



SAFETY DATA SHEET

Section 1: IDENTIFICATION

Product Name: Hydro-Vator
Product Code: B11761
MSDS Date: April 29, 2013

Chemisphere Corporation
2101 Clifton Ave
St. Louis, MO 63139

General Information: 314-644-1300
CHEMTREC: 800-424-9300

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Potential Health Effects: See Section 11 for more information

GHS Classification:

Flammable liquids, Category 3
Toxic to reproduction, Category 1
Skin irritation, Category 2
Eye Irritation, Category 2B
Carcinogenicity, Category 2
Aspiration hazard, Category 1

GHS Labeling



Symbol:

Signal Word: Danger

Hazard Statements:

Flammable liquid and vapor
May damage fertility or the unborn child
Causes skin and eye irritation.
Suspected of causing cancer.
May be fatal if swallowed and enters airways

Precautionary Statements:

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/Bond container and receiving equipment.
Use only non-sparking tools.
Take precautions against static discharge.
Wash hands thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.

Response:

IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower.

In case of fire: consider carbon dioxide, dry chemical powder, or alcohol resistant foam to extinguish.

If exposed or concerned: Get medical advice/attention.

If swallowed: Immediately call a poison center/doctor.

Do not induce vomiting.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

If skin irritation occurs: Get medical advice/attention.

Storage:

Store in a well-ventilated place. Keep cool.

Store locked up.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

This product does contain carcinogens or potential carcinogens as listed by ACGIH.

This material contains components that are considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Environmental Effects: See Section 12 for more information.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

No.	Component CAS REG. NO.	Amount %	OSHA		ACGIH	
			TWA	STEL	TWA	STEL
1	2-Butoxyethanol 111-76-2	1-100	50 ppm	Not avail	20 ppm	Not avail
2	Dimethyl Glutarate 1119-40-0	1-100	Not avail	Not avail	Not avail	Not avail
3	Dimethyl Succinate 106-65-0	1-100	Not avail	Not avail	Not avail	Not avail
4	Dimethyl Adipate 627-93-0	1-100	Not avail	Not avail	Not avail	Not avail
5	Normal Butyl Acetate 123-86-4	1-100	150 ppm	200 ppm	150 ppm	200 ppm
6	Solvent Naphtha (petroleum) 64742-94-5	1-100	Not avail	Not avail	Not avail	Not avail
7	2-Ethoxyethyl acetate 111-15-9	1-100	5 ppm	Not avail	5 ppm	Not avail
8	Di-n-butyl Phthalate 84-74-2	1-10	5 mg/m3	Not avail	5 mg/m3	Not avail

Section 4: FIRST AID MEASURES

Emergency first aid procedures by route of exposure:

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Do NOT induce vomiting. Contact local poison control center or physician immediately. Get medical attention immediately.

Skin: Wash off with soap and plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes: If contact with eyes, check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention.

Section 5: FIRE FIGHTING MEASURES

Flash Point (2-Ethoxyethyl acetate): CLOSED CUP: 54C (129F)
Auto-ignition Temperature (2-Ethoxyethyl acetate): 379C (714F)
Lower Explosion Limit (2-Ethoxyethyl acetate): 1.7% (V)
Upper Explosion Limit (2-Ethoxyethyl acetate): 13.0% (V)

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Products of Combustion: Upon decomposition this product may emit carbon dioxide, carbon monoxide, and/or low molecular weight hydrocarbons.

Fire Fighting Equipment/Instructions:

Wear protective clothing and equipment suitable for the surrounding fire, including helmet, facemask, and self contained breathing apparatus.

HAZARD	HMIS	NFPA
Toxicity	2	2
Fire	2	2
Reactivity	0	0

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Protection:

For large spills wear gloves, Tyvek suits, safety glasses, and appropriate NIOSH approved respiratory protection. Keep unnecessary personnel away. Eliminate all sources of ignition or flammables that may come into contact with a spill of this material.

Environmental Precautions: Prevent discharge to open bodies of water, municipal sewers, and watercourses.

Method for Containment: Absorb spilled liquid in suitable non-flammable inert material such as clay, vermiculite or diatomaceous earth.

Methods for Clean-up: Ventilate area of leak or spill. Use spark-proof tools to sweep or scrape up and containerize in approved chemical waste container.

Section 7: HANDLING AND STORAGE

Handling:

Avoid inhalation of vapor or mist. Keep away from sources of ignition – No smoking. Take measures to prevent the build up of electrostatic charge.

Storage:

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Section 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

Engineering Controls: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment. Ensure that eyewash station and safety shower is proximal to the work-station location.

Personal Protective Equipment (PPE)

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Eye/Face Protection: Face shield and safety goggles.

Hand Protection: Chemical gloves

Body: Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Other Protective Equipment:

Facilities storing or utilizing this material should be equipped with eyewash and safety shower facilities. Avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling the product.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance, State	Liquid
Color	Colorless
Odor	Aromatic
pH (1%soln/water)	Not Available
Vapor Density	Not Available
Boiling Point (2-Ethoxyethyl acetate)	156°C (313°F) - lit
Vapor Pressure (2-Ethoxyethyl acetate)	3 hPa (2 mmHg) at 20°C (68°F)
Melting Point/freezing point (2-Ethoxyethyl acetate)	-61°C (-78°F)
Flash Point (See Section 5)	
Flammability Properties (See section 5)	
Solubility (in water)	Not Available
Specific Gravity (2-Ethoxyethyl acetate)	0.975 g/mL at 25C (77°F)
Evaporation Rate	Not Available
Octanol/Water partition coefficient (Kow)	Not Available
Auto-ignition temperature: (See section 5)	
Decomposition temperature:	Not Available

Section 10: STABILITY AND REACTIVITY

Stability: This material is considered stable at ambient temperatures 70°C (21°C).

Condition to Avoid: Flames, sparks, electrostatic discharge, heat and other ignition sources, moisture.

Incompatible Materials: Strong oxidizing materials, Nitrates, Strong acids, Strong bases

Hazardous Decomposition: Upon decomposition, this product evolves carbon monoxide, carbon dioxide, and/or low weight hydrocarbons.

Hazardous Reactions: This product will not undergo polymerization.

Section 11: TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:

Analysis LD50

2-Butoxyethanol (CAS # 111-76-2)
LD50 Dermal Rabbit 4.0 g/kg
LC-50 Inhalation Sat Air (18 ppm) – no deaths (Rat) 7 hours
LD50 Oral Rat 5.1 g/kg

Dimethyl Succinate (106-65-0)
Oral LD50 Rat: >5g/kg
Dermal LD50 Rat: 1920 mg/kg

Dimethyl Adipate (627-93-0)
Oral LD50 Rat: 1920 mg/kg

Dimethyl Glutarate (1119-40-0)
Inhalation LC50 Rat: 6.1 mg/L/4H
Oral LD50 Rat: 8191 mg/kg

Normal Butyl Acetate (23-86-4)
Inhalation, mouse: LC50 = 6gm/m³/2H
Inhalation, rat: LC50 = 2000 ppm/4H
Oral, mouse: LD50 = 7060 mg/kg
Oral, rabbit LD50 = 3200 mg/kg
Oral rat LD50 = 10768 mg/kg
Skin rabbit LD50 = 17,600 mg/kg

(2-Ethoxyethyl acetate)
LD50 Oral – rat 2,700 mg/kg
LC50 Inhalation – rat – 8h – 12,100 mg/m³

Di-n-butyl Phthalate 84-74-2
LD50 Oral Rat 8000 mg/kg
LC50 Inhalation Rat 4250 mg/m³
LD50 Skin Rabbit: >20 mL/kg

CHRONIC EFFECTS:

Solvent Naphtha (petroleum) (CAS # 64742-94-5)

Carcinogenic Effects: 2B – Possible for humans by IARC. 2 – Reasonable anticipated to be a human carcinogen) by NTP. Classified A4 (Not classifiable for humans or animals) by ACGIH

Mutagenic Effects: Not Available.

Teratogenic Effects: Not Available

Developmental Toxicity: Not Available

Target Organs: Lungs, central nervous system, Digestive System, Respiratory Tract, Skin, Eyes, Blood, Kidneys, Liver. May be irritating to eyes, skin, and respiratory system. Aspiration hazard if swallowed. Can enter lungs and cause damage.

2-Butoxyethanol (CAS # 111-76-2)

Carcinogenic Effects: A3 – Confirmed animal carcinogen with unknown relevance to humans by ACGIH.

Mutagenic Effects: Not Available.

Teratogenic Effects: Has shown teratogenic effects in laboratory animals

Developmental Toxicity: Not Available

Target Organs: Blood, kidneys, liver, lymphatic system, central nervous system (CNS). **Inhalation:** Causes irritation to the respiratory tract. Symptoms may include sore throat, coughing, headache, nausea and shortness of breath. High concentrations have a narcotic effect. **Ingestion:** Causes irritation to the

gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. Toxic! May cause systemic poisoning with symptoms paralleling those of inhalation. **Skin Contact:** May cause irritation with redness and pain. May be absorbed through the skin with possible systemic effects. **Eye Contact:** Vapors are irritating and may produce immediate pain, redness and tearing. Splashing can cause severe pain, stinging, swelling. **Chronic Exposure:** Prolonged or repeated exposures can cause damage to the liver, kidneys, lymphoid system, blood and blood-forming organs. **Aggravation of Pre-Existing Conditions:** Persons with pre-existing skin disorders, eye problems, impaired liver, kidney, blood, respiratory or lymphoid system function may be more susceptible to the effects of the substance.

Dimethyl Adipate (627-93-0) Dimethyl Glutarate (1119-40-0) Diethylene Glycol Monobutyl Ether (112-34-5)

Carcinogenic Effects: Not Available

Mutagenic Effects: no genetic effects were observed in standard tests using bacterial cells and whole animals. Genetic effects were observed in standard tests with animal cells.

Teratogenic Effects: Not Available

Developmental Toxicity: Rat inhalation: no effects on offspring observed in laboratory animals in the presence of maternal toxicity.

Reproductive Effects: Minor changes in male fertility parameters, i.e. hormone measurements, sperm number or reproductive organ weights, observed in the absence of a change in reproductive performance. Rodents are more susceptible to reported effect than humans. Rat inhalation, 1 generation: signs of generalized toxicity (reduced body weight and/or reduced weight gain) were observed in parental animals and offspring with no effect on fertility or reproduction.

Target Organs: Causes eye irritation, May cause skin irritation, May cause respiratory tract irritation, may cause blurred vision. Based on similar material this product produced mild skin and moderate eye irritation during primary irritation studies in rabbits. No dermal sensitization was produced in guinea pigs (based on similar product). Repeat dose toxicity: rat, inhalation, 90 day: produced effects on body weight, serum enzymes and or organ weights in repeat dose studies. Repeated inhalation exposure produces nasal tissue damage. This material can produce temporary blurred vision following exposure to high vapor concentrations or direct contact with eyes.

Normal Butyl Acetate (123-86-4)

Carcinogenic Effects: not listed by ACGIH, IARC, NIOSH, NTP, or OSHA

Mutagenic Effects: Not Available.

Teratogenic Effects: Not Available

Developmental Toxicity: Specific Developmental Abnormalities: Musculoskeletal, inhalation rat TCL=1500ppm/7H.

Target Organs: Inhalation: May be harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness. **Skin:** May be harmful if absorbed through skin. Causes skin irritation. **Eyes:** Causes eye irritation. **Ingestion:** May be harmful if swallowed.

(2-Ethoxyethyl acetate)

Carcinogenic Effects: not listed by ACGIH, IARC, NIOSH, NTP, or OSHA

Mutagenic Effects: Not Available.

Teratogenic Effects: May cause congenital malformations in the fetus. Presumed human reproductive toxicant. May cause reproductive disorders.

Developmental Toxicity:

Target Organs: Inhalation: May be harmful if inhaled. May cause respiratory tract irritation. **Ingestion:** May be harmful if swallowed. **Skin:** May be harmful if absorbed through skin. May cause skin irritation. **Eyes:** May cause eye irritation.

Di-n-butyl Phthalate 84-74-2

Carcinogenic Effects: Not listed by OSHA, NTP, or IARC.

Mutagenic Effects: Not Available.

Teratogenic Effects: Women working where phthalates are used had higher incidence of miscarriages, menstrual disorders, and reduced gestation periods.

Developmental Toxicity: Not Available

Target Organs: Inhalation: Inhalation of vapors or mists is not expected unless this material is heated or misted. If inhaled, material may cause irritation to respiratory tract.

Ingestion: Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. Accidental ingestion of 10 g (ca. 40 mg/kg) in one person produced nausea and vomiting, dizziness, light sensitivity, swelling of the eyelids, watering of the eyes, and kidney effects (red and white blood cells and oxalate crystals in the urine).

Skin Contact: Irritation and contact burns are possible, but do not occur frequently. Allergic dermatitis has been reported after using antiperspirants and contact with plastics containing dibutyl phthalate (such as a watchband).

Eye Contact: Vapor or mist causes eye irritation. Splashes cause severe irritation with stinging pain and tears.

Chronic Exposure: Workers in the artificial leather industry were studied and it was found that exposure to 1.7 to 66 mg/m³ over a period of 19 years showed central nervous system toxicity after 6 to 7 years.

Symptoms included pain, numbness, weakness and spasms in the extremities. Because there was concurrent exposure to other phthalates and a few adipates and sebacates, dibutyl phthalate cannot be singled out as the direct cause.

Aggravation of Pre-existing Conditions: No information found.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: 2-Butoxyethanol (CAS # 111-76-2)
96 hour *Lepomis macrochirus* (LC50) 1490 mg/l

Ecotoxicity: Dimethyl Glutarate, Dimethyl Succinate, and Dimethyl Adipate
EC50/48-hour/*Daphnia*=17 mg/l
EC50/72-hour/*Algae*=46.9 mg/l
LC50/96-hour/*bluegill sunfish* = 7.5 mg/l

Ecotoxicity: Normal Butyl Acetate (123-86-4)
96 Hr Fish Fathead Minnow LC50 = 18.0 mg/L
96 Hr *bluegill/Sunfish*: LC50 = 100 mg/L
48 Hr Static Condition water flea EC50 = 44.0 mg/L

Ecotoxicity: (2-Ethoxyethyl acetate)
EC50 – *Daphnia magna* (Water flea) – 193.6 mg/l – 48 h

Section 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state, and federal regulations.

Section 14: TRANSPORTATION INFORMATION

Not regulated in Non-Bulk.

Bulk

Proper Shipping Name: Combustible liquid, n.o.s.

Hazard Class: Comb Liq

Identification No.: NA1993

Packing Group: III

Label: Combustible

Section 15: REGULATORY INFORMATION

TSCA Inventory This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.

SARA 302/304 The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold

Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355. No components were identified.

CERCLA The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. Chemical substances present in this product or refinery stream that may be subject to this statute are: Butyl Acetate (123-86-4) 5,000 lbs, Dibutyl phthalate (84-74-2) 10 lbs, Naphthalene (91-20-3) 100 lbs

SARA 311/312 Hazard The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories: fire hazard, immediate (acute) health hazard, delayed (chronic) health hazard.

SARA 313 Supplier Notification

This product contains the following EPCRA section 313 chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372 -Table 372.65).

Naphthalene (91-20-3) <2.9%

1,2,4-trimethylbenzene (95-63-6) <1%

Ethylglycol acetate (111-15-9) 1-50%

Di-n-butyl Phthalates (84-74-2) <10%

CALIFORNIA PROP. 65 WARNING: This product contains a chemical or chemicals known to the state of California to cause cancer, birth defects or other reproductive harm

Section 16: OTHER SUPPLEMENTAL INFORMATION

Prepared by: Chemisphere Corp. on April 29, 2013

Disclaimer:

The information and recommendations contained in the Material Safety Data Sheet (MSDS) are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. The information and recommendations set forth herein are presented in good faith and believed to be correct as of this date hereof.

Chemisphere, however, makes no representation as to the completeness or accuracy thereof, and information is supplied upon the express condition that the persons receiving the information will be required to make their own determination as to its suitability for their purposes prior to use. In no event will Chemisphere be responsible for any damages of any nature whatsoever resulting from the use of, reliance upon, or the misuse of this information. User assumes all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations.

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY OTHER NATURE, ARE MADE BY CHEMISPHERE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS. The information as supplied herein is simply to be informative and intended solely to alert the user of the substance which is the subject matter of this MSDS. The ultimate compliance with federal, state or local regulations concerning the use of this compound, or compliance with respect to product liability, rests solely upon the purchaser thereof.

This information relates to the material designated and may not be valid for such material used in combination with any other materials nor in any process.