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MSDS #N30

REC'D FEB 15 1999

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor Occupational Safety and Health Administration (Non-Mandatory Form) CHM00140 Form Approved

OMB No. 1218-0072 X35040071-010



IDENTITY (As Used on Label and List) HYDRO-BALANCE HY-SOL Safety Solvent

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I #H-1200

Table with 2 columns: Manufacturer's Name (North American Research Corporation), Emergency Telephone Number (972) 492-1800, Address (Lewisville, Texas 75067), Telephone Number for Information (972) 492-1800, Date Prepared (9/02/97), Signature of Preparer (Robin Cook).

Section II - Hazardous Ingredients/Identity Information

Table with 5 columns: Hazardous Components (Specific Chemical Identity: Common Name(s)), OSHA PEL, ACGIH TLV, Other Limits Recommended (STEL 200ppm), % (optional) (<100).

Table with 2 columns: NFPA HAZARD RATING (2 Health, 0 Flammability, 0 Reactivity), SHIPPING DESCRIPTION: (Tetrachloroethylene, 6.1, UN1897, PG III).

If the hazardous ingredients are listed with an asterick\*, the ingredient is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and the Reauthorization Act of 1986 and 40 CFR Part 372.

Section III - Physical/Chemical Characteristics

Table with 4 columns: Boiling Point (250°F), Specific Gravity (H2O = 1) (1.62), Vapor Pressure (mm Hg.) @ 20°C (13mm), Melting Point (N/A), Vapor Density (AIR = 1) (5.8), Evaporation Rate (0.1), Solubility in Water (.015gm/100gm @ 25°C), Appearance and Odor (Clear colorless liquid; ether like odor).

Section IV - Fire and Explosion Hazard Data

Table with 4 columns: Flash Point (Method Used) (None (TCC)), Flammable Limits, LEL (N/A), UEL (N/A), Extinguishing Media (Use water, foam or dry chemical appropriately on surrounding fire.), Special Fire Fighting Procedures (Firefighters should wear self-contained, positive-pressure breathing apparatus due to thermal decomposition products.), Unusual Fire and Explosion Hazards (When threshold is exceeded, thermal decomposition will cause toxic fumes (vapors).)

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**Section V — Reactivity Data**

Stability	Unstable		Conditions to Avoid Avoid contact with open flame, electric arcs, or other hot surfaces which can cause thermal decomposition.
	Stable	X	

**Incompatibility (Materials to Avoid)**

Strong alkalis, oxidizers, barium and lithium

**Hazardous Decomposition or B products**

Hydrogen chloride, phosgene (small amounts) and chlorine

Hazardous Polymerization	May Occur		Conditions to Avoid None
	Will Not Occur	X	

**Section VI — Health Hazard Data**

Route(s) of Entry:	Inhalation? Yes	Skin? Yes	Ingestion? Yes
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**Health Hazards (Acute and Chronic)** INHALATION: minimal effects observed below 100ppm; dizziness, drowsiness & throat irritation above 100ppm; unconsciousness or death for prolonged exposures above 500ppm. EYES: can cause slight temporary corneal injury and irritation. SKIN: prolonged or repeated contact cause irritation, defatting of skin & dermatitis. Absorption of liquid through intact skin possible with systemic effects. INGESTION: single dose toxicity is low to moderate. If vomiting occurs, Solvo can be aspirated into the lungs causing chemical pneumonia & systemic effects.

**Carcinogenicity:** NTP? IARC Monographs? OSHA Regulated? Yes

Tetrachloroethylene is not listed on the OSHA carcinogen list.

Chronic overexposure have caused liver toxic effects in experimental animals.

**Signs and Symptoms of Exposure**

Odor threshold approximately 50ppm causes olfactory fatigue. Consumption of alcoholic beverages may increase the potential for development of toxic effects.

**Medical Conditions**

Generally Aggravated by Exposure Acute and chronic liver disease &amp; rhythm disorders of the heart.

NOTE TO PHYSICIAN: Adrenalin should never be given to persons overexposed to this product

**Emergency and First Aid Procedures** INHALATION: remove to fresh air. If breathing stops, administer APR.

SKIN: wash with soap &amp; water &amp; launder contaminated clothing before reuse. EYES: flush immediately with water for at least 15min. If irritation persists, see a physician.

INGESTION: Do Not induce vomiting. Contact physician/emergency medical facility immediately.

**Section VII — Precautions for Safe Handling and Use****Steps to Be Taken in Case Material is Released or Spilled**

Evacuate the area, ventilate &amp; avoid breathing vapors. Small spills: clean by mopping or with absorbent material &amp; place inclosed containers. Do not flush to sewer. Indoor spills: turn off A/C and/or heating system to prevent vapors from contaminating entire building.

**Waste Disposal Method**Recovered liquids may be sent to a licensed ~~recycler~~ or incinerator. Dispose of contaminated material in EPA approved waste management facility. Abide by all Federal, State & Local Laws.**Precautions to Be Taken in Handling and Storage**

Store in cool, dry, well-ventilated area. Prevent water or moist air from entering storage containers.

**Other Precautions**

For professional use only. For industrial &amp; institutional use only.

Vapors are heavier than air and will collect in low areas. Read entire label before using.

**Section VIII — Control Measures****Respiratory Protection (Specify Type)** Use approved organic vapor type respirator when concentration is 25ppm. Concentrations above 200ppm, use self-contained breathing apparatus or air-line

Ventilation	Local Exhaust Open doors and/or windows; Maintain exposure levels below 25ppm.	Special respirator with full face piece.
	Mechanical (General) N/A	Other N/A

**Protective Gloves** Solvent resistant such as Viton polyvinyl alcohol or equivalent.**Eye Protection** Do not wear contact lenses. Wear Safety glasses, chemical goggles or faceshield.**Other Protective Clothing or Equipment** Solvent resistant boots, apron and headgear should be worn where splashing is possible. Safety shower & eyewash station should be available.**Work/Hygenic Practices** Avoid contact with skin & avoid breathing vapors. Do not eat, drink or smoke in work area. Wash hands prior to eating, drinking or using restrooms.