

Material Safety Data Sheet

Effective Date: 05-JUN-2000
Product: BRAVO S

I. IDENTIFICATION

Chemical Name: CHLOROTHALONIL/SULFUR
Chemical Family: AGRICULTURAL FUNGICIDE
Formula: NOT APPLICABLE, FORMULATED MIXTURE
Synonyms: BRAVO-SULPHUR; DACONIL-SULPHUR
CAS Number: SEE INGREDIENT STATEMENT, SECTION III.
EPA Number: 5905-472

II. PHYSICAL DATA

Boiling Point: 100 DEGREES C.
Freezing Point: <32 DEGREES F.
Spec Gravity: 1.305 GMS/CC
Vapor Pressure: NOT ESTABLISHED
Vapor Density: NOT ESTABLISHED
Solubility: ACTIVES (.5%)
Volatiles: <1%
Evaporation: NOT ESTABLISHED
Melting Point: NOT APPLICABLE
Appearance: YELLOW/TAN LIQUID, WITH SULPHUR ODOR.

III. INGREDIENTS

Material	CAS Number	Percent	TLV	Hazard
CHLOROTHALONIL (DACONIL)	01897-45-6	19.15	NOT ESTABLISHED	SKIN & EYE IRRITANT
SULPHUR	07704-34-9	27.25	NOT ESTABLISHED	HAZARDOUS COMBUSTION PRODUCT
INERT INGREDIENTS		53.60	NOT ESTABLISHED	NONHAZARDOUS

IV. FIRE AND EXPLOSION HAZARD

Flash Point: NON-COMBUSTIBLE
Autoignition Temp: NOT APPLICABLE
Flammable Limit: NOT APPLICABLE
Extinguishing Media: NON-COMBUSTIBLE, USE EXTINGUISHING MEDIA FOR UNDERLYING CAUSE OF FIRE.
Special Fire Fight Proc: WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL FIRE FIGHTING PROTECTIVE EQUIPMENT. AVOID

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STRAIGHT STREAMS WHICH WILL SCATTER MOLTEN
SULPHUR. USE WATER SPRAY ONLY.
Fire and Expl Hazard: MAY GENERATE TOXIC FUMES UNDER FIRE
CONDITIONS.

V. HEALTH HAZARD

Carcinogen Information: NCI CARCINOGENESIS BIOASSAY INDICATES POSITIVE
RESULTS (RATS) FOR DACONIL.
ACUTE EFFECTS OF OVER EXPOSURE

Swallowing: THE ACUTE ORAL LD50 (RATS) = >5020 MG/KG (3.80
MG/L).
Skin Absorption: THE ACUTE DERMAL LD50 (RABBITS) = >2010 MG/KG
(1.52 MG/L).
Inhalation: THE ACUTE INHALATION LC50 (RATS) = >2.03 MG/L.
MAY CAUSE IRRITATION TO RESPIRATORY TRACT.
Skin contact: MODERATELY IRRITATING TO THE SKIN (RABBIT).
Eye Contact: MILDLY IRRITATING TO THE EYE (RABBIT).
Chronic Effects: NONE CURRENTLY KNOWN.
Other Hazard: NONE CURRENTLY KNOWN.

EMERGENCY AND FIRST AID PROCEDURES

Swallowing: GIVE 1 TO 2 GLASSES OF WATER AND INDUCE
VOMITING. OBTAIN MEDICAL ATTENTION IMMEDIATELY.
Skin: WASH SKIN THOROUGHLY WITH SOAP AND WATER. IF
IRRITATION DEVELOPS, CONSULT A PHYSICIAN.
Inhalation: MOVE TO FRESH AIR IF IRRITATION IS NOTED.
CONSULT A PHYSICIAN IF IRRITATION PERSISTS.
Eyes: FLUSH EYES WITH WATER FOR 15 MINUTES, HOLDING
EYELIDS OPEN. IF IRRITATION DEVELOPS, CONSULT A
PHYSICIAN.
Notes to Physician: IN THE EVENT OF AN ADVERSE RESPONSE, TREATMENT
SHOULD BE DIRECTED TOWARD CONTROL OF THE
SYMPTOMS.

VI. REACTIVITY

Stability: Stable
Conditions to Avoid: AVOID EXCESSIVE HEAT AND OPEN FLAMES.
Polymerization: Will Not Occur
Conditions to Avoid: NONE CURRENTLY KNOWN.
Incompatibility material: DO NOT MIX THIS MATERIAL WITH OXIDIZERS.
Hazardous Combustion: SULPHUR DIOXIDE, HYDROGEN CHLORIDE, AND CARBON
MONOXIDE UNDER FIRE CONDITIONS.

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VII. SPILL OR LEAK PROCEDURES

Spill or Leak Proc: ROPE OFF CONTAMINATED AREA AND CONTAIN THE
SPILL. ABSORB THE MATERIAL WITH CLAY OR SAWDUST
AND PUT INTO SUITABLE CONTAINERS FOR DISPOSAL.
DO NOT CONTAMINATE WATER WITH WASTE OR CLEANUP
MATERIAL. THIS MATERIAL IS TOXIC TO FISH.
Waste Disposal Method: THIS MATERIAL MUST BE DISPOSED OF ACCORDING TO
FEDERAL, STATE, OR LOCAL PROCEDURES UNDER THE
RESOURCE CONSERVATION AND RECOVERY ACT.

VIII. SPECIAL PROTECTION INFORMATION

Respiration: PRESSURE-DEMAND, SELF-CONTAINED BREATHING
APPARATUS OR NIOSH/MSHA APPROVED CARTRIDGE
RESPIRATOR.
Ventilation: LOCAL EXHAUST SUFFICIENT.
Gloves: IMPERVIOUS
Eyes: CHEMICAL WORKERS GOGGLES.
Other: EYE WASH STATION, IMPERVIOUS APRON AND
FOOTWEAR.

IX. SPECIAL PRECAUTIONS

Special precaution: KEEP OUT OF REACH OF CHILDREN. DO NOT STORE
WITH FOOD, FEED, OR OTHER MATERIAL TO BE USED
OR CONSUMED BY HUMANS OR ANIMALS. DO NOT
CONTAMINATE WATER SUPPLIES, LAKES, STREAMS, OR
PONDS. DO NOT STORE THIS PRODUCT WITH MATERIALS
LABELED AS OXIDIZERS.
Other precaution: A) RCRA HAZARDOUS WASTE NUMBER: NOT LISTED
B) SARA TITLE III, SECTION 313: CHLOROTHALONIL
(19.15%)
C) SARA THRESHOLD PLANNING QUANTITY: NOT LISTED
D) CERCLA REPORTABLE QUANTITY: NOT LISTED
E) CALIFORNIA PROPOSITION 65: 01/01/89
(CARCINOGEN)
F) 49 CFR 172.101, APPENDIX A & B: - NOT LISTED

X. SHIPPING INFORMATION

Shipping name: PESTICIDES, LIQUID, TOXIC, N.O.S.,
(CHLOROTHALONIL, SULFUR) 6.1, UN2902, PG III

Helena Chemical Company
PH: 901-761-0050
CHEMTREC: 800-424-9300

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"ERG # 151"
Hazard Class: POISON (6)
Identification No: UN 2902
Labels Required: POISON (6)
Placarding: POISON (6)
Freight Class: FUNGICIDES, AGRICULTURAL, LIQUID, NOIBN(NMFC
ITEM 102120, CLASS 60)
Chemical Name Equivalent R.Q.

NOT APPLICABLE NOT APPLICABLE

XI. GENERAL PRODUCT INFORMATION

National Fire Protection Association Rating:
(Rating level: 4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-Minimum)

Health: 2 Fire: 0 Reactivity: 0

S.A.R.A. Title III Hazard Classification: (Yes/No)

Immediate (Acute) Health: Y Delayed (Chronic) Health: Y
Sudden Release of pressure: N Fire: N
Reactive: N

Mail inquiries to: 225 Schilling Blvd., Suite 300 Collierville, TN 38017
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