

**1. Identification**

<b>Product identifier</b>	<b>Metolachlor</b>	
<b>Other means of identification</b>		
<b>Item</b>	N-12478	
<b>CAS number</b>	51218-45-2	
<b>Synonyms</b>	2-Chloro-6'-ethyl-N-(2-methoxy-1-methylethyl)aceto-o-toluidide	
<b>Recommended use</b>	For Laboratory Use Only	
<b>Recommended restrictions</b>	None known.	
<b>Manufacturer/Importer/Supplier/Distributor information</b>		
<b>Manufacturer</b>		
<b>Company name</b>	Chem Service, Inc.	
<b>Address</b>	660 Tower Lane West Chester, PA 19380 United States	
<b>Telephone</b>	Toll Free	800-452-9994
	Direct	610-692-3026
<b>Website</b>	www.chemservice.com	
<b>E-mail</b>	info@chemservice.com	
<b>Emergency phone number</b>	Chemtrec US	800-424-9300
	Chemtrec outside US	+1 703-527-3887

**2. Hazard(s) identification**

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Acute toxicity, oral	Category 4
	Acute toxicity, inhalation	Category 2
	Sensitization, skin	Category 1
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
<b>OSHA defined hazards</b>	Not classified.	

**Label elements**

<b>Signal word</b>	Danger
<b>Hazard statement</b>	Harmful if swallowed. May cause an allergic skin reaction. Fatal if inhaled. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
<b>Precautionary statement</b>	
<b>Prevention</b>	Do not breathe vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves. Wear respiratory protection.
<b>Response</b>	If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. Specific treatment is urgent (see this label). If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. Collect spillage.
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed. Store locked up.

<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	None.

### 3. Composition/information on ingredients

#### Substances

Chemical name	Common name and synonyms	CAS number	%
Metolachlor	2-Chloro-6'-ethyl-N-(2-methoxy-1-methyl)aceto-o-toluidide	51218-45-2	100

### 4. First-aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.
<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.
<b>Most important symptoms/effects, acute and delayed</b>	May cause an allergic skin reaction. Dermatitis. Rash.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Alcohol resistant foam. Dry sand. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe vapors or spray mist. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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**Methods and materials for containment and cleaning up**

This product is miscible in water. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

**Environmental precautions**

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage**

**Precautions for safe handling**

Do not breathe vapors or spray mist. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

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

Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Refrigerator Storage (2 - 8 °C)

**8. Exposure controls/personal protection**

**Occupational exposure limits**

This substance has no PEL, TLV, or other recommended exposure limit.

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

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

**Eye/face protection**

Chemical respirator with organic vapor cartridge and full facepiece.

**Skin protection**

**Hand protection**

Wear appropriate chemical resistant gloves.

**Other**

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection**

Chemical respirator with organic vapor cartridge and full facepiece.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

**9. Physical and chemical properties**

**Appearance**

**Physical state**

Liquid.

**Form**

Liquid

**Color**

Colorless to Yellowish

**Odor**

Not available.

**Odor threshold**

Not available.

**pH**

Not available.

**Melting point/freezing point**

-79.78 °F (-62.1 °C)

**Initial boiling point and boiling range**

212 °F (100 °C) 0.000133 kPa

**Flash point**

200.0 °F (93.3 °C) Closed Cup

**Evaporation rate**

Not available.

**Flammability (solid, gas)**

Not applicable.

## Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.

Vapor pressure 0.000004 kPa (77 °F (25 °C))

Vapor density Not available.

Relative density Not available.

## Solubility(ies)

Solubility (water) 488 mg/l at 25 °C

Partition coefficient (n-octanol/water) 3.13

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

## Other information

Density 1.12 g/cm<sup>3</sup> at 20 °C

Explosive properties Not explosive.

Flammability class Combustible IIIB estimated

Molecular formula C<sub>15</sub>-H<sub>22</sub>-Cl-N-O<sub>2</sub>

Molecular weight 283.8 g/mol

Oxidizing properties Not oxidizing.

Specific gravity 1.12

## 10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions Hazardous polymerization does not occur.

Conditions to avoid Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

Inhalation Fatal if inhaled.

Skin contact May cause an allergic skin reaction.

Eye contact Direct contact with eyes may cause temporary irritation.

Ingestion Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics May cause an allergic skin reaction. Dermatitis. Rash.

### Information on toxicological effects

Acute toxicity Fatal if inhaled. Harmful if swallowed.

Product	Species	Test Results
Metolachlor (CAS 51218-45-2)		
Inhalation		
LC50	Rat	> 2.02 mg/l/4h

Product	Species	Test Results
<b>Acute</b>		
<b>Oral</b>		
LD50	Rat	1936 mg/kg Male 1063 mg/kg Female

\* Estimates for product may be based on additional component data not shown.

<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitization</b>	May cause an allergic skin reaction.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	Not listed.
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	Not regulated.
<b>US. National Toxicology Program (NTP) Report on Carcinogens</b>	Not listed.
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.

## 12. Ecological information

**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

Product	Species	Test Results
Metolachlor (CAS 51218-45-2)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea (Daphnia magna) 18.7 - 29.5 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas) 5.4 - 12 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

## Persistence and degradability

### Bioaccumulative potential

**Partition coefficient n-octanol / water (log Kow)**  
3.13

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products**

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging**

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. Transport information****DOT**

<b>UN number</b>	UN2810
<b>UN proper shipping name</b>	Toxic, liquids, organic, n.o.s., MARINE POLLUTANT
<b>Transport hazard class(es)</b>	
<b>Class</b>	6.1(PGI, II)
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	6.1
<b>Packing group</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	IB2, T11, TP2, TP13, TP27
<b>Packaging exceptions</b>	153
<b>Packaging non bulk</b>	202
<b>Packaging bulk</b>	243

**IATA**

<b>UN number</b>	UN2810
<b>UN proper shipping name</b>	Toxic liquid, organic, n.o.s.
<b>Transport hazard class(es)</b>	
<b>Class</b>	6.1(PGI, II)
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	No.
<b>ERG Code</b>	6L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed with restrictions.
<b>Cargo aircraft only</b>	Allowed with restrictions.

**IMDG**

<b>UN number</b>	UN2810
<b>UN proper shipping name</b>	TOXIC LIQUID, ORGANIC, N.O.S., MARINE POLLUTANT
<b>Transport hazard class(es)</b>	
<b>Class</b>	6.1(PGI, II)
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>EmS</b>	F-A, S-A
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not established.

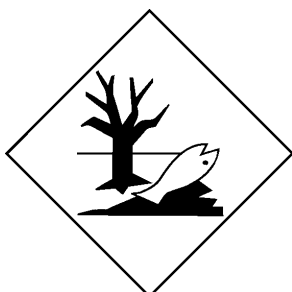
DOT



IATA; IMDG



Marine pollutant



General information

IMDG Regulated Marine Pollutant. DOT Regulated Marine Pollutant.

## 15. Regulatory information

### US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

#### CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

#### SARA 304 Emergency release notification

Not regulated.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

#### Hazard categories

Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

#### SARA 302 Extremely hazardous substance

Not listed.

#### SARA 311/312 Hazardous chemical

Yes

#### SARA 313 (TRI reporting)

Not regulated.

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Contaminate candidate list**US state regulations** California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

**Issue date** 07-23-2014  
**Revision date** 04-20-2021  
**Version #** 03  
**NFPA ratings** Health: 4  
 Flammability: 0  
 Instability: 0



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Persons not specifically and properly trained should not handle this chemical or its container. This product is furnished FOR LABORATORY USE ONLY! Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticide products, food additives or as household chemicals.

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## Revision information

First-aid measures: Inhalation

First-aid measures: Skin contact

Handling and storage: Precautions for safe handling

Handling and storage: Conditions for safe storage, including any incompatibilities

Exposure controls/personal protection: Eye/face protection

Exposure controls/personal protection: Respiratory protection

Exposure controls/personal protection: Other

Physical & Chemical Properties: Multiple Properties

Toxicological Information: Toxicological Data

Toxicological information: Corrosivity

Toxicological information: Eye contact

Toxicological information: Eye contact

Toxicological information: Skin contact

Toxicological information: Skin contact