Material Safety Data Sheet	**Hi-Yield® Crabgrass Control**

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Name: Voluntary Purchasing Groups, Inc.	Box 460, Bonham, TX 75418
Emergency Telephone: (903) 583-5501 or (800) 424-9300 (Chemtrec)	
For Additional Information Contact: Product Manager or Chemtrec	Date Prepared: 03-14-03
Common Name (Used on Label): Hi-Yield® Crabgrass Control	Chemical Family: Aromatic, amine, halogen
Chemical Name: See Section 2	Formula: Mixture
Trade Name & Synonyms: Hi-Yield® Crabgrass Control EPA # 62719-137-7401	

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENT	CAS NUMBER	% (TYPICAL)	TLV (UNITS)	PEL (UNITS)
N-butyl-N-ethyl, alpha, alpha, alphatrifluoro-2, 6-dinitro-p-toludine	1861-40-1	1.4	Not established	Not established
alpha, alpha, alpha-Trifluoro-2, 6-dinitro-N, N-dipropyl-p-toluidine (Trifluralin)*	1582-09-8	.071	Not established	Not established

* This substance is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

PEL: Permissible Exposure Limit established by the Occupational Safety and Health Administration.
TLV: Threshold Limit Value recommended by the American Conference of Governmental Industrial Hygienists.

SECTION 3 - PHYSICAL DATA

BOILING POINT (°F) Does not apply	SPECIFIC GRAVITY (H_2O=1) Not established	VAPOR PRESSURE (mm Hg) Does not apply
PERCENT VOLATILE BY VOLUME (%) Does not apply	VAPOR DENSITY (AIR=1) Does not apply	EVAPORATION RATE (ethyl ether=1) Does not apply
SOLUBILITY IN WATER Insoluble	REACTIVITY IN WATER Does not apply	
APPEARANCE AND ODOR Solid; slight aromatic odor		

SECTION 4 - FIRE AND EXPLOSION DATA

FLASH POINT (°F) Does not apply	FLAMMABLE LIMITS IN AIR (% by volume) Lower: Does not apply Upper: Does not apply
EXTINGUISHING MEDIA Dry chemical, carbon dioxide, halon, water spray or foam.	AUTO IGNITION TEMPERATURE Does not apply
UNUSUAL FIRE AND EXPLOSION HAZARDS If product is involved in fire, noxious, toxic fumes may be produced.	

SPECIAL FIRE FIGHTING PROCEDURES
None

SECTION 5 - HEALTH INFORMATION

PRIMARY ROUTES OF EXPOSURE AND TARGET ORGANS
Eyes, skin, gastrointestinal tract, ingestion

SIGNS AND SYMPTOMS OF EXPOSURE

(1) ACUTE OVEREXPOSURE
Possible eye and skin irritation. There have been no reports of significant exposure of workers to Trifluralin Technical. There is extensive field experience involving a variety of TREFLAN (trifluralin) products, some of which contain organic solvents. Events cannot be easily categorized in relation to the various product forms. The more commonly reported adverse effects following exposure to TREFLAN products are skin irritation and rash; nausea, vomiting, cramping, and diarrhea, eye irritation, dizziness, headache, and other minor central nervous system effects; fever and or chills; and muscle aches or weakness. Except for some reports of skin or eye irritation, it is difficult to establish a cause/effect relationship.

(2) CHRONIC OVEREXPOSURE
The following effects were reported in chronic, tertogenic, and reproductive toxicity studies in laboratory animals, where experimental dosage levels and duration of exposure were far in excess of those likely to occur in humans. Studies were conducted at exposures as high as 800,000 times greater than the expected exposure of applicators using TREFLAN. Chronic Toxicity- Growth retardation, reduced food consumption, reduced survival, increased liver weights and kidney toxicity. Teratology & Reproduction- Not teratogenic. No impairment of reproductive capacity. Fetotoxic only at maternally toxic doses in studies. Matagenicity- Not mutagenic in either bacterial or mammalian cells. Carcinogenicity-NCI-Evidence of carcinogenicity (invalid study due to nitrosamine impurity). EPA-Class C- possible human carcinogen (limited evidence from animal studies). Toxicological studies support noncatcinogen status. Not listed as a carcinogen or potential carcinogen by ACGIH, IARC, NTP, or OSHA. Technical trifluralin may cause skin sensitization reaction in certain individuals.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
Disorders of the skin, eyes, and central nervous system.

CHEMICAL/COMPONENT LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN
None

NTP	IARC	OSHA
☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO

OTHER EXPOSURE LIMITS
None determined

EMERGENCY AND FIRST AID PROCEDURES
EYE OR SKIN CONTACT: Flush with plenty of water for at least 15 minutes and get medical attention. Wash contaminated skin with soap and water. INGESTION: Do not induce vomiting. Give milk or water. Never give anything by mouth to an unconscious person. Call a physician. Harmful if swallowed. Keep out of reach of children.

SECTION 6 - REACTIVITY DATA

STABILITY	CONDITIONS TO AVOID
☐ Unstable ☒ Stable	None

INCOMPATIBILITY (Materials to Avoid)

HAZARDOUS DECOMPOSITION PRODUCTS
Thermal decomposition may produce toxic gases

HAZARDOUS POLYMERIZATION	CONDITIONS TO AVOID
☐ May Occur ☒ Will Not occur	None

SECTION 7 - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS LEAKED OR SPILLED Sweep into labeled container and seal. Do not flush with water.
WASTE DISPOSAL METHOD Dispose of in accordance with Federal, State, and local regulations. Triple rinse containers prior to disposal.

SECTION 8 - PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION Utilize NIOSH/MSHA approved respiratory protection as necessary to provide protection against pesticides.
VENTILATION Use in well-ventilated area.
PROTECTIVE GLOVES Utilize impermeable gloves
EYE PROTECTION Use safety glasses to prevent eye contact.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT Use protective clothing such as coveralls, a long sleeved shirt, and impermeable gloves when handling this product.

SECTION 9 - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING & STORING Do not store or transport with food, feed, or seed. Do not store near heat or open flames.
OTHER PRECAUTIONS None determined

SECTION 10 - OTHER INFORMATION

The information contained within was obtained from authoritative sources and is believed to be accurate for the manner in which the product is intended to be used. Other uses could result in ramifications, which are not included within this document.