

MATERIAL SAFETY DATA SHEET

SUBJECT: KERB 500 WP
DOCUMENT NO: PS 057
EFFECTIVE DATE: JULY 2002
REVISION DATE: MAY 2004
REVISION NO: 2
PAGE: 1 of 2
PRODUCT CODE: -----

1. PRODUCT AND COMPANY IDENTIFICATION

SUPPLIER: DOW AGROSCIENCES (PTY) LTD
 Private Bag X160,
 Bryanston.
 2021

EMERGENCY TELEPHONE NUMBERS

SPILLAGES:

Emergency telephone (+27) 032 5330716 or
 082 887 8079

Fax (+27) 032 5336134

POISONINGS:

National Poison Centre 021-9386084 (office hours).
 021-9316129 (after hours).
 0800 333 444 (24h)

UOFS Pharmacology/Toxicology information centre:
 0824910160

Product Name KERB 500 WP /KERB 50 WP
 HERBICIDE

Use: A wettable powder herbicide for use
 against annual winter grass in canola, grapes, lettuce,
 leguminous pastures, orchards (as indicated) and peas in the
 winter rainfall region and in lawns and sport turf.

2. COMPOSITION / INFORMATION ON INGREDIENTS

Active ingredients Propyzamide 500 g/kg
Chemical Names 3,5-dichloro-N- (1,1-
 dimethylpropynyl) benzamide
 (IUPAC)
Synonym: Pronamide
Chemical Formula $C_{12}H_{11}Cl_2NO$ (Mol. wt.: 256.1)
Chemical Family amide
CAS No's 23950-58-5
NIOSH/RTECS no CV3460000
EINECS NO 245-951-4
UN no. 3077.

3. HAZARD IDENTIFICATION

Primary Routes of Exposure

Inhalation, Eye Contact, Skin Contact.

Inhalation

Inhalation of dust can cause the following:

- irritation of nose, throat, and lungs

Eye Contact

Direct contact with material can cause the following:

- possible irritation

Skin Contact

Prolonged or repeated skin contact can cause the following:

- possible skin irritation

Delayed Effects

Repeated overexposure to the active ingredient in this material may cause the following:

- liver damage

Crystalline silica is listed by the National Toxicology Program (NTP) as a reasonably anticipated cancer causing agent and by the International Agency for Research on Cancer (IARC) as a known cancer causing agent.

Prolonged or repeated overexposure to component 5 can cause the following:

- silicosis, a pneumoconiosis which causes scar tissue

4. FIRST AID MEASURES

Inhalation

Move subject to fresh air.

Eye Contact

Flush eyes with water. Consult a physician if irritation persists.

Skin Contact

Wash affected skin areas thoroughly with soap and water. Consult a physician if irritation persists.

Ingestion

If swallowed, give 2 glasses of water to drink. Consult a physician. Never give anything by mouth to an unconscious person.

Note to Physician

If swallowed, careful evacuation of the stomach is advisable.

5. FIRE FIGHTING MEASURES

Unusual Hazards

Pesticide particulates can become airborne.

Combustion generates toxic fumes of the following:

- hydrogen chloride - nitrogen oxides - carbon oxides

Dusts at sufficient concentrations can form explosive mixtures with air.

The minimum ignition temperature of dust layer is 150 °C.

The minimum ignition temperature of dust cloud is 525 °C.

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Extinguishing Agents

Use the following extinguishing media when fighting fires involving this material:

- carbon dioxide - dry chemical - water spray - foam

Personal Protective Equipment

Wear self-contained breathing apparatus (pressure-demand NIOSH approved or equivalent) and full protective gear.

Special Procedures

Contain run-off. Remain upwind. Avoid breathing smoke. Use water spray to cool containers exposed to fire.

6. ACCIDENTAL RELEASE MEASURES

Personal Protection

Appropriate protective equipment must be worn when handling a spill of this material. See SECTION 8, Exposure Controls/Personal Protection, for recommendations. If exposed to material during clean-up operations, see SECTION 4, First Aid Measures, for actions to follow. Remove all contaminated clothing promptly. Wash all exposed skin areas with soap and water immediately after exposure. Thoroughly launder clothing before reuse. Do not take clothing home to be laundered.

Procedures

Avoid breathing dust. Transfer spilled material to suitable containers for recovery or disposal. Keep dust to a minimum. CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

7. HANDLING AND STORAGE

Storage Conditions

Do not store this material near food, feed or drinking water. Store in a dry area. Store out of direct sunlight in a cool place. Keep container tightly closed when not in use.

Handling Procedures

Do not handle material near food, feed or drinking water. Avoid high concentrations of dust in air and accumulation of dust on equipment. An airborne dust of this material can create a dust explosion. When handling and processing this material local exhaust ventilation may be required to control dust and reduce exposure to vapors. To prevent dust explosions employ bonding and grounding for operations capable of generating static electricity. Protect all equipment from explosions.

Other

Completely empty bag into application equipment. Dispose empty bag in a sanitary landfill or by incineration as allowed by state and local authorities. Avoid inhalation of smoke if incinerated.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Guidelines

Active ingredient: Dow AgroSciences recommendation is 0.1 mg/m³. End users must follow label instructions when using this product.

U.K Exposure Data

Barden clay (CAS-No 1332-58-7) Kaolin. Maximum Exposure Limit (MEL) according to EH40/2000; 2 mg/m³ 8 h TWA respirabel dust.

Silica, respirabel crystalline (CAS-No 14808-60-7), Maximum Exposure Limit (MEL) according to EH40/2000; 0,3 mg/m³ 8 h TWA. Value given is the MEL referring to the total inhalable dust fraction.

Respiratory Protection

A respiratory protection program meeting either EU requirements (see EU Directives 89/656/EEC and 89/686/EEC) or OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. None required if airborne concentrations are maintained below the exposure limit listed in 'Exposure Limit Information'.

Up to 10 times the exposure limit:

Wear a properly fitted NIOSH approved (or equivalent) half-mask, air-purifying respirator.

Up to 50 times the exposure limit: Wear a properly fitted NIOSH approved (or equivalent) full-face-piece, air-purifying respirator,

OR

full-face piece, airline respirator in the pressure demand mode.

Above 50 times the exposure limit or Unknown: Wear a properly fitted NIOSH approved (or equivalent) self-contained breathing apparatus in the pressure demand mode,

OR

full-face piece, airline respirator in the pressure demand mode with emergency escape provision.

Air-purifying respirators should be equipped with high efficiency particulate filter in combination with an organic vapor cartridge.

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Eye Protection

Use safety glasses (see EU-Directives 89/656/EEC and 89/686/EEC or ANSI Z87.1 or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed.

Hand Protection

Chemical-resistant gloves should be worn whenever this material is handled.

The glove(s) listed below may provide protection against permeation:

- Polyvinyl chloride-coated glove or other chemical-resistant rubber-coated glove

Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough.

Rinse and remove gloves immediately after use. Wash hands with soap and water.

Other Protection

Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact.

Engineering Controls (Ventilation)

Use local exhaust ventilation with a minimum capture velocity of 150 ft/min. (0.75 m/sec.) at the point of dust or mist evolution. Refer to the current edition of **Industrial**

Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Other Protective Equipment

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

An off-white solid powder.

Odour:

None.

Flash point:

Not applicable.

pH:

Not applicable.

Bulk density:

0.2 to 0.25 kg/L

Solubility in water:

Disperse in water.

10. STABILITY AND REACTIVITY

Instability

This material is considered stable. However, avoid temperatures above 150 °C.

Hazardous Decomposition Products

Thermal decomposition may yield hydrogen chloride gas.

Hazardous Polymerization

Product will not undergo polymerisation.

Incompatibility

There are no known materials, which are incompatible with this product.

11. TOXICOLOGICAL INFORMATION

Acute oral LD₅₀ :

>5000,0 mg/kg for rats

Acute dermal LD₅₀ :

>2000,0 mg/kg for rats.

Acute inhalation LC₅₀ (4h) Rats:

>5,0 mg/L

Acute skin irritation(Rabbit):

May irritate the skin.

Acute eye irritation(Rabbit):

May irritate the eyes.

Dermal sensitisation:

No allergic response observed.

Carcinogenicity Data

This product may have carcinogenic activity at sufficient doses.

Mutagenicity Data

Not mutagenic.

Reproductive/Teratology Data

No evidence of teratogenicity was observed in studies with rats and rabbits.

12. ECOLOGICAL INFORMATION

Environmental Toxicity

Fish:

Rainbow trout (*Salmo gairdneri*), 96 Hour LC50: 72,0 mg/l

Goldfish, 96 Hour LC50: 350,0 mg/l

Guppy, 96 Hour LC50: 150,0 mg/l

Channel catfish (*Ictalurus punctatus*), 96 Hour LC50: > 200,0 mg/l

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Daphnia magna, 48 Hour LC50: > 5.6 mg/l ; See footnote 1 below

Green Algae (Scenedesmus quadricauda), 96 Hour EC50: 5.8 mg/l

Earthworms LC50: > 346 ppm.

Bees:

Not hazardous to bees.

LD50: >100,0 µg a.i./bee.

Birds:

Bobwhite quail, LC50: > 10000 mg/l

Mallard duck, LC50: > 10000 mg/l

Soil micro-organisms:

The herbicide is not active against common soil microorganisms.

Persistence in Soil:

This product is moderately persistent in most soils, with a reported average field half-life of 60 days

Air (ICAO/IATA)

Proper shipping name: Environmentally Hazardous Substance, Solid, n.o.s. (Propyzamide 50 %)

Class : 9

Label: 9

Packing Group : III

Pack Instr. Passenger : 911

Pack Instr. Cargo : 911

Remarks : Sample shipment not allowed by mail.

Tremcard Nr. CEFIC : 90GM7-III

13. DISPOSAL CONSIDERATIONS

Do not contaminate ponds, waterways or ditches with chemical or used container. Wash out thoroughly. Container and washings must be disposed of safely and in accordance with applicable regulations. The preferred options are to send to licensed reclaimer or to permitted incinerators.

14. TRANSPORT INFORMATION

UN NO: 3077

Road

Proper shipping name: Environmentally Hazardous Substance, Solid, n.o.s. (Propyzamide 50 %)

Class : 9

Label : 9

Packing Group: III

Kemler Code: 90

Sea (IMDG)

Proper shipping name: Environmentally Hazardous Substance, Solid, n.o.s. (Propyzamide 50 %)

Class: 9

Label: 9

Packing Group : III

EMS : F-AS-F

Marine Pollutant : YES

15. REGULATORY INFORMATION

Indication of Danger

Xn - Harmful

N - Dangerous for the Environment

Risk Phrases

R40 Limited evidence of a carcinogenic effect.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases

S35 This material and its container must be disposed of in a safe way

S36/37 Wear suitable protective clothing and gloves.

S57 Use appropriate containment to avoid environmental contamination

National legislation:

In accordance with the South African National Road Traffic Act, 1996 (Act 93 of 1996), the Fire Brigade Act, 1987 (Act 99 of 1987) and the Occupational Health and Safety Act, 1993 (Act. No. 85 of 1993).

16. OTHER INFORMATION

Prepared by: Danie Fourie

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to



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be correct. Dow Agrosciences makes no representations as to the completeness or accuracy thereof.

This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations(s) containing this product, it is the recipient's sole responsibility to ensure the transfers of all relevant information from this MSDS to their own MSDS.

REFERENCES

- *The Pesticide Manual*; Thirteenth Edition; Editor Clive Tomlin; Crop Protection Publications, 2003.
- EXTTOXNET, PIP
- *IATA, Dangerous Goods Regulations, 45th Edition, Effective 1 January 2004.*
- *IMDG CODE, Vol. 2, 2000 Edition.*
- *SABS 0265:1999.*
- *DAS EUROPE AND USA MSDS.*

END OF MSDS.