

The State[®] CHEMICAL MANUFACTURING CO.

MAIN OFFICE AND PLANT: CLEVELAND, OHIO USA 44115-2723
SALES OFFICES/DISTRIBUTION CENTERS ACROSS NORTH AMERICA

MATERIAL SAFETY DATA SHEET

I. IDENTIFICATION

Name: **FORMULA 190**

Type: A nonselective weed killer

D.O.T. Shipping Name: Not a DOT hazardous material in container sizes used

D.O.T. Hazard Class: Combustible Liquid

D.O.T. ID No: N/A

D.O.T. Label: None Required

II. HAZARDOUS INGREDIENTS

Material	Weight %	TLV
2,4-dichlorophenoxyacetic Acid, isooctyl ester (CAS #25168-25-7)	1.09	10 mg/m ³
Bromacil (CAS #314-40-9)	0.98	1 ppm
Petroleum Distillate (CAS #2475-30-2)	92.67	500 ppm
2-butoxyethanol (CAS #111-75-2)	< 5%	50 ppm

No NTP, IARC or OSHA carcinogens present.
This product contains 2,4-dichlorophenoxyacetic Acid and 2-butoxyethanol (Glycol Ether) which are toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA).

III. PHYSICAL DATA

Boiling Point(F°): 350-500°F

Specific Gravity(Water=1): 0.85-0.90

Volatile By Weight(%): > 95

Weight Per Gallon(pounds): 7.26

Solubility In Water: NEGLIGIBLE

pH: Not Applicable (NONAQUEOUS)

Appearance & Odor: Tan to brown liquid with Petroleum odor.

IV. FIRE & HAZARD DATA

Flashpoint (Method Used): 150°F by T.O.C.

FLAMMABLE LIMITS: LEL APPROX. 1.0 UEL APPROX. 7.0

Extinguishing Media: Dry chemical, carbon dioxide, foam and waterfog.

Special Fire Fighting Procedures: A straight water stream may spread the fire however, a water spread from as far a distance as possible may be used to cool containers involved in a fire. Use adequate protective equipment when fire fighting, including self contained breathing apparatus. Do not inhale. Do not inhale smoke, fumes, vapors or combustion products.

Unusual Fire & Explosion Hazards: Vapors are heavier than air and may travel a considerable distance from ignition and flashback. Containers involved in a fire may rupture or explode. Avoid dense accumulation of vapors.

V. HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: Eye irritant. Skin irritant. Possible cause of dermatitis. Vapors are irritating to nose and throat. Harmful or fatal if swallowed. Overexposure may cause nausea, vomiting, burning of eyes and/or skin. Aspiration into lungs causes chemical pneumonia.

CHRONIC EFFECTS: Central nervous system depression and internal organ damage. 2-butoxyethanol may cause blood cell abnormalities. 2,4-D is a suspect carcinogen.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Bronchial conditions. Skin irritation and Dermatitis.

Eye irritation.

FIRST AID PROCEDURES:

If Swallowed: Do not induce vomiting. Aspiration hazard due to Petroleum Distillates present. Contact a physician immediately.

If Inhaled: Remove to fresh air. Use artificial respiration if necessary. Get medical attention immediately.
If In Eyes: Flush eyes immediately with plenty of cool water for at least 15 minutes. Get medical attention immediately.
If on Skin: Wash well with soap and water. Remove contaminated shoes and/or clothing.

VI. REACTIVITY DATA

Stability: STABLE

Conditions to avoid: Ignition sources, electrical areas, heat, sparks, and open flames.

Incompatibility (Materials to avoid): Strong acids or bases, select amines, strong oxidizing reagents.

Hazardous Decomposition Products: Carbon dioxide, Carbon monoxide, Hydrogen chloride, and Nitrogen containing gases.

HAZARDOUS POLYMERIZATION WILL NOT OCCUR

VII. SPILL OR LEAK PROCEDURES

Steps To Be Taken If Material Is Released Or Spilled: Remove sources of heat, sparks, or open flames. Ventilate area. Dike area to contain spill. Use absorbent to collect spill or collect it by vacuuming. Dispose of spilled material appropriately. Reportable quantity of 2,4-dichlorophenoxyacetic acid, isooctyl ester is 100 lbs. (1264 gallons of this product). Product is toxic to fish and wildlife.

Waste Disposal Method: 2,4-D is an acute hazardous waste under RCRA. Follow label disposal instructions. Do not reuse empty containers for any purpose.

Follow All Federal, State and Local Regulations Regarding Waste Disposal.

VIII. SPECIAL PROTECTION INFORMATION

Eye protection and protective gloves are recommended any time you work with any concentrated industrial strength products.

Respiratory Protection: Wear NIOSH approved respirator if TLV is exceeded and/or to avoid breathing spray mist.

Ventilation: Use only outdoors in fresh air.

Protective Gloves: RUBBER

Eye Protection: Safety Glasses

Other Protective Equipment: Rubber boots if necessary to avoid wetting skin.

IX. SPECIAL PRECAUTIONS

Precautions To Be Taken In Handling And Storage: Do not store near heat, sparks, or open flames. Do not store near food or fertilizers. Store only in original labeled container. Store above 40°F to avoid product separation.

OTHER PRECAUTIONS: Do not eat, drink, or smoke when using this product. Wash hands and other exposed areas with soap and water before eating, drinking or smoking to prevent accidental ingestion. Wash contaminated clothing separately from other household laundry.

HMIS/NFPA RATINGS: Health 3 Flammability 2 Reactivity 0

Read and follow all label directions and precautions before using the product. These products are intended for Industrial and Institutional use only.

NOT FOR HOUSEHOLD USE OR RESALE KEEP OUT OF THE REACH OF CHILDREN
While we believe that the data contained herein is factual and the opinion expressed are those of qualified experts, the data are not to be taken as a warranty or representation for which the company assumes legal responsibility. They are offered solely for your consideration, investigation, and verification. Any use of these data and information must be determined by the user to be in accordance with applicable Federal, State, and Local Laws and regulations.

HEALTH AND SAFETY INFORMATION
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