

DOW AGROSCIENCES LLC -- PATHWAY HERBICIDE -- 6840-01-356-8510

===== Product Identification =====

Product ID:PATHWAY HERBICIDE

MSDS Date:04/14/1999

FSC:6840

NIIN:01-356-8510

Status Code:A

MSDS Number: CLMHM

=== Responsible Party ===

Company Name:DOW AGROSCIENCES LLC

Address:9330 ZIONSVILLE ROAD

Box:681428

City:INDIANAPOLIS

State:IN

ZIP:46268-1189

Country:US

Info Phone Num:800-992-5994

Emergency Ph

one Num:800-992-5994

Preparer's Name:NOT PROVIDED

CAGE:TO434

=== Contractor Identification ===

Company Name:DOW AGROSCIENCES LLC

Address:9330 ZIONSVILLE ROAD

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City:INDIANAPOLIS

State:IN

ZIP:46268-1189

Country:US

Phone:800-992-5994

CAGE:TO434

===== Composition/Information on Ingredients =====

Ingred Name:PICLORAM: (4-AMINO-3,5,6-TRICHLOROPICOLINIC
ACID),TRIISOPROPANOLAMINE SALT

CAS:6753-47-5

RTECS #:US5606000

= Wt:5.4

Ingred Name:2,4-DICHLOROPHENOXYACETIC ACID,

TRIISOPROPANOLAMINE SALT

CAS:32341-80-3

= Wt:20.9

Ingred Name:ETHYLENE GLYCOL

CAS:107-21-1

RTECS #:KW2975000

Other REC Limits:NOT PROVIDED

OSHA PEL:NOT PROVIDED

ACGIH STEL:C127 MG/M3;C50 PPM

EPA Rpt Qty:1 LB

DOT Rpt Qty:1 LB

Ingred Name:ISOPROPANOL

CAS:67-63-0

RTECS #:NT8050000

Other REC Limits:NOT PROVIDED

OSHA PEL:980 MG/M3;400 PPM

ACGIH TLV:983 MG/M3;400 PPM

ACGIH STEL:1230 MG/M3;500 PPM

Ingred Name:TRIISOPROPANOLAMINE

CAS:122-20-3

RTECS #:UB8750000

Other REC Limits:10 MG/M3 (MFR)

OSHA PEL

:NOT PROVIDED

ACGIH TLV:NOT PROVIDED

Ingred Name:PROPRIETARY SURFACTANT

Other REC Limits:10 MG/M3 (MFR)

OSHA PEL:NOT PROVIDED

ACGIH TLV:NOT PROVIDED

===== Hazards Identification =====

LD50 LC50 Mixture:LD50 (ORAL, RAT) > 5,000 MG/KG

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:EYE: MAY CAUSE MODERATE IRRITATION,
WHICH MAY BE SLOW TO HEAL. MAY CAUSE SLIGHT CORNEAL INJURY. SKIN:
PROLONGED/REPEATED EXPOSURE MAY CA

USE IRRITATION. NOT ABSORBED

THROUGH SKIN IN HARMFUL AMOUNTS. IN GESTION: TOXICITY FROM INGESTION MAY BE GREATER IN MAN THAN IN ANIMALS. SMALL AMOUNTS SWALLOWED INCIDENTAL TO NORMAL HANDLING OPERATIONS ARE NOT LIKELY TO CAUSE INJURY; HOWEVER, LARGER AMOUNTS MAY CAU SE SERIOUS INJURY, EVEN DEATH. MAY CAUSE CNS AND CARDIOPULMONARY EFFECTS. INHALATION: A SINGLE PROLONGED (HOURS) INHALATION EXPOSURE IS NOT LIKELY TO CAUSE ADVERSE EFFECTS. SYSTEMIC (OTHER TARGET ORGA N) EF

FECTS:

UPPER RESPIRATORY IRRITATION

Explanation of Carcinogenicity:PICLORAM DID NOT CAUSE CANCER IN LABORATORY ANIMALS.

Effects of Overexposure:EYE: MAY CAUSE MODERATE IRRITATION. SKIN: PROLONGED/REPEATED EXPOSURE MAY CAUSE IRRITATION. INGESTION: LARGE AMOUNTS MAY CAUSE SERIOUS INJURY, EVEN DEATH. MAY CAUSE CNS AND CARDIOPULMONARY EFFECTS.

Medical Cond Aggravated by Exposure:NOT PROVIDED

===== First Aid Measures =====

First Aid:EYES: IR

RIGATE WITH FLOWING WATER IMMEDIATELY AND CONTINUOUSLY FOR 15 MINUTES. CONSULT MEDICAL PERSONNEL. SKIN: WASH OFF IN FLOWING WATER OR SHOWER. INGESTION: IF SWALLOWED, INDUCE VOMITING IMMEDIATELY AS DIRECTED BY MEDICAL PERSONNEL. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. CONSULT MEDICAL PERSONNEL. INHALATION: REMOVE TO FRESH AIR IF EFFECTS OCCUR. CONSULT A PHYSICIAN.

===== Fire Fighting Measures =====

Flash Point Method:TCC

F

lash Point:=40.6C, 105.F

Lower Limits:N/D

Upper Limits:N/D

Extinguishing Media:WATER FOG, ALCOHOL FOAM, CO2, DRY CHEMICAL.

Fire Fighting Procedures:WEAR POSITIVE-PRESSURE SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING.

Unusual Fire/Explosion Hazard:TOXIC, IRRITATING FUMES MAY BE PRODUCED IF PRODUCT IS INVOLVED IN FIRE. CONTAIN WATER FROM FIRE FIGHTING TO PREVENT ENTRY TO SURFACE OR GROUND WATER.

===== Accidental Release Measures =====

Sp

ill Release Procedures:ABSORB SMALL SPILLS IN AN INERT MATERIAL SUCH AS CLAY, ZORBALL, OR KITTY LITTER. FOR LARGE SPILLS, CONTACT DOW AGROSCIENCES ON 1-800-992-5994. DIKE AREA TO CONTAIN WATER.

Neutralizing Agent:NOT RELEVANT

===== Handling and Storage =====

Handling and Storage Precautions:KEEP OUT OF REACH OF CHILDREN. COMBUSTIBLE. KEEP PRODUCT AWAY FROM HEAT OR OPEN FLAME. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. STORE IN ORIGINAL

CONTAINER. SEE PRODUCT LABEL FOR HANDLING/STORAGE PRECAUTIONS RELATIVE TO THE END USE OF THIS PRODUCT.

Other Precautions:HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN. CAUSES EYE IRRITATION. AVOID CONTACT WITH EYES, SKIN AND CLOTHING. USERS SHOULD WASH HANDS BEFORE EATING, DRINKING, CHEWING GUM, USING TOBACCO OR USING THE TOILET.

===== Exposure Controls/Personal Protection =====

Respiratory Protection:AIRBORNE LEVELS SHOULD BE MAINTAINED BELOW THE EXPOSURE GUIDELINE. WHEN RESPIRATORY PROTECTION IS REQUIRED FOR CERTAIN OPERATIONS, USE A NIOSH APPROVED AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

Ventilation:PROVIDE GENERAL AND/OR LOCAL EXHAUST VENTILATION TO CONTROL AIRBORNE LEVELS BELOW THE EXPOSURE GUIDELINES.

Protective Gloves:IMPERVIOUS TO THIS MATERIAL WHEN PROLONGED/FREQUENTLY REPEATED CONTACT OCCURS.

Eye Protection:USE CHEMICAL GOGGLES.

Other Protective Equipment:PLEASE REFER TO THE PRODUCT LABEL FOR PERSONAL

PROTECTIVE CLOTHING AND EQUIPMENT.

Work Hygienic Practices:NOT PROVIDED

Supplemental Safety and Health

ABBREVIATION: N/A = NOT APPLICABLE. N/AV = NOT AVAILABLE. N/K =

UNKNOWN. N/P = NOT PROVIDED. N/R = NOT RELEVANT. N/D = NOT

DETERMINED. N/E = NOT ESTABLISHED. CNS = CENTRAL NERVOUS SYSTEM. GI

= GASTROINTESTINAL. SCBA = SELF CONTAINED BREATHING APPARATUS.

===== Physical/Chemical Properties =====

HCC:F4

NRC/State Lic Num:NOT RELEVANT

Boiling Pt:>82.2C, 1

80.F

Melt/Freeze Pt:M.P/F.P Text:NOT PROVIDED

Decomp Temp:Decomp Text:NOT PROVIDED

Vapor Pres:32 MMHG@20C

Vapor Density:2(ALCOHOL)

Spec Gravity:1.092@68/68F

pH:NOT PROVIDED

Viscosity:NOT PROVIDED

Evaporation Rate & Reference:NOT PROVIDED

Solubility in Water:MISCIBLE

Appearance and Odor:BLUE-GREEN LIQUID, ALCOHOL-LIKE ODOR

Percent Volatiles by Volume:NOT PROVIDED

Corrosion Rate:NOT PROVIDED

===== Stability and Reactivity Data =====

CONSULT DOW AGROSCIENCES FOR SPECIFIC CASES.

Stability Condition to Avoid:COMBUSTIBLE. KEEP AWAY FROM HEAT AND OPEN FLAME. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE.

Hazardous Decomposition Products:HYDROGEN CHLORIDE AND OXIDES OF NITROGEN MAY BE FORMED IF PRODUCT IS INVOLVED IN FIRE.

===== Toxicological Information =====

Toxicological Information:THE LD50 FOR SKIN ABSORPTION IN RABBITS IS >3980 MG/KG. THE LC50 FOR RATS IS >1.85 MG/L FOR FOUR HOURS.

===== Ecological Information =====

Ecological:BASED LARGELY OR COMPLETELY ON INFORMATION FOR PICLORAM. BIOCONCENTRATION POTENTIAL IS MODERATE (BCF BETWEEN 100 AND 3000 OR LOG POW BETWEEN 3 AND 5). POTENTIAL FOR MOBILITY IN SOIL IS VERY HIGH (KOC BETWEEN 0 AND 50). REMAINING COMPONENTS. BIOCONCENTRATION POTENTIAL IS LOW (BCF