



MATERIAL SAFETY DATA SHEET

DIVISION ADDRESS

MOBAY CHEMICAL CORPORATION
 AGRICULTURAL CHEMICALS DIVISION
 P.O. Box 4913, 8400 Hawthorn Road
 Kansas City, Missouri 64120

ISSUE DATE 11/15/85
 SUPERSEDES 12/01/80

TRANSPORTATION EMERGENCY: CALL CHEMTREC
 TELEPHONE NO: 800-424-9300; DISTRICT OF COLUMBIA: 202-483-7616

MOBAY NON-TRANSPORTATION EMERGENCY NO.:
 (816) 242-2582

I. PRODUCT IDENTIFICATION

PRODUCT NAME.....: SYSTOX 6
 PRODUCT CODE NUMBER.....: Formula No. 011002
 CHEMICAL FAMILY.....: Organophosphorus pesticide
 CHEMICAL NAME.....: O,O-Dimethyl O-(and S)-
 [2-(ethylthio)ethyl]phosphorothioate
 SYNONYMS.....: Demeton, Demox, Systemox
 T.S.C.A. STATUS.....: Registered under FIFRA
 STRUCTURE.....:



II. HAZARDOUS INGREDIENTS

COMPONENTS:		%:	CURRENT TLV:
SYSTOX	CAS# 8065-48-3	66	0.1 mg/m ³
Ingredient 1406	(Trade Secret)	20-30	NE
Ingredient 1879	(Trade Secret)	5-10	NE

III. PHYSICAL DATA

APPEARANCE.....: Liquid
 COLOR.....: Amber
 ODOR.....: Offensive, sulfur type
 MOLECULAR WEIGHT.....: 258 (A.I.)
 MELT POINT.....: Less than -25°C (pure A.I.)
 BOILING POINT.....: NE
 VAPOR PRESSURE.....: NE
 VAPOR DENSITY (AIR=1).....: NE
 SPECIFIC GRAVITY.....: 1.07 @ 20°C
 SOLUBILITY IN WATER.....: (A.I.) Slightly
 % VOLATILE BY VOLUME.....: NE

IV. FIRE & EXPLOSION DATA

FLASH POINT °F(°C).....: 126°F (TCC)
 FLAMMABLE LIMITS -
 Le1.....: 1.0
 Ue1.....: 5.3
 EXTINGUISHING MEDIA.....: Dry Chemical Powder, Water Spray, CO₂

SPECIAL FIRE FIGHTING PROCEDURES/UNUSUAL FIRE OR EXPLOSION HAZARDS:

Keep out of smoke. Cool exposed containers with water spray. Fight fire from upwind position. Use self-contained breathing equipment. Contain runoff to prevent entry into sewers or waterways. Equipment or materials involved in pesticide fires may become contaminated.

V. HEALTH EFFECTS DATA**ANIMAL TOXICITY -****ORAL, LD50**

(INGESTION).....: Male rat 7.4 mg/kg
Female rat approx. 2 mg/kg

DERMAL, LD50

(SKIN CONTACT).....: Female rat 9.2 mg/kg

INHALATION, LC50.....: One-hour exposure: Male rat 0.175 mg/l
(analytical/SYSTOX Technical)
Four-hour exposure: Male rat 0.047 mg/l
(analytical/SYSTOX Technical)

FISH, LC50.....: Bluegill 0.1 ppm (96 hr.)
Rainbow Trout 0.69 ppm (96 hr.)

EYE EFFECTS.....: NE

SKIN EFFECTS.....: NE

OTHER.....: Aromatic petroleum distillates contained
in this formulation have been reported to
cause severe eye damage.

HUMAN EFFECTS

OF OVEREXPOSURE.....: SYSTOX is a toxic chemical, which like other
organophosphate compounds inhibits the enzyme
cholinesterase. Uncontrolled exposure to SYSTOX can
produce symptoms such as nausea, sweating, a sense
of tightness in the chest and constricted pupils.
Increasing exposure can produce more serious
symptoms such as stomach pains, vomiting and
diarrhea, while grossly excessive exposure can
produce symptoms of life threatening effects, such a
muscular tremors, uncontrolled mucous secretion,
convulsions and coma.

EXPOSURE GUIDELINES.....: For SYSTOX ACGIH-TLV 0.1 mg/m³
OSHA-PEL 0.1 mg/m³

VI. EMERGENCY & FIRST AID PROCEDURES

IN CASE OF POISONING.....: Call a physician or poison control center.

EYE CONTACT.....: Hold eyelids open and flush with a steady,
gentle stream of water for at least 15 minutes.
Consult physician.

SKIN CONTACT.....: Wash skin immediately with soap and warm
water. If irritation occurs, get medical
attention.

- INHALATION.....:** Remove to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention.
- INGESTION.....:** Administer water freely and induce vomiting by giving one dose ($\frac{1}{2}$ oz. or 15 ml) of syrup of ipecac. If vomiting does not occur within 10 to 20 minutes, administer second dose. If syrup of ipecac is not available, induce vomiting by sticking finger down throat. Repeat until vomit fluid is clear. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- TO PHYSICIAN.....:** **ANTIDOTE** - Administer atropine sulfate in large therapeutic doses. Repeat as necessary to the point of tolerance. 2-PAM is also antidotal and may be administered in conjunction with atropine.

Compound inhibits cholinesterase resulting in stimulation of the central nervous system, the parasympathetic nervous system and the somatic motor nerves. Do not give morphine. Watch for pulmonary edema which may develop in serious cases of poisoning even after 12 hours. At first sign of pulmonary edema, the patient should be placed in an oxygen tent and treated symptomatically.

When treating poisoning victims, be aware that this formulation contains 20-30% aromatic petroleum distillates. These aromatic petroleum distillates may have a corrosive effect on the eyes.

In case of poisoning, it is also requested that Mobay Chemical, Agricultural Chemicals Division, Kansas City, Missouri, be notified.
Telephone: 816-242-2000; nights or week-ends: 816-242-2582.

VII. EMPLOYEE PROTECTION RECOMMENDATIONS

- EYE PROTECTION.....:** Splash-proof goggles
- SKIN PROTECTION.....:** Latex or Neoprene gloves, rubber boots & apron
- RESPIRATORY PROTECTION...:** Wear a pesticide respirator jointly approved by the Mining Enforcement and Safety Administration (formerly U.S. Bureau of Mines) and by the National Institute for Occupational Safety and Health under the provisions of 30 CFR Part 11. In Canada, obtain this information from your dealer.
- VENTILATION.....:** Maintain exposure levels below exposure limits through use of general and local exhaust ventilation.

OTHER.....: Launder clothing daily after use. Wash thoroughly after handling.

VIII. REACTIVITY DATA

STABILITY.....: Stable
POLYMERIZATION.....: Will not occur
INCOMPATIBILITY
(MATERIALS TO AVOID)....: Strong oxidizing agents
HAZARDOUS DECOMPOSITION
PRODUCTS.....: CO, SO₂, P₂O₅, volatilized SYSTOX

IX. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Avoid breathing vapors and skin contact. Contain spilled material through use of diking or absorbent materials. Absorb spilled material with absorbent and place in covered container. Scrub contaminated area with detergent and bleach or caustic solution. Repeat and rinse with water.

WASTE DISPOSAL METHOD: Bury absorbed material in EPA-approved landfill or burn in an incinerator approved for pesticide destruction.

X. SPECIAL PRECAUTIONS & STORAGE DATA

PRECAUTIONS TO BE TAKEN

IN HANDLING AND STORING: Store in a cool, dry area. Store away from excessive heat and open flame. Store in an area designated specifically for pesticides. Do not store near any material intended for use or consumption by humans or animals.

XI. SHIPPING DATA

D.O.T. SHIPPING NAME.....: Organophosphorus Pesticide, Mixture, Liquid,
N.O.S.
TECHNICAL SHIPPING NAME...: Demeton
D.O.T. HAZARD
CLASSIFICATION.....: Poison B
UN/NA NO.....: UN 2783
REPORTABLE QUANTITY.....: None
D.O.T. LABELS REQUIRED...: Poison
D.O.T. PLACARDS.....: Poison
FRT. CLASS PKG.....: Insecticide, Agricultural, Liquid

XII. DOCUMENTATION

REASON FOR ISSUE.....: Revise to New Format
APPROVED BY.....: William J. Brinkman
TITLE.....: Industrial Hygiene Manager
DATE APPROVED.....: November 15, 1985