

SAFETY DATA SHEET

SECTION 1

IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **Apparent Ravage Herbicide**

Other Names: MCPA plus Dicamba. Group I Herbicide.
Use: An agricultural cereal herbicide.
Company: Apparent Pty Ltd.
Address: Suite G.08, 762 Toorak Road, Hawthorn East, Vic. 3123.
PO Box 3092, Cotham PO, Kew, Vic 3101
ACN/ABN: 143 724 136
Telephone Number: 03 9817 5536
Email: enquiries@apparentag.com.au
Emergency Contact: 0411 227 338

SECTION 2

HAZARDS IDENTIFICATION

**Classified as hazardous according to criteria of Safe Work Australia.
Not classified as a Dangerous Good according to the ADG Code.**

Globally Harmonised System (GHS) classification of the substance/mixture:

Acute Toxicity – Oral: Category 4.
Acute Toxicity – Dermal: Category 4.
Acute Toxicity – Inhalation: Category 4.
Hazardous to the Aquatic Environment – Acute Hazard: Category 1.
Eye Damage/Irritation: Category 2B.

Signal Word: WARNING.

Hazard statements:

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.

Precautionary Statements:

Prevention:

P261 Avoid breathing mist, vapours or spray.
P264 Wash hands, arms and face thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if feel unwell.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P363 Wash contaminated clothing before reuse.
P391 Collect spillage.

Disposal:

P501 Dispose of contents/container in accordance with national regulations.

SECTION 2 HAZARDS IDENTIFICATION (Continued)

Pictograms:

**SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS****Ingredients:**

CHEMICAL	CAS NUMBER	PROPORTION
MCPA as the dimethylamine salt	2039-46-5	340 g/L
Dicamba as the dimethylamine salt	2300-66-5	80 g/L
Other ingredients (including water) determined not to be hazardous		Balance

SECTION 4 FIRST AID MEASURES**FIRST AID**

- Ingestion:** If poisoning occurs, contact a Doctor or Poisons Information Centre. Phone 131 126. If swallowed do NOT induce vomiting. Wash mouth out with water.
- Eye contact:** Immediately hold eyes open and flood with clean water. Ensure irrigation under eyelids by occasionally lifting them. Do not try to remove contact lenses unless trained. If irritation persists, seek medical attention.
- Skin contact:** Remove contaminated clothing. Wash skin with soap and water. If skin is irritated, seek medical advice.
- Inhalation:** Remove to fresh air and observe until recovered. If irritation or symptoms persists more than about 30 minutes, seek medical advice.

Advice to Doctor: Treat symptomatically.

SECTION 5 FIRE FIGHTING MEASURES

Specific Hazard: Generally considered a low risk due to the water content, but once the water has evaporated the product is combustible.

Extinguishing media: Non-combustible material. Extinguish fire using media suited to burning material. If containers are ruptured contain all runoff.

Hazards from combustion products: Non-combustible, however after evaporation of water, the residual material can emit toxic fumes. Will not polymerise.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind residents. Wear full protective clothing and self contained breathing apparatus. Do not breathe smoke or vapours generated.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Emergency procedures: In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear cotton overalls buttoned to the neck and wrist and washable hat, elbow-length PVC gloves and face shield or goggles. In the case of spillage, stop leak if safe to do so, and contain spill. Contain and absorb spilled material with absorbent material such as sand, clay, cat litter or material such as vermiculite. Collect recoverable product for use as labelled on the product. Vacuum, shovel or pump contaminated spilled material into an approved container and dispose of waste as per the requirements of Local or State Waste Management Authorities. Keep out animals and unprotected persons. Prevent spillage entering drains or watercourses.

This product is a herbicide and spills can damage crops, pastures and desirable vegetation. Prevent from entering drains, waterways or sewers. Use earthen bunds or absorbent bunding to prevent spreading of spillage.

SECTION 6 ACCIDENTAL RELEASE MEASURES (Continued)

Material and methods for containment and cleanup procedures: To clean spill area, tools and equipment, wash with a solution of soap, water and acetic acid/vinegar. Follow this with a neutralisation step of washing the area with a bleach or caustic soda ash solution. Finally, wash with a strong soap and water solution. Absorb, as above, any excess liquid and add both solutions to the drums of waste already collected.

SECTION 7 HANDLING AND STORAGE

Precautions for Safe Handling: Keep out of reach of children. Harmful if absorbed by skin contact, inhaled or swallowed. Will irritate the eyes and skin. DO NOT inhale vapour. Repeated exposure may cause allergic disorders. When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist and washable hat, elbow-length PVC gloves and face shield or goggles. When using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow length PVC gloves. If product in eyes, wash out immediately with water. After each day's use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use wash gloves and face shield or goggles and contaminated clothing.

Conditions for Safe Storage: Store in the closed, original container in a dry, cool, well ventilated area away from children, animals, food, feedstuffs, herbicides, seed and fertilisers. DO NOT store for prolonged periods in direct sunlight. This product is a Schedule 5 Poison (S5) and must be stored, transported and sold in accordance with the relevant Health Department regulations. Not classified as a Dangerous Good.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**Exposure Guidelines:**

No exposure limits have been assigned by Safe Work Australia for this product

Biological Limit Values:

No biological limit allocated.

Engineering controls:

Use in ventilated areas. Keep containers closed when not in use. No special engineering controls are required.

Personal Protective Equipment (PPE):

General: When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist and washable hat, elbow-length PVC gloves and face shield or goggles. When using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow length PVC gloves. If product in eyes, wash out immediately with water. After each day's use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use wash gloves and face shield or goggles and contaminated clothing.

Personal Hygiene: Harmful if absorbed by skin contact, inhaled or swallowed. Will irritate the eyes and skin. DO NOT inhale vapour. Repeated exposure may cause allergic disorders. Clean water should be available for washing in case of eye or skin contamination. Wash skin before eating, drinking or smoking. Shower at the end of the workday.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, almost colourless liquid.
Odour:	Mild amine odour.
Boiling point:	No data available.
Freezing point:	No data available.
Solubility in Water:	Soluble in water.
pH:	No data available.
Flammability:	Not flammable.
Poisons Schedule:	S5.
Specific Gravity:	1.12
Formulation type:	Aqueous concentrate.

SECTION 10**STABILITY AND REACTIVITY**

Chemical Stability: Product is considered stable in ambient conditions for a period of at least 2 years after manufacture.

Conditions to avoid: Keep away from strong oxidizing agents.

Incompatible materials: Strong oxidizing agent such as chlorates, nitrates, peroxides etc.

Hazardous decomposition products: If heated until evaporation of water, the residual material can emit toxic fumes. Will not polymerise.

Hazardous reactions: Avoid contact of the concentrate with strong alkalis and alkaline materials such as lime. Polymerisation is unlikely.

SECTION 11**TOXICOLOGICAL INFORMATION**

No specific data is available for this product as no toxicity tests have been conducted on this product. Information presented is our best judgement based on similar products and/or individual components. As with all products for which limited data is available, caution must be exercised through the use of protective equipment and handling procedures to minimise exposure.

Potential Health Effects:**ACUTE EFFECTS**

Swallowed: Harmful if swallowed. Acute Oral LD₅₀ 1707 mg/kg (rats) - Dicamba. Oral LD₅₀ 700 mg/kg (rats) – MCPA.

Eye: This product will cause severe irritation to the eyes. Possible eye damage if not washed off immediately.

Skin: This product will irritate the skin and may be sensitising to sensitive individuals. Acute dermal LD₅₀ > 2,000 mg/kg - Dicamba. Acute dermal LD₅₀ > 1,000 mg/kg – MCPA.

Inhaled: Inhalation of mists or sprays may produce respiratory irritation. DO NOT inhale vapour.

Chronic toxicity: MCPA dietary levels of approximately 50 mg/kg/day and 125 mg/kg/day over 7 months caused reduced feeding rates and retarded growth rates in rats. White blood cell counts and ratios were not affected, but some reductions in red blood cell counts and haemoglobin did appear to be associated with exposure to MCPA at oral dose levels of approximately 20 mg/kg/day. In the same study, oral doses of approximately 5 mg/kg/day caused increased relative kidney weights, and oral doses of approximately 20 mg/kg/day caused increased relative liver weights. Other studies in rats showed no effects on kidney or liver weights over an unspecified period at oral doses of 60 mg/kg/day, but oral doses of 150 mg/kg/day did cause reversible increases in these weights over a period of 3 months. Very high dermal doses of 500 mg/kg/day caused reduced body weight, and even higher dermal doses of 1000 and 2000 mg/kg/day resulted in increased mortality and observable changes in liver, kidney, spleen, & thymus.

Mutagenic effects: MCPA is reportedly weakly mutagenic to bone marrow and ovarian cells of hamsters, but negative results were reported for other mutagenic tests. It was negative in a bacterial test system (both with and without metabolic activation), negative in spot tests, and negative in host-mediated tests. It produced no detectable increase in chromosomal aberrations in house flies. Some irregularities occurred in gene transfer during cell division in brewers yeast, although at levels which caused massive cell death. It appears that the compound poses little or no mutagenic risk. Dicamba has not been shown to be a mutagen.

Carcinogenic effects: All available evidence on MCPA indicates that the compound does not cause cancer. Forestry and agricultural workers occupationally exposed to MCPA in Sweden did not show increased cancer incidence.

Reproductive effects: A two-generation rat study at doses of up to 15 mg/kg/day affected reproductive function. Even smaller amounts of the compound were toxic to the foetuses. Dogs receiving relatively small amounts of MCPA (8 and 16 mg/kg) for 13 weeks showed adverse sperm and testes changes. It is unlikely that humans will experience these effects under normal exposure conditions.

Dicamba is suspected of being a human teratogen. No teratogenic effects have been shown in lab animals such as rabbits and rats.

SECTION 11**TOXICOLOGICAL INFORMATION (Continued)**

Teratogenic effects: Offspring of pregnant rats fed 20 to 125 mg/kg of MCPA on days 6 to 15 of gestation, had no birth defects. However, when the ethyl ester form of MCPA was fed to pregnant rats (2 to 100 mg/kg/day on days 8 to 15 of gestation), cleft palate, heart defect, and kidney anomalies were observed in the offspring. Mice fed 5 to 100 mg/kg/day of MCPA on days 6 to 15 showed significantly reduced foetal weight and delayed bone development at the highest dose. Teratogenic effects in humans are unlikely at expected exposure levels.

Organ toxicity: Target organs identified in animal studies include the liver, kidneys, spleen and thymus. Farm worker exposure has resulted in reversible anaemia, muscular weakness, digestive problems, and slight liver damage.

Fate in humans and animals: MCPA is rapidly absorbed and eliminated from mammalian systems. Rats eliminated nearly all of a single oral dose within 24 hours, mostly through urine with little or no metabolism. In another rat study, three quarters of the dose was eliminated within 2 days. All was gone by 8 days. Humans excreted about half of a 5 mg dose in the urine within a few days. No residues were found after day 5. Cattle and sheep fed low to moderate doses of MCPA in the diet for 2 weeks showed no residues from levels less than about 18 mg/kg.

SECTION 12**ECOLOGICAL INFORMATION**

Environmental Toxicology: No data is available on this product. Moderate to high toxicity to aquatic organisms. LC₅₀ (96 hr) for rainbow trout and bluegill sunfish is 135 mg/L for Dicamba, > 100.0 mg/L in grass shrimp, and > 180.0 mg/L in fiddler crab and sheepshead minnow. LC₅₀ (96 hr) for rainbow trout is 50 - 560 mg/L for MCPA. LC₅₀ (96 hr) for bluegill sunfish is > 135 mg/L for MCPA. LC₅₀ (48 hr) for daphnia is 110 mg/L for Dicamba. LC₅₀ (48 hr) for daphnia is > 190 mg/L for MCPA. MCPA is practically nontoxic to freshwater invertebrates, and estuarine and marine organisms. Non-toxic to bees. Moderate toxicity to birds LD₅₀ for bobwhite quail is 377 mg/kg for MCPA.

Environmental Fate: MCPA and its formulations are rapidly degraded by soil microorganisms and it has low persistence, with a reported field half-life of 14 days to 1 month, depending on soil moisture and soil organic matter. With less than 10% organic matter in soil, MCPA is degraded in 1 day and, with greater than 10% levels in soil, it takes 3 to 9 days to degrade. The half-life is 5 to 6 days in slightly acidic to slightly alkaline soils. MCPA readily leaches in most soils, but its mobility decreases with increasing organic matter. MCPA and its formulations show little affinity for soil. It is relatively stable to light breakdown, but can be rapidly broken down by microorganisms. In sterilized water, it takes about 5 weeks for half of the compound to degrade due to the action of sunlight. In rice paddy water, however, MCPA is almost totally degraded by aquatic microorganisms in under 2 weeks.

Dicamba does not bind to soil particles (K_{oc} = 2 g/mL) and is highly soluble in water. It is therefore highly mobile in the soil and may contaminate groundwater. Its leaching potential increases with precipitation and the volume applied. The rate of biodegradation increases with temperature and increasing soil moisture, and tends to be faster when soil is slightly acidic. When soil moisture increases above 50%, the rate of biodegradation declines. Dicamba slowly breaks down in sunlight. Volatilization from soil surfaces is probably not significant, but some volatilization may occur from plant surfaces. It is stable to water and other chemicals in the soil. In humid areas, dicamba will be leached from the soil in 3-12 weeks. The half-life of dicamba in soil has varied from 4 to 555 days with the typical half-life being 1 to 4 weeks. Under conditions suitable to rapid metabolism, the half-life is less than 2 weeks. At an application rate of 6.7 kg/ha, no dicamba remained in the soil after one year.

SECTION 13**DISPOSAL CONSIDERATIONS**

Spills and Disposal: Persons involved in cleanup require adequate skin protection - see Section 8. Keep material out of streams and sewers. Vacuum, shovel or pump waste into an approved drum. Dispose of drummed wastes, including decontamination solution in accordance with the requirements of Local or State Waste Management Authorities. In rural areas contact ChemClear <http://www.chemclear.com.au> for help with collection of unwanted rural chemicals.

SECTION 13 DISPOSAL CONSIDERATIONS (Continued)

Disposal of empty containers: Triple-rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations. Do not burn empty containers or product

SECTION 14 TRANSPORT INFORMATION

Road & Rail Transport: This product is not classified as a Dangerous Good. This product is a Schedule 5 Poison (S5) and must be stored, transported and sold in accordance with the relevant Health Department regulations.

SECTION 15 REGULATORY INFORMATION

Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is a Schedule 5 poison.

This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration No. 67058.

This product is classified as a Hazardous Substance under the criteria of Safe Work Australia. Xn harmful; Xi irritant.

This product is not classified as a Dangerous Good.

Requirements concerning special training:

Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

SECTION 16 OTHER INFORMATION

Issue Date: 21 August 2016. Valid for 5 years till 21 August 2021 (Revised to GHS).

Key to abbreviations and acronyms used in this SDS:

ADG Code: Australian Dangerous Goods Code (for the transport of Dangerous Goods by Road and Rail).

Carcinogen: An agent which is responsible for the formation of a cancer.

Genotoxic: Capable of causing damage to genetic material, such as DNA.

HSIS: Hazardous Substances Information System.

Lacrimation: The production, secretion, and shedding of tears.

Lavage: A general term referring to cleaning or rinsing.

Mutagen: An agent capable of producing a mutation.

NOHSC: National Occupational Health and Safety Commission.

Pneumonitis: A general term that refers to inflammation of lung tissue.

PPE: Personal protective equipment.

Teratogen: An agent capable of causing abnormalities in a developing foetus.

TWA: The Time Weighted Average airborne concentration over an eight-hour working day, for a five day working week over an entire working life.

Safe Work Australia: Formally known as Australian Safety & Compensation Council (ASCC) which was formally known as the National Occupational Health & Safety Commission (NOHSC).

References

1. "Search Hazardous Substances". HSIS - Safe Work Australia website. (2016).
2. "Approved Criteria for Classifying Hazardous Substances" 3rd Ed. NOHSC Australia. [NOHSC:1008 (2004)]. October 2004.
3. Globally Harmonized System of Classification and Labelling of Chemicals (GHS). United Nations, 2009.

SECTION 16 OTHER INFORMATION (Continued)

This SDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

End SDS