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MATERIAL SAFETY DATA SHEET

® DuPont Registered Trademark
N/R In Product Identification section means Not Regulated as a Dangerous Good and no UN number is allocated.

ISSUED DUPONT 09/03/04

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PRODUCT: DUPONT HYVAR® X HERBICIDE WETTABLE POWDER

Hazardous According to Criteria of NOHSC.

PRODUCT IDENTIFICATION

UN No: N/R Poisons: UNSCH (Fed)

Tradenames: Hyvar® X herbicide wettable powder
Manuf.: DuPont
ManCode:

Use:
For the control of certain annual broadleaved weeds and grasses in citrus, pineapple, asparagus and in commercial and industrial areas, rights of way and around agricultural buildings.

Ingredients:	CAS No:	Proportion:
Bromacil	314-40-9	80%
Inert Ingredients		20%

Physical Description / Properties

Appearance:

Odour: Odourless
Colour: Beige
Form: Solid, wettable powder

Other Properties:

Bulk Density: 0.53 g/cm³
pH: 8.5 - 9.5
Chemical family: Uracil

HEALTH HAZARD INFORMATION

Acute Effects

Eye:

Mild to moderate eye irritant.

Skin:

Slightly toxic by contact. The compound is a moderate skin irritant, and is not a skin sensitiser according to the criteria of NOHSC.

Inhaled:

Slightly toxic by inhalation. Not classified as harmful according to the criteria of NOHSC.

Swallowed:

Classified as harmful according to the criteria of NOHSC.

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**PRODUCT: DUPONT HYAR® X HERBICIDE WETTABLE POWDER**

HEALTH HAZARD INFORMATION (Continued)

Chronic Effects

None established for formulated product.

Bromacil:

Acute inhalation exposure of rats resulted in only general signs of distress, rapid and deep respiration, at the highest dose tested, 4.8 mg/L. Toxicity described in animals repeatedly exposed to the compound for two weeks include slightly increased platelet counts, and lower serum cholesterol in the group exposed to 2.0 mg/L. Slightly increased liver weights were noted in the groups exposed to 0.5 or 2.0 mg/L. All remaining animals were normal after a 14 day recovery period. When a massive dose was administered (ingested) to the dog (5000 mg/kg), incoordination, salivation, vomiting, weakness, lacrimation and dilated pupils were observed. Toxicity described in animals repeatedly exposed to near lethal doses included liver changes, increased liver, adrenal and heart weights, and decreased kidney and spleen weights. In another study, body weights were lower and changes were noted in the liver, kidneys and thyroids in rats repeatedly fed 2500 ppm in the diet for 90 days. Dogs fed 50, 250 or 1250 ppm of the compound for two years had no evidence of toxicity in any exposure group. Rats fed the same doses of the compound for two years had lower weight gain, and there were suggestions of slight thyroid effects, focal hyperplasia, in the high dose group. Mice that were administered 250, 1250 or 5000 ppm in the diet for 18 months demonstrated reduced growth rates at 1250 ppm in females and at 5000 ppm in males. Higher mortality was noted among female mice in the high dose group. Increased incidences of naturally occurring changes in aging mice, including testicular tubule atrophy and liver effects, were observed at the higher doses. An increase in total liver tumours that was above the normal background incidence was observed in high-dose male mice. This response in male mice is considered only as limited evidence of a carcinogenic response in the species. The weight of the scientific data for bromacil suggests that this is not indicative of a similar response in female mice, other laboratory animals or in man. Additional animal testing indicated that this compound was not teratogenic and was not uniquely toxic to the conceptus. No reproductive effects were observed in rats exposed to 250 ppm in the diet for three generations. The compound does not produce heritable genetic damage in animals. Most studies for genetic damage in mammalian and bacterial cells in culture were also negative.

Other Health Effects:

Skin contact may initially cause irritation or rash. Eye contact may initially include irritation, tearing, or blurring of vision. Significant skin permeation, and systemic toxicity, after contact appears unlikely. There are no reports of human sensitisation.

First Aid**Eye:**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Seek Medical attention.

Skin:

In case of contact, immediately wash skin with soap and plenty of water. Wash contaminated clothing before reuse.

Inhaled:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek Medical attention.

Swallowed:

If swallowed, seek medical attention. Never give anything by mouth to an unconscious person.

Advice to Doctor:

No specific requirements. Treat symptomatically.

Toxicity Data:

None established for formulated product.

Bromacil:

Acute oral LD₅₀(rat): 2000 mg/kg (male), 1300 mg/kg (female).

Acute percutaneous LD₅₀ (rabbit): > 5000 mg/kg

4hr inhalation LC₅₀ (rat): > 4.8 mg/L.

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**PRODUCT: DUPONT HYAR® X HERBICIDE WETTABLE POWDER****PRECAUTIONS FOR USE**

Exposure Standards:

None established for finished product.

Bromacil:

AEL (Du Pont): 10 mg/m³, (8 and 12 hr TWA)

TLV (ACGIH): 10 mg/m³ (8 hr TWA)

PEL (OSHA): None established.

Engineering Controls:

Avoid confined spaces where fine dust may disperse in air.

Personal Protection:

May irritate the eyes, nose, throat and skin. Avoid contact with eyes and skin. **DO NOT** inhale dust or spray mist. Avoid contact with eyes and skin. After use and before eating, drinking or smoking wash hands, arms and face thoroughly with soap and water.

Flammability:

May be ignited by heat or open flame. Keep away from heat, sparks or flames.

Environment:

96 hr LC₅₀(rainbow trout): >100 mg/L.

SAFE HANDLING INFORMATION

Storage and Transport:

Keep container tightly closed. **DO NOT** consume food, drink or tobacco in the areas where they may become contaminated with this material. Store in well ventilated area.

Spills and Disposal:

Review FIRE AND EXPLOSION HAZARDS and SAFETY PRECAUTIONS before proceeding with cleanup. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up. Dyke spill. Prevent liquid from entering sewers, waterways or low areas. Shovel or sweep up. If spill area is on ground near valuable plants and trees, remove top 50 mm of soil after initial clean up. Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State, and local regulations. **DO NOT** flush to surface water or sanitary sewer system. **DO NOT** reuse container. Triple rinse the container, then puncture and dispose of in a sanitary landfill or by other approved methods. **DO NOT** burn empty container or product.

Reactivity Data:

Stable at normal temperatures and storage conditions. No incompatibilities reasonably foreseeable. Decomposition will not occur. Polymerisation will not occur.

Fire/Explosion Hazard:

Flammable limits in Air, % by volume: LEL 0.173 g/L. Not a fire and explosion hazard. Like most organic powders, or crystals, under severe dusting conditions, this material may form explosive mixtures in air. Evacuate personnel to a safe area. Wear self-contained breathing apparatus and full protective equipment. Suitable extinguishing media: water spray, dry powder, foam, carbon dioxide (CO₂). On small fires, if area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the contamination hazard.

REGULATORY INFORMATION

Package and Labelling: UNSCH (Fed)
Contains: Bromacil 80%

R Phrases:

R36/38 Irritating to eyes and skin
R22 Harmful if swallowed

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PRODUCT: DUPONT HYAR® X HERBICIDE WETTABLE POWDER

SOURCE INFORMATION

Technical Data:

Source MSDS: US-DU005751, revised 10/02/2003

ADDITIONAL INFORMATION

Contact Points:

For sales, technical, and product related enquiries contact DuPont's North Sydney office on (02) 9923 6111. Outside the Sydney metropolitan area 1800 252 997 is a toll free number to North Sydney Office. To assist communications, ask for the Customer Service, Technical, or Marketing personnel for the product family relative to the inquiry.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.