



SECTION I: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Gen 49D with CI
Product use: Diesel Fuel Lubricant

Manufacturer: WYS Manufacturing Ltd.
Bay 7 & 8, 4216 – 54th Ave. SE
Calgary, Alberta T2C 2E3
Phone 1-403-252-2239
Canada

Supplier: Maryn International Ltd.
Bay 5 & 6, 4216 – 54th Ave. SE
Calgary, Alberta T2C 2E3
Phone 1-403-252-2239
Canada

Emergency Phone Number: CANUTEC – 24 hr Emergency No. 1-613-996-6666
Business Hour Number 1-403-252-2239
(Monday through Friday 8:00am to 4:30pm MST)

MSDS Prepared By B Chandler
Date Prepared August 12, 2010

SECTION II: COMPOSITION/ INFORMATION ON INGREDIENTS

| Hazardous Ingredients | Concentration % | C.A.S. # | LD ₅₀ (Species/Route) | LC ₅₀ (Species/Route) |
|---|-----------------|-------------|---|---|
| Solvent Naphtha (petroleum), Heavy Aromatic | 30-60 | 64742-94-5 | >2 mL/kg (Rabbit/Dermal) 3200 mg/kg (Rat/Oral) | 590 mg/m ³ /4H (Rat/Inhalation)(Saturated vapour no mortalities) |
| 2-Ethylhexyl Nitrate | 15-40 | 27247-96-7 | >9640 mg/kg (Rats/Oral) | Not Available |
| Polymeric Succinimide | 5-10 | Proprietary | 660 mg/kg (Rabbit/Dermal) | 3990mg/kg (Rat/Oral) |
| Xylene, Mixture of Isomers | 1-5 | 1330-20-7 | 4300 mg/kg (Rat/Oral), >1700mg/kg unverified (Rabbit/Dermal) , 3523 mg/kg (Male Rat/Oral), >21.3 g/kg (Rabbit/Dermal) | 5000 ppm/4H unverified (Rat/Inhalation), 6350 ppm/4H (Rat/Inhalation) |
| Ethylene Glycol Monobutyl Ether | 1-5 | 111-76-2 | 1167 mg/kg (Mouse/Oral), 1230 | 450 ppm/4H (Rat/Inhalation), |



| | | | | |
|--|-----|-------------|--|--|
| | | | mg/kg (Mouse/Oral), 470 mg/kg (Rat/Oral), 530 mg/kg (Rat/Oral), 917 mg/kg (Rat/Oral), 320 mg/kg (Rabbit/Oral), 1200 mg/kg (Guinea Pig/Oral), 220 mg/kg (Rabbit/Dermal), 99 mg/kg (Rabbit/Dermal) | 700 ppm/7H (Mouse/Inhalation) , 3380 mg/m ³ /7H (Mouse/Inhalation) , 2900 mg/m ³ /7H (Rat/Inhalation) |
| Light ends of polyethylbenzene residue | 1-5 | 178535-25-6 | Not Available | Not Available |
| Long chain Dicarboxylic Acid | 1-5 | Proprietary | Not Available | Not Available |

Note: under the Hazardous Materials Review Act, a claim for exemption was filed for this product on February 27, 2008 and was assigned a registry number 6711.

SECTION III: Hazards Identification

Emergency Overview No hazards under normal conditions of use.

Route of entry Skin contact, skin adsorption, eye contact, inhalation and ingestion are the primary routes of exposure to this product.

Ingestion May cause irritation of the mouth and throat, abdominal discomfort, nausea, vomiting and diarrhea. Ingestion may cause central nervous system depression with anesthetic effects such as dizziness, headache, confusion, loss of coordination, and loss of consciousness.
 Aspiration hazard: small amounts aspirated into the lungs during ingestion or vomiting may cause lung injury, possibly leading to death. Symptoms of aspiration into the lungs include coughing, gasping, choking, shortness of breath, bluish discolored skin, rapid breathing and heart rate. Chemical pneumonitis from aspiration may result in fever. Pulmonary edema or bleeding, drowsiness, confusion, coma and seizures may occur in more serious cases. Symptoms develop immediately or as late as 24 hours after exposure, depending on how much chemical entered the lungs.

Inhalation Inhalation may cause irritation of the respiratory passages, headache, weakness, temporary nervous system depression with anesthetic effects such as dizziness, headache, confusion, loss of coordination, and loss of consciousness. Nausea and vomiting may also occur. Higher exposures may result in fatality from gross overexposure. Aspiration into lungs may cause pneumonitis.

Skin Contact Skin contact with the product may cause skin irritation with discomfort or rash, and may be absorbed through the skin in toxic amounts. May cause sensitization by skin contact.

Eye Contact May cause eye irritation with discomfort, tearing, or blurring of vision.

Effects of Chronic Exposure See individual routes of entry above.

Effects of Acute Exposure See individual routes of entry above.



SECTION IV: First Aid Measures

| | |
|---------------------------|---|
| Ingestion | Do not induce vomiting. Call physician immediately. Never give anything by mouth to an unconscious or convulsing person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Administer artificial respiration if breathing has stopped. If the heart rate has stopped, trained personnel should begin cardiopulmonary resuscitation (CPR) immediately. |
| Skin Contact | Immediately flush skin with plenty of water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse. |
| Inhalation | Remove source of contamination or move victim to fresh air. If symptoms persist, get medical attention. If the affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. In situations where administering oxygen is appropriate, first aid personnel must be trained in the safe use and handling of oxygen. It is preferable to administer oxygen under a doctor's supervision or advice. IF the heart has stopped, trained personnel should begin cardiopulmonary resuscitation (CPR) immediately. Immediate medical assistance is required. |
| Eye Contact | Flush with gently flowing, clean tepid water for at least 15 minutes or until chemical is removed, keeping eyelids open. Take care not to rinse the contaminated water into the unaffected eye or face. If irritation persists, consult physician. |
| Notes to Physician | Treatment based on sound judgment of physician and individual reactions of patient. Any material aspirated during vomiting may cause lung injury. Therefore, emesis should not be induced mechanically or pharmacologically. If it is considered necessary to evacuate the stomach contents, this should be done by means least likely to cause aspiration (e.g. gastric lavage after endotracheal intubation). |

SECTION V: Fire-Fighting Measures

| | |
|--------------------------------------|---|
| Flammability | Non flammable at ambient temperature. Liquid may burn at temperatures above flash point if exposed to an open flame. |
| Means of Extinction | Carbon dioxide, dry chemicals, alcohol foam, or water spray. Keep containers cool with water spray. When fighting fire, wear full protective clothing, including NIOSH approved self-contained breathing apparatus. Avoid spreading with water flooding. Fight fire from maximum distance as heat may decompose material and cause containers to rupture. Product may produce floating fire hazards in extreme fire conditions. This product can produce flammable vapors that may travel to a source of ignition and flash back. |
| Flash Point (ASTM D92) | 63.9°C (147°F) |
| Upper Flammability Limits | Not Determined. |
| Lower Flammability Limits | Not Determined. |
| Auto Ignition Temperature | Not Determined. |
| Hazardous Combustion Products | Carbon monoxide and oxides of nitrogen. |



Fire and Explosion Hazards None

Sensitivity to Static Discharge None at normal temperatures below flash point. Do not cut, weld, or pressurize empty container. Container may explode in heat of fire.

SECTION VI: Accidental Release Measures

Personal Protection Wear suitable protective equipment. Eliminate sources and or potential sources of ignition.

Environmental Precautions Product has low solubility in water. Do not flush to sewers, streams or other bodies of water. Dike if needed. For disposal, see Section XIII.

Methods for cleaning up Combustible. Isolate hazard are and restrict access. Remove ignition sources and work with non-sparking tools. Absorb on inert material such as sand, earth, sawdust, oil dry, vermiculite, or other absorbent material. Sweep up and collect in a suitable container for disposal. Observe government regulations.

Large spills Stop leak if without risk. Dike to contain spill. Pump excess material into suitable container (metal drums, metal tanks, or such). Clean up residual with absorbent material, place in appropriate container, and flush with water. Unless released material is cleaned up for reprocessing, recycling, or reuse, a release of 100lbs may trigger reporting requirements for CERCLA Section 103.

SECTION VII: Handling and Storage

Handling Handle and open containers with care. Avoid excess heat, breathing vapors, and prolonged or repeated contact with skin. Do not handle near an open flame, heat, or other sources of ignition. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. Do not pressurize, cut, heat, or weld containers. Empty containers may contain hazardous product residues.

Storage Store in a cool, dry, well ventilated area. Keep away from heat, spark and open flame. Place away from incompatible materials. Store in accordance with good industrial practices.

SECTION VIII: Exposure Controls / Personal Protection

| Component | Exposure Limit (ACGIH) | Exposure Limit (OSHA) | Immediately Dangerous to Life and Health (IDLH) |
|---|---------------------------------|---|---|
| Solvent Naphtha (petroleum), Heavy Aromatic | Not available | Not available | Not available |
| 2-Ethylhexyl Nitrate | Not available | Not available | Not available |
| Polymeric Succinimide | Not available | Not available | Not available |
| Xylene, Mixture of Isomers | 150 ppm STLE 100 ppm TLV-TWA | 435 mg/ m ³ TWA 100 ppm TWA | Not available |



| | | | |
|--|---|---|---------------|
| | | 150 ppm STEL 655 mg/ m ³ STEL | |
| Ethylene Glycol Monobutyl Ether | 20 ppm (97 mg/ m ³) TLV-TWA | 50 ppm (240 mg/ m ³), skin, PEL-TWA | 700 ppm |
| Light ends of polyethylbenzene residue | Not available | Not available | Not available |
| Long chain Dicarboxylic Acid | Not available | Not available | Not available |

- Engineering Controls** Use only with adequate ventilation to keep airborne levels below recommended exposure limits. Keep container tightly closed.
- Respiratory Protection** Use NISOH/MSHA approved respiratory protection if vapor concentration exceeds permissible exposure limit.
- Eye Protection** Use chemical splash goggles. Also use face shield if risk of splashing present.
- Skin Protection** Use rubber or plastic apron, and boots, pants, hood, and jack where appropriate to prevent skin contact.
- Hand Protection** Use oil resistant gloves.

SECTION IX: Physical and Chemical Properties

- Physical State:** Liquid
Odour: Aromatic
Appearance: Clear, amber
Odour Threshold: Not established
Specific Gravity: 0.939 at 15.6°C (60°F)
Vapour Pressure: Not available
Vapor Density: Not available
Evaporation Rate: Not available
Boiling Point: Not available
Pour Point: -40°C (-40°F)
Solubility in Water: <5 wt%
pH: Not available
Partitioning Coefficient: Not available

SECTION X: Stability and Reactivity

- Chemical Stability:** Stable



Incompatibility: Avoid contact with strong oxidizing agents, excessive heat, and all ignition sources.
Reactivity: No reactivity
Polymerization: Will not occur
Decomposition Products: Decomposes with heat. Hazardous gases/vapors produced are oxides of nitrogen and carbon monoxide. Decomposition temperature: >100°C (>212°F)

SECTION XI: Toxicological Information

Skin Contact Frequent or prolonged contact may irritate the skin and cause discomfort or a skin rash. May cause sensitization by skin contact.

Skin Absorption May be absorbed through the skin in toxic amounts.

Eye Contact May cause eye irritation with discomfort, tearing, or blurring of vision.

Inhalation May cause irritation of the respiratory passages, headache, weakness, temporary nervous system depression with anesthetic effects such as dizziness, headache, confusion, loss of coordination, and loss of consciousness. Nausea and vomiting may occur. Higher exposures may result in fatality from gross overexposure. Aspiration into lungs may cause pneumonitis.

Ingestion May cause irritation of the mouth and throat, causing abdominal discomfort, nausea, vomiting and diarrhea. May also cause central nervous system depression with anesthetic effects such as dizziness, headache, confusion, loss of coordination, and loss of consciousness. Aspiration hazard. Small amounts aspirated into the lungs include coughing, gasping, choking, shortness of breath, bluish discolored skin, rapid breathing and heart rate. Chemical pneumonitis from more serious cases. Symptoms may develop immediately or as late as 24 hours after exposure, depending on how much chemical entered the lungs.

Sensitization: Repeated or prolonged contact may cause sensitization in some individuals.

Carcinogenicity:

| Ingredients | IARC – Carcinogens | ACGIH - Carcinogens |
|---|---------------------------|----------------------------|
| Solvent Naphtha (petroleum), Heavy Aromatic | Not listed | Not listed |
| 2-Ethylhexyl Nitrate | Not listed | Not listed |
| Polymeric Succinimide | Not listed | Not listed |
| Xylene, Mixture of Isomers | Group 3 | Listed |
| Ethylene Glycol Monobutyl Ether | Group 3 | Listed |
| Light ends of polyethylbenzene residue | Not listed | Not listed |
| Long Chain Dicarboxylic Acid | Not listed | Not listed |

Reproductive Toxicity: Although abnormal sperm were observed after an interperitoneal injection in rats, xylene did not produce reproductive effects. An increase in menstrual disorders has been reported in women exposed to organic solvents, but is not possible to attribute this to xylene alone. Xylene has produced fetotoxic effects (delayed ossification and behavioral effects) in animals, in the absence of maternal toxicity. Note: An ingredient in the controlled product has been shown to cause fetotoxic effects in laboratory animals at maternally toxic dose levels.

Teratogenicity: In studies where rats and mice were exposed by inhalation or ingestion, harmful effects in the offspring (teratogenicity, embryotoxicity, and/or fetotoxicity) were either not observed or were observed in the presence of significant harmful effects in the mother. Animal information suggests that xylenes are not teratogenic or embryotoxic at exposure levels that are not harmful to the mother.



Mutagenicity: There have been few studies investigating the mutagenic potential of xylenes. These were negative. Ethylene glycol butyl ether has caused mutagenic effects in humans and mammalian cells in vitro. The polymeric succinimide has produced genetic damage in bacteria and mammalian cell cultures, but animal tests have not been carried out.

Toxicologically Synergistic Products Not available.

Additional Information:

Heavy Aromatic Naphtha (64742-94-5) is a severe skin irritant, but is not a skin sensitizer in animals. Dermal exposure produces central nervous system (CNS) symptoms in rats, whereas ingestion produces CNS effects in animals. No animal test reports available to define carcinogenic, mutagenic, developmental or reproductive hazards.

Long term exposure of xylene may cause nervous system effects with symptoms such as headaches, irritability, depression, insomnia, agitation, extreme tiredness, tremors, impaired concentration. And short term memory loss. The blood platelet count may be reduced on exposure to xylene, which is reversible when exposure is stopped. Repeated contact can produce dermatitis (dryness and cracking). Chronic inhalation exposure to xylene causes mid-frequency hearing loss in laboratory animals. Reduced body weight was observed in male rats in one test.

Workers exposed to 2-ethylhexyl nitrate reported throbbing headaches and heart palpitations. Single ingestion exposure produced weight loss, diarrhea, loss of coordination and prostration. Repeated inhalation exposures produced weight loss and increased liver weight.

Ethylene glycol butyl ether (EGBE) acutely inhaled is a toxic respiratory irritant that produces CNS effects in animals. Repeated dermal exposure to EGBE causes blood effects in animals. Acute inhaled EGBE vapor caused blood and CNS effects in rats. In rats, chronic inhalation of EGBE produced anemia and spleen effects. Female rats showed significantly higher rates of malignant adrenal gland tumors. Chronic inhalation of EGBE produced anemia and spleen effects in male and female mice, males exhibited significantly higher rates of malignant liver tumors. Oral exposure to EGBE causes CNS effects in rats. Chronic EGBE ingestion induces hematopoietic effects in rats.

The polymeric succinimide is a severe skin irritant, eye irritant, and skin sensitizer in animals. Effects of long term dermal exposures include hyperkeratosis and necrosis of the epidermis but no evidence of increased incidence of tumors. Repeated dietary administration of high doses produced depressed liver weights and body weight loss.

SECTION XII: Ecological information

Environmental Effects (Ecotoxicological Data):

| Component | Ecotoxicity – Fish Species Data | Acute Crustaceans Toxicity | Ecotoxicity – Fresh Water Algae Data |
|---|--|----------------------------|--------------------------------------|
| Solvent Naphtha (petroleum), Heavy Aromatic | Fathead Minnows 96 hr LC50 4.2-20.8 mg/L | Not available | Not available |
| 2-Ethylhexyl Nitrate | Not available | Not available | Not available |
| Polymeric Succinimide | Not available | Not available | Not available |
| Xylene, Mixture of Isomers | LC50 (Pimephales promelas) 13.4 mg/L LC50 (Lepomis macrochirus) 16.1 mg/L LC50 (Pimephales promelas) 26.7 mg/L LC50 (Oncorhynchus mykiss) 8.05 mg/L | Not available | Not available |
| Ethylene Glycol Monobutyl Ether | LC50 (Lepomis macrochirus) 1490 mg/L | Not available | Not available |



| | | | |
|--|---------------|---------------|---------------|
| Light ends of polyethylbenzene residue | Not available | Not available | Not available |
| Long chain Dicarboxylic Acid | Not available | Not available | Not available |

Environmental Fate:

No specific environmental fate data is available. This product is not expected to be readily biodegradable.

SECTION XIII: Disposal Consideration

RCRA 40 CFR 261 Classification Not listed
US EPA Waste Number / Classification Not available

Waste Disposal

Dispose of waste material in compliance with all federal, state, provincial and local regulations. Incinerate in a furnace or bury in an approved landfill where permitted under appropriate federal, provincial and local regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

SECTION XIV: Transport Information

Department of Transport (U.S.): Regulated under DOT
TDG (Canada): Regulated under TDG.
DOT Proper Shipping Name: Combustible Liquid, n.o.s. (2-Ethylhexyl Nitrate, Aromatic Hydrocarbons)
DOT Hazard Class: 3
NA Number: NA1993
Packing Group: III
DOT Labels: Primary: Combustible Liquid
Subsidiary: None required
DOT Placards: None required
Note: Flash Point of 63.9°C (147°F). Not regulated in containers <119 gallons
Marine Pollutant: Yes

TDG (Canada): Regulated under TDG for MARINE TRANSPORT ONLY.
TDG Proper Shipping Name: Environmentally Hazardous Substance, Liquid, n.o.s. (2-Ethylhexyl Nitrate), Marine Pollutant
Hazard Class: 9
UN Number: UN3082
Packing Group: III
IMO Label: Miscellaneous Dangerous Goods
Note: TDG documentation and Dangerous Goods Safety Marks do not apply if in transport solely on land by road vehicle or railway vehicle and/or by air. (*sec 1.45.1 Marine Pollutants Exemption, SOR/2008-34 & Special Provision A97, Technical Instructions for the Safe Transport of Dangerous Good by Air, ICAO*)
Marine Pollutant: Yes
Reportable Quantity: Naphthalene 100 lbs, Xylene 100 lbs
Shipping Containers: Steel Drums UN1A1/Y/100



SECTION XV: Regulatory Information

CPR Compliance:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

OSHA Hazard Communication Standards 29CFR 1910.1200:

This product has been determined to contain carcinogens required to be listed under OSHA Hazards Communication Standards 29 CFR 1910.1200 and is toxic and combustible.

WHMIS Classification:

This product is classified under the following WHMIS category:

- B3 Combustible Liquids
- D1A Very Toxic Materials
- D2A Very Toxic Materials
- D2B Toxic Materials

CERCLA:

Not listed on CERCLA (40CFR 302.4). If this product is accidentally spilled, it is not subject to special reporting under requirements of the Comprehensive Environmental Response and Liability Act. We recommend you contact local authorities to determine if there may be other local reporting requirements.

SARA Title III Section 311/312:

Under the provisions of Title III, Section 311/312 of the Superfund Amendments and Reauthorization Act, this product is classified into the following hazard category:

- | | |
|-------------|-----|
| Acute: | Yes |
| Chronic: | Yes |
| Fire: | Yes |
| Reactivity: | Yes |
| Pressure: | No |

SARA Title III Section 313:

This product does contain more than 1 % of a chemical substances listed under SARA Section 313.
Xylene, mixture of isomers
Ethylene glycol monobutyl ether

RCRA:

Not controlled under **RCRA** (40 CFR 261.33) for hazardous waste.

NPRI:

Not Controlled under the **NPRI** of the Canadian EPA.

Chemical Inventory

Canada: The ingredients of this product are on the DSL, the NDSL, or exempt.
United States: The ingredients of this product are on the TSCA or exempt.



SECTION XVI Other Information

HMIS Information

| Degree of Hazard | HMIS Rating |
|-------------------------|--------------------|
| 4= Severe | Health 2 |
| 3= Serious | Flammability 2 |
| 2= Moderate | Reactivity 1 |
| 1= Slight | |
| 0= Minimal | |

Revision Information

Prepared by: Maryn Research
Phone: 1-403-252-2239

Effective Date: August 12th 2010

Supersedes: January 29, 2009

Revision: 5.1

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