

MATERIAL SAFETY DATA SHEET

Page: 1 of 6

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Section 1 - Identification of Chemical Product and Company



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Trade Name: Burst 500SC Herbicide
Substance: Propyzamide is an amide derived herbicide.
Product Use: Agricultural herbicide for use as described on the product label.
Creation Date: September 2002
Revision Date: September 2007

Section 2 - Hazards Identification

Statement of Hazardous Nature

This product is classified as: Xi, Irritating. N, Dangerous to the environment. Hazardous according to the criteria of ASCC.

Not a Dangerous Good according to the Australian Dangerous Goods (ADG) Code.

Risk Phrases: R40, R36/38, R51/53. Limited evidence of a carcinogenic effect. Irritating to eyes and skin. Toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment.

Safety Phrases: S23, S60, S61, S24/25, S36/39. Do not breathe spray mists. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/Safety Data Sheets. Avoid contact with skin and eyes. Wear suitable protective clothing and eye/face protection.

SUSDP Classification: S5

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

UN Number: None allocated

Emergency Overview

Physical Description & colour: Light brown coloured viscous liquid.

Odour: Mild odour.

Major Health Hazards: Propyzamide is practically nontoxic via ingestion. The reported oral LD₅₀ values for Propyzamide range from 5620 mg/kg in female rats to 8350 mg/kg in male rats, respectively, and 10,000 mg/kg in dogs. Propyzamide is slightly toxic by skin exposure, with a dermal LD₅₀ of greater than 3160 mg/kg. When applied to the skin of rabbits, it produced slight local irritation, but no systemic intoxication. The 4-hour inhalation LC₅₀ for Propyzamide is greater than 5.0 mg/L, indicating slight toxicity by this route. For this product: limited evidence of a carcinogenic effect, irritating to eyes and skin.

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 is a skin irritant. Symptoms may include itchiness and reddening of contacted skin. Other symptoms may also become evident, but all should disappear once exposure has ceased.

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

MATERIAL SAFETY DATA SHEET

Product Name: Burst 500SC Herbicide

Page: 2 of 6

This revision issued: November, 2007

Eye Contact:

Short term exposure: This product is an eye irritant. Symptoms may include stinging and reddening of eyes and watering which may become copious. Other symptoms may also become evident. If exposure is brief, symptoms should disappear once exposure has ceased. However, lengthy exposure or delayed treatment may cause permanent damage.

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. However, this product is an oral irritant. Symptoms may include burning sensation and reddening of skin in mouth and throat. Other symptoms may also become evident, but all should disappear once exposure has ceased.

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

Carcinogen Status:

ASCC: Propyzamide is classified by ASCC as a Class 3 Carcinogen, possibly carcinogenic to humans. See the ASCC website for further details. A web address has not been provided as addresses frequently change.

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)
Propyzamide	23950-58-5	500g/L	not set	not set
Ethylene glycol	107-21-1	42g/L	60	120
Other non hazardous ingredients	secret	<10	not set	not set
Water	7732-18-5	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 ASCC 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: No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

Skin Contact: Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts) and completely decontaminate them before reuse or discard. If irritation persists, repeat flushing and seek medical attention.

Eye Contact: Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.

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: There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

This product is likely to decompose only after heating to dryness, followed by further strong heating.

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

MATERIAL SAFETY DATA SHEET

Product Name: Burst 500SC Herbicide

Page: 3 of 6

This revision issued: November, 2007

Extinguishing Media: Not Combustible. Use extinguishing media suited to burning materials.

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

Flash point: Does not burn.

Upper Flammability Limit: Does not burn.

Lower Flammability Limit: Does not burn.

Autoignition temperature: Not applicable - does not burn.

Flammability Class: Does not burn.

Section 6 - Accidental Release Measures

Accidental release: In the event of a major spill, prevent spillage from entering drains or water courses. Wear full protective clothing including eye/face protection. All skin areas should be covered. See below under Personal Protection regarding Australian Standards relating to personal protective equipment. Suitable materials for protective clothing include rubber, PVC, butyl rubber. 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). Otherwise, not normally necessary.

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: This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. 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**, Industrial Clothing: **AS2919**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

ASCC Exposure limits	TWA (mg/m ³)	STEL (mg/m ³)
Ethylene glycol	60	120

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: This product should only be used where there is ventilation that is adequate to keep exposure below the TWA levels. If necessary, use a fan.

Eye Protection: Protective glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used.

Skin Protection: Prevent skin contact by wearing impervious gloves, clothes and, preferably, apron. Make sure that all skin areas are covered. See below for suitable material types.

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

MATERIAL SAFETY DATA SHEET

Product Name: Burst 500SC Herbicide

Page: 4 of 6

This revision issued: November, 2007

Respirator: Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above. Otherwise, not normally necessary.

Eyebaths or eyewash stations and safety deluge showers should be provided near to where this product is being used.

Section 9 - Physical and Chemical Properties:

Physical Description & colour:	Light brown coloured viscous liquid.
Odour:	Mild odour.
Boiling Point:	Approximately 100°C at 100kPa.
Freezing/Melting Point:	Below 0°C.
Volatiles:	Water component.
Vapour Pressure:	2.37 kPa at 20°C (water vapour pressure).
Vapour Density:	No data.
Specific Gravity:	1.1-1.2 at 20°C
Water Solubility:	Forms suspensions in water.
pH:	No data.
Volatility:	No data.
Odour Threshold:	No data.
Evaporation Rate:	No data.
Coeff Oil/water distribution:	No data
Autoignition temp:	Not applicable - does not burn.

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: strong acids, strong bases, strong oxidising agents.

Fire Decomposition: This product is likely to decompose only after heating to dryness, followed by further strong heating. 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. Water. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

Polymerisation: Polymerisation reactions are unlikely; they are not expected to occur.

Section 11 - Toxicological Information

Toxicity: Acute toxicity: Propyzamide is practically nontoxic via ingestion. The reported oral LD₅₀ values for Propyzamide range from 5620 mg/kg in female rats to 8350 mg/kg in male rats, respectively, and 10,000 mg/kg in dogs. Propyzamide is slightly toxic by skin exposure, with a dermal LD₅₀ of greater than 3160 mg/kg. When applied to the skin of rabbits, it produced slight local irritation, but no systemic intoxication. The 4-hour inhalation LC₅₀ for Propyzamide is greater than 5.0 mg/L, indicating slight toxicity by this route.

Chronic toxicity: When dogs were fed a diet containing Propyzamide for 3 months, decreases in weight gain and food consumption, changes in blood chemistry, and increased liver weights were observed at doses of 15 mg/kg/day. In a study in rats over 3 months, similar effects were seen at doses of over 10 mg/kg/day, and changes in thyroid, adrenal, and pituitary function were observed at 50 mg/kg/day. In a 2-year feeding study in dogs, the addition of Propyzamide to the diet at doses of 0.75, 2.5, or 7.5 mg/kg/day caused no adverse health effects at any of the doses tested.

Reproductive effects: When pregnant rabbits were given doses of 5, 20, or 80 mg/kg/day during days 7 to 19 of gestation (18 rabbits per dose), no effects on development or reproduction were observed at or below the 20 mg/kg dose. At 80 mg/kg, there was an increased incidence of liver lesions, one maternal death, five abortions, and a decrease in maternal and offspring weight gain. In a three-generation rat reproduction study, no effects on reproduction were observed at 300 ppm (15 mg/kg/day), the highest dose tested. It is unlikely that Propyzamide will have reproductive effects except at doses high enough to cause maternal toxicity.

Teratogenic effects: No teratogenic effects were found when doses as high as 15 mg/kg/day were administered to pregnant rabbits. This evidence suggests Propyzamide is not teratogenic.

Mutagenic effects: Mutagenicity tests on bacteria, mammalian cell cultures, and live animals have been negative. It appears Propyzamide is not mutagenic.

MATERIAL SAFETY DATA SHEET

Product Name: Burst 500SC Herbicide

Page: 5 of 6

This revision issued: November, 2007

Carcinogenic effects: Propyzamide caused liver tumors in mice after 2 years at doses of 10 mg/kg/day and above. In rats, doses of 50 mg/kg/day and above produced changes in ovary and liver structure and function, as well as thyroid and testicular effects. These data suggest that Propyzamide may have carcinogenic activity at sufficient doses.

Organ toxicity: Target organs identified in animal studies include the liver, thyroid, and adrenal and pituitary glands.

Fate in humans and animals: Propyzamide is not readily absorbed into the bloodstream from the gastrointestinal tracts of rats and cows. After oral doses of a formulated product to rats, 54% and 0.6% of the unmetabolized Propyzamide was recovered in faeces and urine, respectively. Unmetabolized Propyzamide did not appear in the urine of a cow treated orally with the formulated product. Traces of Propyzamide were found in the milk of cows given feed that contained 5 ppm doses of a Propyzamide formulation. Propyzamide has a low potential for bioaccumulation in animal tissues.

Classification of Hazardous Ingredients

Ingredient	Risk Phrases
Propyzamide	Conc>=1%: Xn; R40

Section 12 - Ecological Information

Toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment. This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.

Effects on birds: Propyzamide is practically nontoxic to birds. The oral LD₅₀ for Propyzamide in Japanese quail is 8700 mg/kg, and greater than 14,000 mg/kg in mallard ducks. The 8-day dietary LC₅₀ for Kerb Technical Herbicide in bobwhite quail and mallard ducks is greater than 10,000 ppm.

Effects on aquatic organisms: Propyzamide is practically nontoxic to warm water fish and slightly toxic to cold water fish. The 96-hour LC₅₀ for Propyzamide is 100 mg/L in bluegill sunfish, 72 mg/L in rainbow trout, 350 mg/L in goldfish, 204 mg/L in harlequin fish, and 150 mg/L in guppies. The 48-hour LC₅₀ for Daphnia magna, a small freshwater crustacean, is greater than 5.6 mg/L. Propyzamide may be moderately toxic to aquatic invertebrates.

Effects on other organisms: Propyzamide is nontoxic to honey bees.

Environmental Fate:

Breakdown in soil and groundwater: Propyzamide is moderately persistent in most soils, with a reported average field half-life of 60 days. It is readily bound, or adsorbed, to most soils. Increasing soil temperature, and to a lesser extent, soil moisture and pH increase the rate of Propyzamide degradation in soil. In most soil types, there is very little movement, or leaching, of Propyzamide into groundwater as it is nearly insoluble in water. Leaching of Propyzamide residues in soil is most likely in soils with low organic matter content, such as loamy sands or silt loams. Propyzamide is inactivated by soil organic matter and will not be effective on muck, peat, or other very high-organic content soils. Depending upon soil type and climatic conditions, persistence of Propyzamide may be higher. Accumulation of the herbicide from repeated annual applications to the same soil does not appear problematic. Chemical degradation may be the main route of disappearance from the soil. Photodecomposition at the soil surface can also occur. A moderate amount of Propyzamide breakdown is carried out by soil microorganisms. The herbicide is not active against common soil microorganisms. Volatilization loss may be high under hot, dry conditions.

Breakdown in water: In water bodies, Propyzamide is stable at a neutral pH. It is slowly degraded chemically, by light, and by aquatic and microorganisms. Loss from volatilization is not significant. Propyzamide is thought to be stable because less than 10% was hydrolyzed, or broken down in water, over a 4-week period. It is stable to hydrolysis between pH 4.7 and 8.8.

Breakdown in vegetation: Propyzamide is readily translocated from the roots to other plant parts. Absorption of Propyzamide through plant leaves is minimal. Propyzamide is metabolized slowly by both tolerant and sensitive plants.

Section 13 - Disposal Considerations

Disposal: There are many pieces of legislation covering waste disposal and they differ in each state and territory, so each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. The Hierarchy of Controls seems to be common - the user should investigate: Reduce, Reuse, and Recycle and only if all else fails should disposal be considered. Note that properties of a product may change in use, so that the following suggestions may not always be appropriate. The following may help you in properly addressing this matter for this product. 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.

MATERIAL SAFETY DATA SHEET

Product Name: Burst 500SC Herbicide

Page: 6 of 6

This revision issued: November, 2007

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 ingredients: Propyzamide, Ethylene glycol, are mentioned in the SUSDP.

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
AICS	Australian Inventory of Chemical Substances
ASCC	Office of the Australian Safety and Compensation Council
CAS number	Chemical Abstracts Service Registry Number
Hazchem Code	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
SUSDP	Standard for the Uniform Scheduling of Drugs & Poisons
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 Material Safety Data Sheet (MSDS) 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 MSDS 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 MSDS is prepared in accord with the ASCC document "National Code of Practice for the Preparation of Material Safety Data Sheets" 2nd Edition [NOHSC:2011(2003)]

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