

**MATERIAL SAFETY DATA
EXPEDITE GRASS AND WEED I HERBICIDE**

Page 1 of 9

IDENTIFICATION

<p>PRODUCT NAME NOMIX GRASS AND WEED I HERBICIDE ®</p>

n2n enviro
c/o DEANGELO BROTHERS INC
100 N CONAHAN DRIVE
HAZLETON
PA 18201
Phone (800) 486 6649

EMERGENCY PHONE NO: (CALL COLLECT) 800 - 900 - 4044

PRODUCT IDENTIFICATION

Synonyms: MON 8723, MON 18701

EPA Reg. No: 66524-2

Chemical Name: Not Applicable, Formulated Product

Active Ingredient: *Glyphosate, N-(phosphonomethyl)glycine, in the form of the isopropylamine salt 18.3%

Inert Ingredients: 1.7%
100.0%

Contains petroleum distillates

* Contains 199 grams per litre or 1.66 pounds per U.S. gallon of the active ingredient, glyphosate, in the form of the isopropylamine salt. Equivalent to 147 grams per litre or 1.23 pounds per U.S. gallon of the acid, glyphosate.

CAS Reg. No: Not Applicable, Formulated Product

CAS Reg. No. Active Ingredient: 1071-83-6

DOT Proper Shipping Name: Not Applicable

DOT Hazard Class/I.D. No: Not Applicable

DOT Label: Not Applicable

Reportable Quantity (RQ) Under CERCLA: Not Applicable

U.S. Surface Freight Classification: Weed Killing Compound N.O.I.B.N.

SARA Hazard Notification

Hazard Categories Under Criteria of SARA

Title III Rules (40 CFR Part 370): Immediate

Section 313 Toxic Chemicals: Not Applicable

**MATERIAL SAFETY DATA
EXPEDITE GRASS AND WEED I HERBICIDE**

Page 2 of 9

PRODUCT IDENTIFICATION cont'd

Hazardous Chemicals Under OSHA Hazard Communication Standard:

This product contains, as components, the substances listed below, which are identified as hazardous chemicals under the Criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200):

Hydrocarbon solvent mixture (CAS Reg. Nos. 64742-48-9, 64742-47-8), less than 10% by wt. Surfactants, less than 8%. The specific chemical identity is withheld because it is trade secret information of n2n enviro Ltd.

Titanium Dioxide Pigment, (CAS Reg No. 13463-67-7), less than 2% by wt.

WARNING STATEMENTS

Keep out of reach of Children.

WARNING!

CAUSES SUBSTANTIAL BUT TEMPORARY EYE INJURY.

HARMFUL IF SWALLOWED OR INHALED.

REFORMULATION OR REPACKAGING IS PROHIBITED.

PRECAUTIONARY MEASURES

- * Do not get in eyes, on skin or on clothing.
- * Wear goggles or face shield.
- * Avoid breathing vapor or spray mist.
- * Wash thoroughly with soap and water after handling.
- * Remove contaminated clothing and wash before reuse.
- * Keep people and pets off treated area until foliage is dry.
- * Do not apply directly to water or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment cleaning solutions.
- * Apply this product ONLY through EXPEDITE/NOMIX application equipment designed for its use.

EMERGENCY AND FIRST AID PROCEDURES

FIRST AID

- IF IN EYES:** Immediately flush with plenty of water for at least 15 minutes. Get medical attention.
- IF INHALED:** Remove individual to fresh air. Seek medical attention if breathing difficulty develops.

**MATERIAL SAFETY DATA
EXPEDITE GRASS AND WEED I HERBICIDE**

Page 3 of 9

EMERGENCY AND FIRST AID PROCEDURES cont'd

IF SWALLOWED: Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol. Get medical attention.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists.

NOTE: For additional human emergency first-aid or treatment guidance, call collect, any time, day or night 800 - 900 - 4044

OCCUPATIONAL CONTROL PROCEDURES

EYE PROTECTION: Wear chemical goggles and have eye flushing equipment available.

SKIN PROTECTION: Although NOMIX GRASS & WEED I HERBICIDE does not present a significant skin concern minimize skin contamination by following good industrial practice. Wearing of protective gloves is recommended. Wash hands and contaminated skin thoroughly after handling.

RESPIRATORY PROTECTION: Avoid breathing vapor or spray mist. Respiratory protection should not be required for normal use and handling. During abnormal circumstances where possible exposure to heavy/dense mists may occur prudence would dictate the use of an appropriate NIOSH/MSHA respirator to minimize the exposure. Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Respiratory protection programmes must comply with 29 C.F.R. 1910.134.

VENTILATION: Provide natural or mechanical ventilation to minimize exposure. If practical, use local mechanical exhaust ventilation at source of air contamination, such as open process equipment.

AIRBORNE EXPOSURE LIMITS:

Product: NOMIX GRASS & WEED I HERBICIDE.

OSHA PEL: None Established.

ACGIH TLV: None Established.

**MATERIAL SAFETY DATA
EXPEDITE GRASS AND WEED I HERBICIDE**

Page 4 of 9

OCCUPATIONAL CONTROL PROCEDURES cont'd

Surfactant Ingredients: less than 8% by wt.

OSHA PEL: None Established.

ACGIH TLV: None Established

***Hydrocarbon Solvent Mixture: less than 10% by wt.**

OSHA PEL: None Established.

ACGIH TLV: None Established

* The occupational exposure limit of 300ppm (1900mg/m³) for an 8-hour workday has been recommended by the supplier.

Titanium dioxide: less than 2% by wt.

OSHA PEL: 15mg/m³ total dust, 5 mg/m³ respirable dust **ACGIH TLV:** 10mg/m³ total dust.

FIRE PROTECTION INFORMATION

Flash Point: >200⁰F.

Method: T.C.C.

Extinguishing Media:

Use appropriate extinguishing media for exposure fire.

Special Fire Fighting Procedures:

Fire fighters and others who may be exposed to mists or products of combustion from exposing fire should wear self-contained breathing apparatus and full protective clothing. Equipment should be thoroughly cleaned after use.

Unusual Fire and Explosion Hazards: None.

**MATERIAL SAFETY DATA
EXPEDITE GRASS AND WEED I HERBICIDE**

Page 5 of 9

REACTIVITY DATA

Stability: Stability of at least two years is anticipated under conditions of normal warehouse storage.

Incompatibility: Apply this product ONLY through EXPEDITE/NOMIX application equipment designed for its use. DO NOT USE IN ANY OTHER TYPE OF CONTAINER, PARTICULARLY GALVANIZED STEEL OR UNLINED STEEL CONTAINERS. This product will react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode causing serious personal injury, if ignited by open flames, spark, welder's torch, lighted cigarette or any other ignition source.

Hazardous Decomposition Products: None.

Hazardous Polymerization: Does not occur. This product can react with caustic (basic) material to liberate heat. (not a polymerisation)

HEALTH EFFECTS SUMMARY

The following information presents both human experience and the results of scientific experiments used by qualified experts to assess the effects of NOMIX GRASS & WEED I HERBICIDE and development of Precautionary Statements and Occupational Control Procedures recommended in this document.

MATERIAL SAFETY DATA
EXPEDITE GRASS AND WEED I HERBICIDE

Page 6 of 9

EFFECTS OF EXPOSURE

Dermal contact and inhalation are expected to be the primary routes of occupational exposure to NOMIX GRASS & WEED I HERBICIDE. Although occupational exposure to this product has not been reported to cause significant adverse health effects, NOMIX GRASS & WEED I HERBICIDE is considered, on the basis of acute animal tests, to be moderately to severely irritating to eyes. Ingestion of a similar, but more concentrated, formulation has been reported to produce gastrointestinal discomfort with irritation of the mouth, nausea, vomiting and diarrhea. Willful ingestion of large amounts of a formulated product containing the surfactant (15 grams or more of surfactant) used in NOMIX GRASS & WEED I HERBICIDE has resulted in hypotension and pulmonary edema in people attempting suicide.

The hydrocarbons contained in the solvent used in this material, as a class are irritating to the eyes and upper respiratory tract. Overexposure to high atmospheric concentrations of these hydrocarbons may produce central nervous system effects, with possible effects such as headache and dizziness.

TOXICOLOGICAL DATA

Data from laboratory studies conducted with NOMIX GRASS & WEED I HERBICIDE are summarized below:

Single exposure (acute) studies indicate:

- Oral - Practically Nontoxic (RatLD₅₀ >5,000mg/kg)
 - Dermal - Practically Nontoxic (RabbitLD₅₀ >5,000mg/kg)
 - Inhalation - No more than Slightly Toxic (Rat 4 hour LC₅₀ >1.5mg/m³ the highest atmospheric concentration attainable in this study).
 - Eye Irritation - Severely Irritating (Rabbit, 24-hr)
 - Skin Irritation - Practically Nonirritating (Rabbit, 4-hr)
- No skin allergy was observed in guinea pigs following repeated skin exposure.

COMPONENTS

Data from laboratory studies conducted by Monsanto and from the available literature on the component of NOMIX GRASS & WEED I HERBICIDE:

Isopropylamine Salt of Glyphosate

Data from studies with a formulation comprised of 62% isopropylamine salt of glyphosate (MON 0139) indicate the following:

MON 0139 was practically nontoxic orally (rats) or after skin application (rabbits). It was nonirritating to rabbit eyes and practically nonirritating to rabbit skin. In repeat dosing studies (6 month), dogs fed MON 0139 exhibited slight body weight changes. Following repeat skin exposure (3 weeks) to MON 0139, skin irritation was the primary effect in rabbits. Additional toxicity information is available on glyphosate, the active herbicidal ingredient of MON 0139, which has been tested in mutagenicity, teratogenicity, reproductive, acute, subchronic and chronic toxicity studies.

MATERIAL SAFETY DATA
EXPEDITE GRASS AND WEED I HERBICIDE

Page 7 of 9

HEALTH EFFECTS SUMMARY contd

Hydrocarbon Solvent Mixture

The composition of the hydrocarbon solvent component of NOMIX GRASS & WEED I HERBICIDE is variable. Excessive exposure to high atmospheric concentrations of hydrocarbons of this type may result in central nervous system (CNS) depression and anaesthetic-like effects. Solvent mixture components may act as defatting agents on the skin and mucous membranes to produce drying, irritation and dermatitis with repeated or prolonged contact and may be irritating to the eyes upon direct contact. Accidental oral ingestion of hydrocarbons is often associated with stomach and intestinal irritation, vomiting and CNS depression. Inhalation of the material or its harmful fumes can occur when hydrocarbons are initially ingested or during spontaneous or induced vomiting. This may cause injury to the lungs. Symptoms of inhalation of material or fumes include coughing, choking and increased breathing and heart rates.

This component of NOMIX GRASS & WEED I HERBICIDE is reported to have a low order of acute oral (rat) and dermal (rabbit) toxicity. Kidney effects have, however, been reported in animal studies with hydrocarbons of the same boiling range.

Surfactant

The surfactant components of NOMIX GRASS & WEED I HERBICIDE are reported to cause irritation to the eyes and skin and may contribute to the irritation potential reported for this herbicide. Ingestion may produce gastrointestinal irritation, nausea, vomiting and diarrhea.

Titanium Dioxide

Titanium dioxide is a minor component (<2%) of NOMIX GRASS & WEED I HERBICIDE. Inhalation of excessive amounts of titanium dioxide dust may produce coughing, sneezing, shortness of breath and mild and temporary respiratory tract irritation. Grossly excessive and prolonged exposure may lead to pulmonary injury. In long-term (2-year) inhalation studies with titanium dioxide, at levels well in excess of the TLV (250 mg/m³), which were considered to overwhelm the normal clearance mechanism of the lungs, an increase in benign and malignant lung tumors were seen in rats. An increased incidence of rhinitis, tracheitis and pneumonia were reported in all exposure groups (10 to 250 mg/m³). A Threshold Limit Value (TLV) has been established by the American Conference of Governmental Industrial Hygienists for titanium dioxide. For additional information on this material, please refer to the current edition of The Documentation of the Threshold Limit Values and Biological Exposure Indices.

MATERIAL SAFETY DATA
EXPEDITE GRASS AND WEED I HERBICIDE

Page 8 of 9

PHYSICAL DATA

Appearance/Odor: White liquid.
Density: 1.069 g/ml
Solubility: Forms an emulsion.
pH: 4.94 (1% solution).

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

SPILL, LEAK & DISPOSAL INFORMATION

SPILL, LEAK:

Observe all protection and safety precautions when cleaning up spills - See Occupational Control Procedures.

Liquid spills on floor or other impervious surfaces should be contained or diked and should be absorbed with attapulgate, bentonite or other absorbent clays. Collect contaminated absorbent, place in a plastic-lined metal drum and dispose of in accordance with instruction provided under DISPOSAL. Thoroughly scrub floor with a strong industrial type detergent solution and rinse with water. Liquid spills that soak into the ground should be dug-up, placed in plastic-lined metal drums and disposed of in accordance with instructions provided under DISPOSAL.

Leaking containers should be separated from non-leakers and either the container or its contents transferred to a plastic-lined drum or other non-leaking container. Dispose of leaking container in accordance with instructions provided under DISPOSAL.

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

DISPOSAL:

Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, State or local procedures.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is destroyed. Do not reuse container.

When container is completely emptied through the NOMIX/EXPEDITE application equipment, 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.

**MATERIAL SAFETY DATA
EXPEDITE GRASS AND WEED I HERBICIDE**

Page 9 of 9

SPILL, LEAK & DISPOSAL INFORMATION contd

STORAGE:

Store this product between 32⁰F and 100⁰F in its original container and in a secured storage area.

DATE: April 2004 **SUPERSEDES:** May 2000

ADDITIONAL INFORMATION

<p>Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof. n2n enviro makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will n2n enviro be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OR MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.</p>
--

For further information contact:

DE ANGELO BROTHERS INC
100 N CONAHAN DRIVE
HAZLETON
PA 18201
Phone (800) 486 6649

Nomix is a trademark of n2n enviro Limited.