

SAFETY DATA SHEET

Page: 1 of 6

This revision issued: October, 2015

Section 1 - Identification of The Material and Supplier



SIPCAM

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Trade Name: Strada Herbicide
APVMA Code: 53941
Chemical nature: Metolachlor is a chloroacetanilide herbicide.
Product Use: Agricultural herbicide for use as described on the product label.
Creation Date: February, 2007
This version issued: October, 2015 and is valid for 5 years from this date.

Section 2 - Hazards Identification

Statement of Hazardous Nature

This product is classified as: Not classified as hazardous according to the criteria of SWA.

Not a Dangerous Good according to the Australian Dangerous Goods (ADG) Code. However, this is a C1 Combustible Liquid so must be stored and handled as specified in AS 1940 "The storage and handling of flammable and combustible liquids."

Risk Phrases: R22. Harmful if swallowed.

Safety Phrases: S20, S23, S45, S24/25. When using, do not eat or drink. Do not breathe vapours or spray mists. In case of accident or if you feel unwell, contact a doctor or Poisons Information Centre immediately (show this MSDS where possible). Avoid contact with skin and eyes.

SUSMP Classification: S5

ADG Classification: None allocated. Not a Dangerous Good under the ADG Code.

UN Number: None allocated



GHS Signal word: WARNING.

HAZARD STATEMENT:

H227: Combustible liquid.

H302: Harmful if swallowed.

PREVENTION

P102: Keep out of reach of children.

P210: Keep away from heat, sparks, open flames and hot surfaces. - No smoking.

P262: Do not get in eyes, on skin, or on clothing.

P264: Wash contacted areas thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P281: Use personal protective equipment as required.

RESPONSE

P337: If eye irritation persists: seek medical attention.

P352: Wash with plenty of soap and water.

P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P370+P378: In case of fire, use carbon dioxide, dry chemical, foam, water fog.

STORAGE

P410: Protect from sunlight.

P402+P404: Store in a dry place. Store in a closed container.

P403+P235: Store in a well-ventilated place. Keep cool.

SAFETY DATA SHEET

Product Name: Strada Herbicide
Page: 2 of 6
This revision issued: October, 2015

DISPOSAL

P501: Dispose of contents and containers as specified on the registered label.

Emergency Overview

Physical Description & colour: Clear amber coloured liquid.

Odour: Mild solvent odour.

Major Health Hazards: Signs of human intoxication from Metolachlor exposure include abdominal cramps, anaemia, shortness of breath, dark urine, convulsions, diarrhoea, jaundice, weakness, nausea, sweating, and dizziness. This product is harmful if swallowed.

Potential Health Effects

Inhalation:

Short term exposure: Available data indicates that this product is not harmful. However product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort.

Long Term exposure: No data for health effects associated with long term inhalation.

Skin Contact:

Short term exposure: Available data indicates that this product is not harmful. It should present no hazards in normal use. However product may be mildly irritating, but is unlikely to cause anything more than mild discomfort which should disappear once contact ceases.

Long Term exposure: No data for health effects associated with long term skin exposure.

Eye Contact:

Short term exposure: This product is believed to be mildly irritating, to eyes, but is unlikely to cause anything more than mild transient discomfort.

Long Term exposure: No data for health effects associated with long term eye exposure.

Ingestion:

Short Term Exposure: Significant oral exposure is considered to be unlikely. Available data shows that this product is harmful, but symptoms are not available. This product is unlikely to cause any irritation problems in the short or long term.

Long Term exposure: No data for health effects associated with long term ingestion.

Carcinogen Status:

SWA: No significant ingredient is classified as carcinogenic by SWA.

NTP: No significant ingredient is classified as carcinogenic by NTP.

IARC: No significant ingredient is classified as carcinogenic by IARC.

Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc,%	TWA (mg/m ³)	STEL (mg/m ³)
Metolachlor	51218-45-2	72	not set	not set
Non hazardous hydrocarbon		10-20	not set	not set
Other non hazardous ingredients	secret	to 100	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

Section 4 - First Aid Measures

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this MSDS with you when you call.

Inhalation: First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Skin Contact: Irritation is unlikely. However, if irritation does occur, flush with lukewarm, gently flowing water for 5 minutes or until chemical is removed.

Eye Contact: Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed, while holding the eyelid(s) open. Obtain medical advice immediately if irritation occurs. Take special care if exposed person is wearing contact lenses.

SAFETY DATA SHEET

Product Name: Strada Herbicide

Page: 3 of 6

This revision issued: October, 2015

Ingestion: If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

Section 5 - Fire Fighting Measures

Fire and Explosion Hazards: This product is classified as a C1 combustible product. There is no risk of an explosion from this product under normal circumstances if it is involved in a fire. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids. Vapours from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. They may also flash back considerable distances.

Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

Extinguishing Media: Preferred extinguishing media are carbon dioxide, dry chemical, foam, water fog.

Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade.

Flash point: No data

Upper Flammability Limit: No data.

Lower Flammability Limit: No data.

Autoignition temperature: No data.

Flammability Class: Flammable Category 4 (GHS), C1 combustible (AS 1940)

Section 6 - Accidental Release Measures

Accidental release: In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. Suitable materials for protective clothing include rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8).

Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this MSDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

Section 7 - Handling and Storage

Handling: Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this MSDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

Storage: Note that this product is combustible and therefore, for Storage, meets the definition of Dangerous Goods in some states. If you store large quantities (tonnes) of such products, we suggest that you consult your state's Dangerous Goods authority in order to clarify your obligations regarding their storage.

Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging - there may be further storage instructions on the label.

Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

SWA Exposure Limits

TWA (mg/m³)

STEL (mg/m³)

Exposure limits have not been established by SWA for any of the significant ingredients in this product.

The ADI for Metolachlor is set at 0.08mg/kg/day. The corresponding NOEL is set at 7.5mg/kg/day. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, June 2014.

SAFETY DATA SHEET

Product Name: Strada Herbicide

Page: 4 of 6

This revision issued: October, 2015

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Ventilation: No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that vapours and mists are minimised.

Eye Protection: Eye protection such as protective glasses or goggles is recommended when this product is being used.

Skin Protection: The information at hand indicates that this product is not harmful and that normally no special skin protection is necessary. However, we suggest that you routinely avoid contact with all chemical products and that you wear suitable gloves (preferably elbow-length) when skin contact is likely.

Protective Material Types: We suggest that protective clothing be made from the following: rubber, PVC.

Respirator: Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above.

Section 9 - Physical and Chemical Properties:

Physical Description & colour:	Clear amber coloured liquid.
Odour:	Mild solvent odour.
Boiling Point:	Not available.
Freezing/Melting Point:	No specific data. Liquid at normal temperatures.
Volatiles:	No data.
Vapour Pressure:	No data.
Vapour Density:	No data.
Specific Gravity:	No data.
Water Solubility:	Emulsifiable.
pH:	No data.
Volatility:	No data.
Odour Threshold:	No data.
Evaporation Rate:	No data.
Coeff Oil/water distribution:	No data.
Autoignition temp:	No data.

Section 10 - Stability and Reactivity

Reactivity: This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

Conditions to Avoid: Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

Incompatibilities: acids, bases, strong oxidising agents.

Fire Decomposition: Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. Hydrogen chloride gas, other compounds of chlorine. Water. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

Polymerisation: This product will not undergo polymerisation reactions.

Section 11 - Toxicological Information

Toxicity: An information profile for Metolachlor is available at <http://extoxnet.orst.edu/pips/ghindex.html>

Acute toxicity: Metolachlor is harmful by ingestion. The reported oral LD₅₀ in rats for technical grade Metolachlor is from 1200mg/kg to 2780mg/kg. It is practically nontoxic by skin exposure, with a reported dermal LD₅₀ of greater than 2000mg/kg. Technical Metolachlor is a skin sensitizer in guinea pigs, and causes slight irritation and mild eye irritation in rabbits. The 4-hour rat inhalation LC₅₀ of greater than 4.3mg/L indicates slight toxicity via this route. Human exposure most commonly occurs through skin or eye contact. Signs of human intoxication from Metolachlor exposure include abdominal cramps, anaemia, shortness of breath, dark urine, convulsions, diarrhoea, jaundice, weakness, nausea, sweating, and dizziness.

Chronic toxicity: While Metolachlor is not readily absorbed by the skin, repeated dermal exposures may create skin sensitization, especially among those who work with Metolachlor. In rats fed Metolachlor for 90 days, no effects were noted at about 90mg/kg/day. In a 2-year study of mice, a similar no-effect level was found, but doses of about 300mg/kg/day caused decreased body weight gain.

Reproductive effects: In two long-term rat reproduction studies, mating, gestation, lactation, and fertility were not affected at doses of 50mg/kg/day. However, pup weights and parental food consumption decreased at this low dose.

SAFETY DATA SHEET

Product Name: Strada Herbicide

Page: 5 of 6

This revision issued: October, 2015

The evidence suggests that Metolachlor is not likely to have an effect on reproduction in humans under normal circumstances.

Teratogenic effects: Metolachlor caused no birth defects in rats at maternal doses of 300mg/kg/day administered during critical periods of gestation (organogenesis), although some delayed or abnormal development in offspring was seen at this dose. These data indicate that teratogenic and developmental effects in humans are unlikely at expected levels of exposure.

Mutagenic effects: Metolachlor tested negative in two bacterial assays. Also, no mutagenicity effects were noted in a standard mouse test. From this evidence it is unlikely that the compound is mutagenic.

Carcinogenic effects: Male and female mice exposed to doses up to 100mg/kg/day for 18 to 20 months did not develop cancer, nor did male rats at doses of up to 150mg/kg/day over a 2-year period. From these data, it seems unlikely that Metolachlor is carcinogenic in humans.

Organ toxicity: Exposure to Metolachlor can damage the liver and cause irritation of the skin, eyes, and mucous membranes. It has also caused skin sensitization in guinea pigs.

Fate in humans and animals: Studies show that orally administered Metolachlor is quickly broken down into metabolites and is almost totally eliminated in the urine and faeces of goats, rats, and poultry. Metolachlor itself was not detected in the urine, faeces, or body tissues.

Section 12 - Ecological Information

Metolachlor is not readily biodegradable.

Breakdown in soil and groundwater: Metolachlor is moderately persistent in the soil environment. Half-lives of 15 to 70 days in different soils have been observed. Soils with significant soil water content may show more rapid breakdown.

Breakdown in water: Metolachlor is highly persistent in water over a wide range of water acidity. Its half-life at 20 C is more than 200 days in highly acid waters, and is 97 days in highly basic waters. Metolachlor is also relatively stable in water under natural sunlight.

Breakdown in vegetation: Metolachlor, applied before plants emerge, is absorbed through shoots just above the seed, and may be absorbed from the soil into and through the roots. This chemical acts by inhibiting the production of essential plant components like chlorophylls, enzymes, and other proteins. Metolachlor is a growth inhibitor affecting root and shoot growth after seeds have germinated.

Section 13 - Disposal Considerations

Disposal: Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 <http://www.chemclear.com.au/> and for help with the disposal of empty drums, contact DrumMuster <http://www.drummuster.com.au/> where you will find contact details for your area.

Section 14 - Transport Information

ADG Code: This product is not classified as a Dangerous Good. No special transport conditions are necessary unless required by other regulations.

Section 15 - Regulatory Information

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations. The following ingredient: Metolachlor, is mentioned in the SUSMP.

Section 16 - Other Information

This MSDS contains only safety-related information. For other data see product literature.

Acronyms:

ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail, 7th Edition
AICS	Australian Inventory of Chemical Substances
SWA	Safe Work Australia, formerly ASCC and NOHSC
CAS number	Chemical Abstracts Service Registry Number
Hazchem Number	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
IARC	International Agency for Research on Cancer
NOS	Not otherwise specified
NTP	National Toxicology Program (USA)
R-Phrase	Risk Phrase
SUSMP	Standard for the Uniform Scheduling of Medicines & Poisons

SAFETY DATA SHEET

Product Name: Strada Herbicide

Page: 6 of 6

This revision issued: October, 2015

UN Number

United Nations Number

Contact Points:

AUSTRALIA

Police and Fire Brigade:

Dial

000

If ineffective:

Dial

1100 (Exchange)

For emergency response:

Dial

1800 033 111

National Poisons Information Centre: Dial 13 1126 (from anywhere in Australia)

Please read all labels carefully before using product.

The Safety Data Sheet (SDS) augments the label and should not be used in place of regulatory approved product labels which are attached to or accompanying the product container. This SDS provides important health, safety and environmental information for personnel that are manufacturing, distributing, transporting and storing the product, including emergency responders and other product handlers. The label provides information specifically for product users.

This SDS is prepared in accord with the SWA document "Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice" (December 2011)

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