if swallowed
Acute toxicity – Inhalation	N/A	Harmful if inhaled
Skin corrosion/irritation	Causes skin irritation	Causes skin irritation
Serious eye damage/eye irritation	Causes moderate eye irritation	Causes serious eye irritation
Aspiration Hazard	N/A	May be fatal if swallowed and enters airways

**16. OTHER INFORMATION**

<b>NFPA</b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Instability</b>	<b>Special Hazards</b>
	2	2	0	None
<b>HMIS</b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Physical Hazards</b>	<b>Personal Protection</b>
	2	2	0	See section 8

Issue Date: 07-Jan-2013  
 Revision Date: 16-Oct-2015  
 Revision Note: Updated format from 02-Jun-2014

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**