



DuPont  
Material Safety Data Sheet

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M0000056 "Velpar" L Herbicide  
Revised 13-APR-1998 Printed 18-MAY-1998  
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CHEMICAL PRODUCT/COMPANY IDENTIFICATION  
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Material Identification

"Velpar" is a registered trademark of DuPont.

Corporate MSDS Number : DU003032

Company Identification

MANUFACTURER/DISTRIBUTOR  
DuPont  
1007 Market Street  
Wilmington, DE 19898

PHONE NUMBERS

Product Information : 1-800-441-7515  
Transport Emergency : CHEMTREC 1-800-424-9300  
Medical Emergency : 1-800-441-3637

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COMPOSITION/INFORMATION ON INGREDIENTS  
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Components

Material	CAS Number	%
*HEXAZINONE (3-CYCLOHEXYL-6-(DIMETHYLAMINO)-1-METHYL- 1,3,5-TRIAZINE-2,4(1H,3H)-DIONE)	51235-04-2	25
INERT INGREDIENTS (INCLUDES PERCENTAGES OF THE FOLLOWING:)		75
ETHANOL	64-17-5	40-45

\* Disclosure as a toxic chemical is required under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

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HAZARDS IDENTIFICATION  
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# Emergency Overview

DANGER! Causes eye damage. Corrosive, causes irreversible eye damage. Harmful if swallowed.

## (HAZARDS IDENTIFICATION - Continued)

## # Potential Health Effects

## ANIMAL DATA:

ORAL - The LD50 (rat) is 4,120 mg/kg. Low to slightly toxic by ingestion.

DERMAL - The LD50 (rabbit) is >5,000 mg/kg. Practically nontoxic by skin contact. Slight to mild skin irritation by direct contact with the concentrated material. Not a skin sensitizer.

EYE - Direct contact with the concentrated material produced moderate irritation with effects persisting >21 days.

INHALATION - The 4-hour inhalation LC50 (rat) was >7.6 mg/L. Practically nontoxic by inhalation of the concentrated material.

## CHRONIC STUDIES - HEXAZINONE

Oral (rat): In a 2-year feeding study with the 90% powder, the no-observable-effect level was 200 ppm a.i.; nutritional and body weight effects were seen in females at 1,000 ppm a.i. and in both sexes at 2,500 ppm a.i. Biochemical effects were noted in both sexes at 2,500 ppm a.i.

Oral (mouse): In a 2-year feeding study with technical material, the no-observable-effect level (NOEL) was 200 ppm; Decreased body weight gain was observed in both sexes at 2,500 ppm and 10,000 ppm. This effect was severe at 10,000 ppm, the highest dose tested. Non-neoplastic liver effects were noted in males at 2,500 ppm and in both sexes at 10,000 ppm. Based on a recent pathology review, hyperplastic liver nodules diagnosed at 10,000 ppm when this study was initially conducted have been reclassified as liver adenomas. This effect was only significant among female mice in this dose group. This change reflects the current scientific consensus regarding the classification of this benign lesion in the mouse liver.

Oral (dog): In a 1-year feeding study with technical material, the NOEL was 200 ppm. Reduced food consumption and body weight gains were significant at the high dose, 6,000 ppm. These nutritional effects were associated with mild but reversible changes in hematological parameters at the high dose. Increased liver weights and other non-neoplastic liver effects as indicated by histopathology and changes in clinical chemical parameters were observed at 1,500 and/or 6,000 ppm.

Dermal (rabbit): A 21-day dermal study was conducted in

## (HAZARDS IDENTIFICATION - Continued)

rabbits with technical hexazinone. There were no compound-related effects observed. This included the high-dose group in which 1,000 mg/kg was dermally applied for 6 hours/day throughout the study.

## OTHER STUDIES:

REPRODUCTION (Rat) - In a 3-generation, 3-litter study with 90% powder, no adverse reproduction or lactation effects were seen at any level; slightly depressed average weanling weights were noted in the second and third litters at the high dose, 2,500 ppm. A second rat reproduction study (2-generation, 3-litter study) was conducted at dietary doses from 200 to 5,000 ppm. There were no adverse effects on fertility. The NOEL was 200 ppm. Decreased food consumption, parental body weight gain and decreased offspring weights were observed at the higher doses.

TERATOGENICITY - Not teratogenic or embryo-fetal toxic to rats by dietary administration at levels as high as 5,000 ppm, the highest dose tested. Administration to rats by oral intubation resulted in a NOEL for maternal and fetal effects of 100 mg/kg body wt./day. Maternal toxicity (reduced food consumption and lower body weights) was observed at 400 and 900 mg/kg. Lower fetal weights and indications of general delayed development associated with maternal toxicity were also observed at these doses. When hexazinone was administered to rabbits via oral intubation, there were no teratogenic or embryo-fetal toxic effects at the highest dose tested, 125 mg/kg/day. Only a transient reduction in maternal food consumption was observed at the high dose. The maternal and fetal NOELs are considered to be 125 mg/kg.

MUTAGENICITY - Not mutagenic in Ames bacterial assay, Chinese hamster ovary cell point mutation assay, or rat liver DNA repair assay; positive in the in vitro Chinese hamster ovary cell cytogenetic assay but negative in the in vivo rat bone marrow cytogenetic assay.

HUMAN HEALTH EFFECTS OF OVEREXPOSURE TO HEXAZINONE:  
Overexposure to hexazinone by eye contact may initially include eye irritation with discomfort, tearing, or blurring of vision.

Ingestion may include abnormal liver function as detected by laboratory tests.

Significant skin permeation, and systemic toxicity after contact appears unlikely. Individuals with preexisting diseases of the liver may have increased susceptibility to the toxicity of excessive exposures.

HUMAN HEALTH EFFECTS OF OVEREXPOSURE TO ETHANOL:

## (HAZARDS IDENTIFICATION - Continued)

The principal manifestation of ethanol poisoning is central nervous system depression.

Skin contact may initially include defatting of the skin resulting in irritation with discomfort or rash; or allergic skin rashes.

Eye contact may initially include eye irritation with discomfort, tearing, or blurring of vision.

Inhalation may initially include irritation of the upper respiratory passages, with coughing and discomfort.

Ingestion may initially include temporary nervous system depression with anaesthetic effects such as dizziness, headache, confusion, incoordination, and loss of consciousness; reproductive effects with risk to the unborn child; temporary nervous system effects such as muscular weakness and incoordination; gastrointestinal tract irritation; or nonspecific discomfort, such as nausea, headache, or weakness.

Higher exposures may lead to reduced white blood cell production; temporarily reduced fertility in females and males; temporary elevation of blood pressure; degeneration of the heart muscles; abnormal liver function as detected by laboratory tests; or abnormal liver function with nausea or vomiting, reduced appetite, or abnormal pain.

Individuals with preexisting diseases of the liver, central nervous system, gastrointestinal tract, or reproductive organs may have increased susceptibility to the toxicity of excessive exposures.

## Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

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FIRST AID MEASURES  
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## # First Aid

## INHALATION

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

## SKIN CONTACT

## (FIRST AID MEASURES - Continued)

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

## EYE CONTACT

Hold eyelids open and flush with a steady, gentle stream of water  
for 15 minutes. Get medical attention.

## INGESTION

If swallowed, call a physician or Poison Control Center. Do  
not induce vomiting. Drink promptly a large quantity of  
milk, egg whites, gelatin solution, or if these are not  
available, drink large quantities of water. Avoid alcohol.

## # Notes to Physicians

Probable mucosal damage may contraindicate the use of  
gastric lavage.

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FIRE FIGHTING MEASURES  
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## Flammable Properties

Flash Point : 23-25 C (73-77 F)  
Method : Closed Cup

Flammable liquid. Vapor forms explosive mixture with air.  
Heating can release vapors which can be ignited.

## Extinguishing Media

Water Spray, Foam, Dry Chemical, CO2.

## # Fire Fighting Instructions

Wear self-contained breathing apparatus. Use water spray. Cool  
tank/container with water spray.

If area is exposed to fire and conditions permit, let fire burn  
itself out. Burning chemicals may produce by-products more toxic  
than the original material. If product is on fire, wear  
self-contained breathing apparatus and full protective equipment.  
Use water spray. Control runoff.

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ACCIDENTAL RELEASE MEASURES  
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## # Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Emergency Response - Chemical resistant coveralls, waterproof gloves, waterproof boots and face/eye protection. If dusting occurs, use NIOSH approved respirator protection.

## Initial Containment

Dike spill. Prevent material from entering sewers, waterways, or low areas.

## Spill Clean Up

Soak up with sawdust, sand, oil dry or other absorbent material. Shovel or sweep up.

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HANDLING AND STORAGE  
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## Handling (Personnel)

Do not get on clothing. Do not get in eyes. Avoid breathing vapors or mist. Avoid contact with skin. Wash thoroughly after handling. Wash clothing after use. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

## Handling (Physical Aspects)

Keep away from heat, sparks and flames.

## # Storage

Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage.

Do not subject product to temperatures below 32 deg F.

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EXPOSURE CONTROLS/PERSONAL PROTECTION  
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## Engineering Controls

Use only with adequate ventilation. Keep container tightly closed.

## Personal Protective Equipment

Always follow label instructions when using this product.

Applicators and other handlers must wear:

Long-sleeved shirt and long pants  
Shoes plus socks  
Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

Coveralls  
Waterproof gloves  
Shoes plus socks  
Protective eyewear

## Exposure Guidelines

## Applicable Exposure Limits

## HEXAZINONE

PEL (OSHA) : None Established  
TLV (ACGIH) : None Established  
AEL \* (DuPont) : 10 mg/m<sup>3</sup>, 8 Hr. TWA

## ETHANOL

PEL (OSHA) : 1,000 ppm, 1,900 mg/m<sup>3</sup>, 8 Hr. TWA  
TLV (ACGIH) : 1,000 ppm, 1,880 mg/m<sup>3</sup>, 8 Hr. TWA, A4  
AEL \* (DuPont) : 1000 ppm, 8 & 12 Hr. TWA

\* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

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PHYSICAL AND CHEMICAL PROPERTIES  
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## Physical Data

Vapor Pressure : 33 mm Hg @ 25 C (77 F)  
Solubility in Water : Dispersible  
Odor : Alcoholic  
Form : Liquid  
Color : Light yellow  
Specific Gravity : 0.9776

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STABILITY AND REACTIVITY  
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## Chemical Stability

Stable at normal temperatures and storage conditions.

## Incompatibility with Other Materials

Incompatible with strong acids or bases (slowly hydrolyzes).

## Polymerization

Polymerization will not occur.

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ECOLOGICAL INFORMATION  
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## Ecotoxicological Information

## Aquatic Toxicity

This formulation is considered slightly toxic.

96 hour LC50, bluegill sunfish: > 1,000 mg/L

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DISPOSAL CONSIDERATIONS  
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## Waste Disposal

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

Do not contaminate water, food or feed by storage or disposal. 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.

## (DISPOSAL CONSIDERATIONS - Continued)

## # Container Disposal

Triple rinse (or equivalent) the container. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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TRANSPORTATION INFORMATION  
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## Shipping Information

DOT/IMO  
Proper Shipping Name : ETHANOL SOLUTION  
Hazard Class : 3  
UN No. : UN 1170  
Special Information : FLASH POINT: 23 deg C (74 deg F)  
Packing Group : III

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REGULATORY INFORMATION  
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## # U.S. Federal Regulations

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute : Yes  
Chronic : No  
Fire : Yes  
Reactivity : No  
Pressure : No

In the United States this product is regulated by the US Environmental Protection Agency under the Federal Insecticide, Fungicide and Rodenticide Act. It is a violation of federal law to use this product in a manner inconsistent with its labeling.

EPA Reg. No. 352-392

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OTHER INFORMATION  
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## NFPA, NPCA-HMIS

NFPA Rating  
Health : 2  
Flammability : 3  
Reactivity : 0

NPCA-HMIS Rating  
Health : 2  
Flammability : 3  
Reactivity : 0

(Continued)

Personal Protection rating to be supplied by user depending on use conditions.

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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.

Responsibility for MSDS : DuPont  
Address : Agricultural Products  
Wilmington DE 19898  
Telephone : 800-441-7515

# Indicates updated section.

End of MSDS