BAYER CROPSCIENCE, LP
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2 T.W. Alexander Drive
Research Triangle Park, NC 27709

For MEDICAL, Transportation, Environmental or other EMERGENCY:
Call 24 hours a day 1-800-334-7577
For Product Use Information: call 1-866-99BAYER (1-866-992-2937)

1. CHEMICAL PRODUCT IDENTIFICATION:

PRODUCT NAME........: OLYMPUS 70% Water Dispersible Granular Herbicide
PRODUCT CODE........: 144052
CHEMICAL FAMILY.....: Sulfonyl-amino-carbonyl-triazolinone
CHEMICAL NAME.......: Methyl 2-(((4-methyl-5-oxo-3-propoxy-4,5-dihydro-1H-1,2,4-triazol-1-yl)carbonyl)amino)sulfonyl)benzoate sodium salt
SYNONYMS............: Propoxycarbazone-sodium); BAY MKH 6561
FORMULA.............: C15 H17 N4 Na O7 S
PRODUCT USE.........: Commercial herbicide

2. COMPOSITION/INFORMATION ON INGREDIENTS:

<table>
<thead>
<tr>
<th>INGREDIENT NAME /CAS NUMBER</th>
<th>EXPOSURE LIMITS</th>
<th>CONCENTRATION (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propoxycarbazone-sodium</td>
<td>181274-15-7 OSHA : Not Established</td>
<td>70 %</td>
</tr>
<tr>
<td></td>
<td>ACGIH: Not Established</td>
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</tbody>
</table>

***** HAZARDOUS INGREDIENTS *****

3. HAZARDS IDENTIFICATION:

**WARNING!** Color: Tan; Form: Solid; Free flowing granule;
* Odor: Slight musty odor; Harmful if absorbed through skin;
* Harmful if swallowed.
3. HAZARDS IDENTIFICATION (Continued)

POTENTIAL HEALTH EFFECTS:

ROUTE(S) OF ENTRY..............: Inhalation; Skin Contact; Skin Absorption; Eye Contact

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE:

ACUTE EFFECTS OF EXPOSURE.....: No specific symptoms of acute overexposure are known to occur in humans. Based on EPA Toxicity Category criteria, this material is mildly toxic by the oral and dermal routes of exposure. In addition, animal studies have shown that it was mildly irritating to the conjunctiva of the eyes, but the irritation was cleared by 24 hours post-treatment. It was not a dermal irritant nor a dermal sensitizer.

CHRONIC EFFECTS OF EXPOSURE....: No specific symptoms of chronic overexposure to this material are known to occur in humans.

CARCINOGENICITY.............: This product is not listed by NTP, IARC or regulated as a carcinogen by OSHA.

MEDICAL CONDITIONS

AGGRAVATED BY EXPOSURE......: No specific medical conditions are known which may be aggravated by exposure to this substance.

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4. FIRST AID MEASURES:

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FIRST AID FOR EYES......: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

FIRST AID FOR SKIN......: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

FIRST AID FOR INHALATION: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

FIRST AID FOR INGESTION.: Call poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything to an unconscious person.

NOTE TO PHYSICIAN.......: Treat symptomatically. It is also requested that you call the poison control center by calling the number on page 1.
5. FIRE FIGHTING MEASURES:

FLASH POINT.....................: Not Applicable
EXTINGUISHING MEDIA..........: Water; Carbon Dioxide; Dry Chemical; Foam
SPECIAL FIRE FIGHTING PROCEDURES: Keep out of smoke, cool exposed containers with water spray. Fight fire from upwind position. Use self-contained breathing equipment. Contain run-off by diking to prevent entry into sewers or waterways. Equipment or materials involved in pesticide fires may become contaminated.

6. ACCIDENTAL RELEASE MEASURES:

SPILL OR LEAK PROCEDURES........: Isolate area and keep unauthorized people away. Do not walk through spilled material. Avoid breathing dusts and skin contact. Avoid generating dust (a fine water spray mist, plastic film cover, or floor sweeping compound may be used if necessary). Use recommended protective equipment while carefully sweeping up spilled material. Place in covered container for reuse or disposal. Scrub contaminated area with soap and water. Rinse with water. Use dry absorbent material such as clay granules to absorb and collect wash solution for proper disposal. Contaminated soil may have to be removed and disposed. Do not allow material to enter streams, sewers, or other waterways.

7. HANDLING AND STORAGE:

STORAGE TEMPERATURE(MIN/MAX): 32 F (or 0 C)/30-day average not to exceed 100 F (or 38 C)
SHELF LIFE....................: Time and temperature-dependent. Specific information is available on request.
SPECIAL SENSITIVITY.........: Heat; moisture
HANDLING/STORAGE PRECAUTIONS: Store in a cool, dry and well-ventilated area, away from heat sources. Store in an area designated specifically for pesticides. Do not store near any materials intended for use or consumption by humans or animals.
OTHER NOTES...................: PVA water-soluble film becomes brittle when handled below freezing.

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8. PERSONAL PROTECTION:

EYE PROTECTION REQUIREMENTS........: Goggles
SKIN PROTECTION REQUIREMENTS.......: Long sleeves and trousers and chemical-resistant gloves such as nitrile.
VENTILATION REQUIREMENTS...........: Control exposure levels through the use of general and local exhaust ventilation where needed.
RESPIRATOR REQUIREMENTS............: When needed based on the conditions of use, wear a NIOSH-approved particulate respirator.
ADDITIONAL PROTECTIVE MEASURES......: Clean water should be available for washing in case of eye or skin contamination. Educate and train employees in safe use of the product. Follow all label instructions. Launder clothing after use. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES:

PHYSICAL FORM.............: Solid
APPEARANCE................: Free flowing granule
COLOR.....................: Tan
ODOR......................: Slight musty odor
BOILING POINT.............: Not applicable
MELTING/FREEZING POINT....: Decomposes at approx. 230 C (for technical)
SOLUBILITY IN WATER ......: 4.2% (w/w) for technical
SPECIFIC GRAVITY .........: Not applicable
BULK DENSITY..............: 28-31 lb./cu-ft.
VAPOR PRESSURE ...........: 7.5 x 10 (-11) mm Hg @ 20 C (for technical)

10. STABILITY AND REACTIVITY:

STABILITY..................: This is a stable material.
HAZARDOUS POLYMERIZATION...: Will not occur.
INCOMPATIBILITIES.........: Not established
INSTABILITY CONDITIONS.....: Forms the neutral compound, MKH 5554, when acidified.
DECOMPOSITION PRODUCTS.....: Not established

11. TOXICOLOGICAL INFORMATION:

Only acute studies have been performed on this product as formulated. The non-acute information pertains to the active ingredient,
11. TOXICOLOGICAL INFORMATION (Continued)

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**propoxycarbazone-sodium.**

**ACUTE TOXICITY**

**ORAL LD50**........: Male and Female Rat: >2000 mg/kg

**DERMAL LD50**........: Male and Female Rat: >2000 mg/kg

**INHALATION LC50**....: 4 HR Exposure to Dust: Male and Female Rat: >4.995 mg/l (actual); 1 HR Exposure to Dust (extrapolated from 4 HR LC50): Male and Female Rat: >19.98 mg/l (actual)

**EYE EFFECTS**.......: Rabbit: Minimal irritation to the conjunctiva was observed with all irritation clearing within 24 hours post-treatment.

**SKIN EFFECTS**.....: Rabbit: Not a dermal irritant

**SENSITIZATION**....: Guinea pig: Not a dermal sensitizer

**SUBCHRONIC TOXICITY**...: In a subacute dermal toxicity study, rats were exposed to propoxycarbazone-sodium at a limit dose of 1000 mg/kg for 6 hours/day for a total of 22 applications. No systemic or local effects were observed in any of the treated animals. The no-observed-effect-level (NOEL) was 1000 mg/kg, the highest dose tested. In a Plaque-forming-cell assay conducted to investigate the immunotoxicological potential of propoxycarbazone-sodium, male rats were administered dietary concentrations of 4000, 10000 or 20000 ppm for 4 weeks. Propoxycarbazone-sodium did not affect the plaque formation in any group. The no-observed-adverse-level (NOAEL) for immunotoxicity in the Plaque-forming-cell assay was 20000 ppm, the highest dose tested. Subchronic (90-day) feeding studies have been conducted on propoxycarbazone-sodium using mice and rats at maximum doses of 10000 and 20000 ppm, respectively. In mice, effects observed included increased water intake, changes in clinical chemistries, and histopathological findings in the forestomach. The irritative effect on the forestomach was reversible within the 4 week recovery period. A NOEL was not established in the subchronic mouse study. The NOEL in the subchronic rat study was 4000 ppm.

**CHRONIC TOXICITY**.....: Dogs were administered propoxycarbazone-sodium at dietary concentrations of 2000, 10000 or 25000 ppm. Effects observed in the study included decreased food consumption, organ weight changes (adrenal and heart) and histopathological findings (adrenal). The NOEL was 10000 ppm for males and 2000 ppm for females. In a 2 year chronic feeding study in rats, propoxycarbazone-sodium was administered continuously in the feed at dietary dosages of 50, 500 or 1000 mg/kg bw/day for approximately the first 7 months. Thereafter, it was administered at dietary concentrations of 1000, 10000 or 20000 ppm. Effects observed included decreased body weight gains, increased urinary pH and histopathological changes in the kidney (renal pelvic mineralization). The NOEL was 1000 ppm.

**CARCINOGENICITY**.......: Propoxycarbazone-sodium was investigated for carcinogenicity in chronic feeding studies using mice and rats at maximum levels of 7000 mg/kg and 20000 ppm, respectively. There was no evidence of a carcinogenic potential observed in either species.

**MUTAGENICITY**........: In vitro and in vivo mutagenicity studies have been conducted on propoxycarbazone-sodium, all of which were negative.

**DEVELOPMENTAL TOXICITY**: In a developmental toxicity study in rats, propoxycarbazone-sodium was administered by oral gavage during gestation at doses of 100, 300 or 1000 mg/kg. Propoxycarbazone-sodium did not induce any maternal or developmental toxicity at doses up to and including 1000 mg/kg, the limit dose. The NOEL for both maternal and developmental toxicity in the
11. TOXICOLOGICAL INFORMATION (Continued)

rat was 1000 mg/kg. In a developmental toxicity study in rabbits, propoxycarbazone-sodium was administered by oral gavage during gestation at doses of 20, 100, 500 or 1000 mg/kg. Developmental toxicity was observed in conjunction with maternal toxicity. The NOEL for both maternal and developmental toxicity was 100 mg/kg.

REPRODUCTION........: Propoxycarbazone-sodium was administered to rats for 2 generations at dietary concentrations of 1000, 4000 or 16000 ppm. Parental toxic effects included increased feed consumption, an increased incidence of dilated caecum in females and an increased incidence in focal vacuolation of the forestomach epithelium. There were not treatment-related effects on the reproduction parameters. The NOELs for parental and reproductive toxicity were 1000 and 16000 ppm, respectively.

NEUROTOXICITY ........: Propoxycarbazone-sodium has been tested in both acute and subchronic neurotoxicity screening studies at doses up to 2000 mg/kg and 20000 ppm, respectively. In both studies, there were no clinical signs of toxicity, treatment-related neurobehavioral effects, or microscopic lesions noted in the skeletal muscle or neural tissues of any of the treated rats. The NOEL for overall toxicity as well as neurotoxicity was 2000 mg/kg and 20000 ppm, the highest dose tested in each of the neurotoxicity screening studies.

12. ECOLOGICAL INFORMATION:

This product has been thoroughly evaluated for ecological effects. Bayer will provide a summary of specific data upon written request. As with any pesticide, this product should be used according to label directions and should be kept out of streams, lakes and other aquatic habitats of concern. In event of a spill emergency call the number on page 1.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD.......: Burn packaging which was in direct contact with product in an incinerator approved for pesticide destruction. Do not reuse container.

14. TRANSPORTATION INFORMATION:

TECHNICAL SHIPPING NAME........: Propoxycarbazone-sodium
FREIGHT CLASS PACKAGE..........: Herbicides, NOI - NMFC 50320, Sub 2.
PRODUCT LABEL..................: OLYMPUS 70% WDG Herbicide

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14. TRANSPORTATION INFORMATION (Continued)

DOT (DOMESTIC SURFACE)
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HAZARD CLASS OR DIVISION ......: Non-Regulated

IMO / IMDG CODE (OCEAN)
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HAZARD CLASS DIVISION NUMBER...: Non-Regulated

ICAO / IATA (AIR)
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HAZARD CLASS DIVISION NUMBER...: Non-Regulated

15. REGULATORY INFORMATION:

OSHA STATUS...............: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA STATUS...............: This product is exempt from TSCA Regulation under FIFRA Section 3 (2)(B)(ii) when used as a pesticide.

CERCLA REPORTABLE QUANTITY..: No components listed

SARA TITLE III:
  SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES..: None
  SECTION 311/312 HAZARD CATEGORIES.....: Immediate Health Hazard
  SECTION 313 TOXIC CHEMICALS.......: None

RCRA STATUS...............: If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

16. OTHER INFORMATION:

NFPA 704M RATINGS: Health Flammability Reactivity Other

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

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Bayer’s method of hazard communication is comprised of Product Labels and Material Safety Data Sheets. NFPA ratings are provided by Bayer as a customer service.

REASON FOR ISSUE..........: Update address and phone numbers.
PREPARED BY...............: C. A. Sheehan
APPROVED BY...............: S. E. Earnest
TITLE.....................: Manager, Quality Systems Services
APPROVAL DATE.............: 09/11/2003
SUPERSEDES DATE.........: 10/11/2001
MSDS NUMBER..............: 38296

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