SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: TEMIK® BRAND 15G ALDICARB PESTICIDE
MSDS Number: 102000001960
EPA Registration No.: 264-330

Bayer CropScience
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
For Product Information call: 1-866-99BAYER (1-866-992-2937)

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Average % by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aldicarb</td>
<td>116-06-3</td>
<td>15.00</td>
</tr>
<tr>
<td>Dichloromethane</td>
<td>75-09-2</td>
<td>0.50</td>
</tr>
<tr>
<td>Acetic acid ethenyl ester, polymer with chloroethene</td>
<td>9003-22-9</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview: Danger! Poison. Fatal if swallowed. Cholinesterase inhibitor. May be fatal or harmful by skin or eye contact or by breathing dust. Rapidly absorbed through skin or eyes. Do not get in eyes, on skin, or on clothing. Do not breathe dust. Keep out of reach of children and animals.

Physical State: solid pellets
Odor: sulfurous
Appearance: grey to black
Routes of Exposure: Ingestion, Inhalation, Eye contact, Skin Absorption

Immediate Effects:
Eye: May cause redness, irritation, tearing. May be absorbed through the eye and produce symptoms similar to those from ingestion. Do not get in eyes.
Skin: May be harmful or fatal if absorbed through the skin. May produce symptoms similar to those from ingestion. Do not get on skin or clothing.
Ingestion
Fatal if swallowed. This product causes reversible cholinesterase inhibition. Repeated overexposure may cause more severe cholinesterase inhibition with more pronounced symptoms. May lead to rapid onset of nausea, vomiting, diarrhea, abdominal pain, pinpoint pupils, blurred vision, profuse sweating, temporary paralysis, respiratory depression and convulsions. Do not take internally.

Inhalation
May be fatal or harmful if inhaled. May produce symptoms similar to those from ingestion. Do not breathe dust.

Chronic or Delayed Long-Term
This product contains ingredients that are considered to be probable or suspected human carcinogens (see Section 11 - Chronic). This product or its components may have long term (chronic) health effects.

Medical Conditions Aggravated by Exposure
Skin contact may aggravate existing skin disease. Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis.

Potential Environmental Effect
Toxic to fish, birds, and other wildlife. Toxic to aquatic invertebrates.

SECTION 4. FIRST AID MEASURES

General
When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Skin
Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

Ingestion
Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Inhalation
Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Notes to Physician Signs and Symptoms
Temporary blurred vision due to contraction of the pupils (miosis) following contact with the eyes.
- bradycardia
- low blood pressure
- Salivation
bronchial hypersecretion
Vomiting
Diarrhoea
sweating
muscular fasciculation
spasm
breathing difficulties
respiratory paralysis
somnolence
Coma
respiratory failure
hypothermia
Convulsions
Nausea

Hazards
This product contains a cholinesterase inhibitor carbamate.

Treatment
The product inhibits cholinesterase resulting in stimulation of the central nervous system, the parasympathetic nervous system, and the somatic motor nerves. If symptoms of carbamate poisoning are present, the administration of atropine sulfate is indicated.

ANTIDOTE: Administer atropine sulfate in large therapeutic doses. Repeat as necessary to the point of tolerance. In mild cases, start treatment by giving 1-2 mg of atropine intravenously every 15 minutes until signs of atropinization appear (dry mouth, flushing and dilated pupils if pupils were originally pinpoint). In severe cases 2 to 4 mg should be injected intravenously every 10 minutes until fully atropinized, then intramuscularly every 30 to 60 minutes as needed to maintain the effect for at least 12 hours. Dosages for children should be appropriately reduced.

Do not use oximes such as 2-PAM unless organophosphate intoxication is suspected. Do not give morphine. Watch for pulmonary edema, which may develop in serious cases of poisoning even after 24-48 hours. At first sign of pulmonary edema, the patient should be placed in an oxygen tent and treated symptomatically.

To aid in confirmation of a diagnosis, urine samples should be obtained within 24 hours of exposure and immediately frozen. Analysis will be arranged by Bayer. Call 1-800-334-7577 before sending samples.

SECTION 5. FIRE FIGHTING MEASURES

Flash point not applicable
Fire and Explosion Hazards
In the event of fire the following can be released:
- Sulphur oxides
- Nitrogen oxides (NOx)
- Carbon monoxide (CO)

Accumulation of fine dust may entail the risk of a dust explosion in the presence of air.

Suitable Extinguishing Media
Water spray, Carbon dioxide (CO2), Foam, Dry powder

Unsuitable extinguishing media
High volume water jet

Fire Fighting Instructions
Keep out of smoke. Fight fire from upwind position. Cool closed containers/tanks exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods for Cleaning Up
Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional Advice
Use personal protective equipment. Do not allow product to contact vegetation.

SECTION 7. HANDLING AND STORAGE

Handling Procedures
Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation. Handle and open container in a manner as to prevent spillage.

Take measures to prevent the build up of electrostatic charge.

Storing Procedures
Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Keep away from food, drink and animal feedingstuffs.

Work/Hygienic
Wash hands thoroughly with soap and water after handling and before eating,
Procedures  

- drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

- Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves, clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Min/Max Storage Temperatures  

- Recommended maximum transport/storage temperature: 46 °C / 115 °F
- The 30-day storage temperature average must not exceed the recommended maximum.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection  

- Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

- Follow all label instructions. Train employees in safe use of the product.

Eye/Face Protection  

- Tightly fitting safety goggles

Hand Protection  

- Chemical resistant nitrile rubber gloves

Body Protection  

- Wear long-sleeved shirt and long pants and shoes plus socks.
- Chemical resistant apron when cleaning equipment, mixing or loading.

Respiratory Protection  

- When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Exposure Limits

<table>
<thead>
<tr>
<th>Substance</th>
<th>WEEL</th>
<th>OES BCS*</th>
<th>OSHA REF</th>
<th>OSHA TWA</th>
<th>OSHA STEL</th>
<th>OSHA OSHA_ACT</th>
<th>US CA OEL TWA PEL</th>
<th>US CA OEL STEL</th>
<th>US CA OEL TWA A LV</th>
<th>TX ESL ST ESL</th>
<th>TX ESL AN ESL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aldicarb</td>
<td>116-06-3</td>
<td>TWA</td>
<td>0.07 mg/m3</td>
<td>0.07 mg/m3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dichloromethane</td>
<td>75-09-2</td>
<td>ACGIH TWA</td>
<td>50 ppm</td>
<td>OSHA TWA 25 ppm</td>
<td>OSHA STEL 125 ppm</td>
<td>OSHA OSHA_ACT 12.5 ppm</td>
<td>US CA OEL TWA PEL 25 ppm</td>
<td>US CA OEL STEL 125 ppm</td>
<td>US CA OEL TWA A LV 12.5 ppm</td>
<td>TX ESL ST ESL 75 ppm</td>
<td>TX ESL AN ESL 7.5 ppm</td>
</tr>
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</table>

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"
SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>grey to black</td>
</tr>
<tr>
<td>Physical State</td>
<td>solid pellets</td>
</tr>
<tr>
<td>Odor</td>
<td>sulfurous</td>
</tr>
<tr>
<td>pH</td>
<td>6 - 6.5 (1 %) emulsion in water</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>32 - 41 lb/ft³ loose</td>
</tr>
<tr>
<td>Water solubility</td>
<td>slightly soluble</td>
</tr>
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</table>

SECTION 10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Incompatibility</th>
<th>Strong bases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous Decomposition Products</td>
<td>Thermal decomposition can lead to release of:</td>
</tr>
<tr>
<td></td>
<td>Carbon monoxide</td>
</tr>
<tr>
<td></td>
<td>Nitrogen oxides (NOx)</td>
</tr>
<tr>
<td></td>
<td>Sulphur oxides</td>
</tr>
<tr>
<td>Hazardous Reactions</td>
<td>No hazardous reactions when stored and handled according to prescribed instructions.</td>
</tr>
<tr>
<td></td>
<td>Dust may form explosive mixtures with air.</td>
</tr>
<tr>
<td></td>
<td>Stable under normal conditions.</td>
</tr>
</tbody>
</table>

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on the formulated product. The non-acute information pertains to the technical-grade active ingredient, aldicarb.

Acute Oral Toxicity  
rabbit: LD50: 8.4 mg/kg

Acute Dermal Toxicity  
male rabbit: LD50: 1,960 mg/kg
female rabbit: LD50: 2,000 mg/kg

Skin Irritation  
Product is highly toxic and is rapidly absorbed through the eyes and skins.

Eye Irritation  
Product is highly toxic and is rapidly absorbed through the eyes and skins.

Chronic Toxicity  
Aldicarb caused cholinesterase inhibition in chronic studies in rats and dogs.

Assessment Carcinogenicity
Aldicarb was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH
- Dichloromethane 75-09-2 Group A3

NTP
- Dichloromethane 75-09-2

IARC
- Aldicarb 116-06-3 Overall evaluation: 3
- Dichloromethane 75-09-2 Overall evaluation: 2B
- Acetic acid ethenyl ester, polymer with chloroethene 9003-22-9 Overall evaluation: 3

OSHA
- Dichloromethane 75-09-2

Reproductive & Developmental Toxicity

REPRODUCTION: Aldicarb was not considered a primary reproductive toxicant in rats. Decreased pup body weights and reduced viability occurred in conjunction with maternal toxicity.

DEVELOPMENTAL TOXICITY: Aldicarb was not a primary developmental toxicant in rats and rabbits. Developmental effects (e.g., delayed ossifications) were observed at doses that caused maternal toxicity.

Neurotoxicity
Aldicarb caused transient neurobehavioral effects related to cholinergic toxicity in acute, subchronic and developmental neurotoxicity screening studies in rats. There were no neuropathological changes observed in these studies. Aldicarb did not demonstrate delayed neurotoxicity in hens.

Mutagenicity
Aldicarb was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions
Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.

Ecological Information
Exposed treated seed may be hazardous to birds.
### SECTION 13. DISPOSAL CONSIDERATIONS

| General Disposal Guidance | Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. Open dumping is prohibited. |
| Container Disposal | Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke. |
| RCRA Classification | The RCRA Classifications may be on the individual component(s) and not necessarily on the product as a whole. |

| 75-09-2 Dichloromethane | US. EPA Resource Conservation and Recovery Act (RCRA) U List of Hazardous Wastes (40 CFR 261.33(f) and 40 CFR 302 [CERCLA]): U080 |

### SECTION 14. TRANSPORT INFORMATION

**DOT CLASSIFICATION:**
UN2757, Carbamate Pesticides, Solid, Toxic, 6.1 // PG II // RQ(Aldicarb)

**IMDG CLASSIFICATION:**

**FREIGHT CLASSIFICATION:**
Insecticides or Fungicides, N.O.I., poison, other than gases that are poisonous by inhalation

### SECTION 15. REGULATORY INFORMATION

**EPA Registration No.**
264-330
US Federal Regulations

TSCA list

Aldicarb  116-06-3
Dichloromethane  75-09-2
Acetic acid ethenyl ester, polymer with chloroethene  9003-22-9

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None.

SARA Title III - Section 302 - Notification and Information

Aldicarb  116-06-3

SARA Title III - Section 313 - Toxic Chemical Release Reporting

Aldicarb  116-06-3  1.0%
Dichloromethane  75-09-2  0.1%

US States Regulatory Reporting

CA Prop65

This product contains a chemical known to the State of California to cause cancer.
Dichloromethane  75-09-2

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

Aldicarb  116-06-3  CA, CT, IL, LA, MA, NJ, PA
Dichloromethane  75-09-2  CA, CT, IL, MA, MI, MN, NJ, PA, RI

Canadian Regulations

Canadian Domestic Substance List

Dichloromethane  75-09-2
Acetic acid ethenyl ester, polymer with chloroethene  9003-22-9

Environmental

CERCLA

Aldicarb  116-06-3  1 lbs
Dichloromethane  75-09-2  1,000 lbs

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)

Aldicarb  116-06-3
SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):
Health - 4  Flammability - 1  Reactivity - 1  Others - none
0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason to Revise: Updated due to new system and numbering scheme. Updated for general editorial purposes.

Revision Date: 02/25/2008

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