



SECTION I- Chemical Product and Company Identification

Product Identifier: GEN 49D with Cetane

Supplier: Maryn International Ltd.
 Bay 5, 4216 – 54th Ave. SE
 Calgary, Alberta T2C 2E3
 Canada

Product use: Diesel Fuel Lubricant

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)

SECTION II Composition/ Information on Ingredients

Hazardous Ingredients	Concentration %	C.A.S. #	Exposure limits	LD ₅₀ (Species/Route)	LC ₅₀ (Species/Route)
Polymeric Succinimide	5-10	Proprietary	Not Available	660 mg/kg rabbit dermal 3990 mg/kg rat oral	Not Available
Xylene, Mixture of Isomers	0.5 – 1.5	1330-20-7	100 ppm TLV-TWA 150 ppm STEL 100 TWA-OSHA 435 mg/m ³ TWA-OSHA 655 mg/m ³ STEL	4300 mg/kg rat > 21.3 g/kg rabbit dermal	5500 ppm/4H rat inhalation
2-Ethylhexyl Nitrate	15-40	27247-96-7	Not Available	>4.8 g/kg rabbit skin >9.6 g/kg rat oral	>639 ppm rat inhalation
Heavy Aromatic Naphtha	< 8	64742-94-5	Not Available	>5 g/kg rat oral >3 g/kg rabbit skin	>11.67 mg/L rat inhalation
Light Aromatic Naphtha	1-5	64742-95-6	350 mg/m ³ TWA Ceil 1800 mg/m ³ (ACGIH)	8400 mg/kg rat oral	14.4 mg/L rat inhalation
-1,2,4-Trimethylbenzene	<2	95-63-6	500 ppm PEL –TWA (Petroleum distillates)	5.0 g/kg rat oral	18 kg/m ³ rat inhalation
Light ends of Polyethylbenzene Residue	15-40	178535-25-6	Not Available	Not Available	Not Available
Vinyl Acetate Monomer	3-7	108-05-4	10 ppm TWA-ACGIH 15 ppm TWA-STEEL	> 2 mL/kg rabbit skin 2.9 g/kg rat oral	4000 ppm rat inhalation



Ethylene Glycol N-Butyl Ether	3-7	111-76-2	50 ppm TWA-OSHA 20 ppm-TWA-ACGIH 700 ppm – IDLH (Immediately Dangerous to Life or Health)	1167 mg/kg mouse oral 470 mg/kg rat oral 320 mg/kg rabbit oral 99 mg/kg rabbit dermal	450 ppm/4H rat inhalation 700 ppm/4H mouse inhalation
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NOTES: TWA values based on 8 hours, except for 2-Ethylhexyl Nitrate where it is based on 8&12 hours. AEL is the acceptable exposure limit. The Xylene has Ethylbenzene, CAS No. 100-41-4 as part of its' composition. The light ends of the Polyethylbenzene Residue contains Triethylbenzene CAS No. 102-25-0 as part of its' composition.

SECTION III Hazards Identification

Emergency Overview Combustible liquid.

Potential Health Effects

Route of entry

Skin contact, skin adsorption, eye contact, inhalation and ingestion.

Eye Contact

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

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 skin sensitization by skin contact.

Inhalation

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

Ingestion

May cause irritation of the mouth and throat, causing abdominal discomfort, nausea, vomiting, and diarrhea. Ingestion may cause central nervous system depression with anesthetic effects such as dizziness, headache, confusion, in coordination, and loss of consciousness. Aspiration hazard: Small amounts aspirated into the lungs during ingestion or vomiting may cause lung injury, leading to death. Symptoms of aspiration into the lungs include coughing, gasping, 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 may develop immediately or as late as 24 hours after exposure.

SECTION IV First Aid Measures

Ingestion

Seek immediate medical attention. If swallowed, **DO NOT** induce vomiting. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs. If the heart has stopped, trained personnel should begin CPR immediately. Call a physician.

Skin

Flush skin with water for at least 15 minutes after contact. Get medical attention. Wash contaminated clothing before re-use.

Inhalation

If inhaled, remove to fresh air. If symptoms persist, get medical attention. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If the heart has stopped, trained personnel should begin CPR immediately. Immediate medical assistance is required.

Eye Contact

In case of contact immediately flush eyes with plenty of water for at least 15 minutes or until the chemical is removed. Call a physician.

Notes to Physician



Treatment based on sound judgment of physician and individual reactions of the 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.

SECTION V Fire-Fighting Measures

Flammability	Combustible liquid: Can form combustible mixtures at temperatures at or above the flash point.
Means of Extinction	Alcohol foam, CO₂, water spray, dry chemicals. 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. Fire fight from maximum distance, as heat may decompose material and rupture containers.
Flash Point (ASTM D92)	67°C (153°F) PMCC
Upper Flammability Limits	Not Determined.
Lower Flammability Limits	Not Determined.
Hazardous Combustion Products	Carbon monoxide and nitrogen oxides.
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.
NFPA Rating	HEALTH 2, FLAMMABILITY 2, REACTIVITY 3
HMIS Rating	HEALTH 2, FLAMMABILITY 2, REACTIVITY 3

SECTION VI Accidental Release Measures

Personal Protection	Wear suitable protective equipment. Eliminate sources and or potential sources of ignition.
Environmental Precautions	Product has very low solubility in water. Dike spill. Do not flush to sewers, streams or other bodies of water. For disposal, see Section XIII.
Methods for cleaning up	Combustible. Isolate hazard area and restrict access. Spills are very slippery and should be cleaned up promptly. Absorb on inert material such as sawdust, sand, earth, vermiculite. 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). Unless released material is cleaned up immediately for reprocessing, recycling, or reuse a release of 100 lbs may trigger reporting requirements for CERCLA Section 103.

SECTION VII Handling and Storage

Handling	Handle and open containers with care. Avoid excess heat, formation of oil mist, breathing vapours and mist from hot oil, and prolonged or repeated contact with skin. Keep away and do NOT handle near heat, sparks, flames or other sources of ignition. Fixed equipment as well as transfer containers should be grounded to prevent accumulation of static charge.
Storage	Store in a cool, dry, and well ventilated place. Keep container tightly closed. Keep away from incompatible materials.

SECTION VIII Exposure Controls / Personal Protection

Engineering Controls	Use only with adequate ventilation. If user's operation generates mist, use ventilation to keep exposure to airborne contaminants below exposure limits. Make up air should always be supplied to balance air removed by exhaust ventilation. Keep container tightly closed.
Respiratory Protection	Use approved respirator with dual organic vapor / mist and particulate cartridge if vapor concentration exceeds permissible exposure limit. Use Self-Contained Breathing Apparatus in high vapour concentrations.
Eye Protection	Chemical goggles; also wear a face shield if splashing exists.



Skin Protection

Wear as appropriate, apron, pants, hood, and jacket if potential for skin contact.

Hand Protection

Use impervious gloves, oil resistant.

SECTION IX Physical and Chemical Properties

Physical State:	Liquid
Odour:	Aromatic
Appearance:	Amber
Odour Threshold:	Not established
Specific Gravity:	0.929 (@ 16°C / 60.8°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:	Slightly Soluble
pH:	Not determined
Partitioning Coefficient:	Not determined

SECTION X Stability and Reactivity

Chemical Stability:	Stable to normal temperatures and storage conditions.
Incompatibility:	Avoid contact with oxidizing agents , reducing agents, direct heat and ignition sources.
Polymerization:	Will not occur.
Decomposition Products:	Decomposes with heat. Hazardous gases/vapours produced are oxides of nitrogen and carbon monoxide. Decomposition temperature is >100°C (212°F)

SECTION XI Toxicological Information

Irritancy / Route of Entry:

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.
Eye Contact	Contact with the product may cause eye irritation with discomfort, tearing, or blurring of vision.
Inhalation	If the product is misted, high concentration of vapour and/or mist may cause irritation, experienced as nasal discomfort, headaches and nausea.
Ingestion	May cause irritation of the throat and mouth, causing nausea, abdominal discomfort, vomiting and diarrhea. Symptoms of aspiration into the lungs include coughing, gasping, 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 may develop immediately or as late as 24 hours after exposure.
Sensitization:	Repeated or prolonged contact may cause sensitization in some individuals.

ADDITIONAL INFORMATION: Heavy Aromatic Naphtha (64742-94-5) is a severe skin irritant, and is an eye irritant, but is not a skin sensitizer in animals. Repeated inhalation exposures caused reduced growth rate, respiratory tract irritation, congestion in liver and spleen, changes in blood tests and equilibrium disturbances. Dermal exposure produces CNS symptoms in rats, ingestion produces CNS effects in animals. No animal test Reports are 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. The blood platelet count may be reduced on exposure to xylene which is reversible when exposure is stopped. Repeated contact can produce dermatitis. Chronic inhalation exposure to xylene causes mid-frequency hearing loss in lab animals. Xylene reacts synergistically with n-hexane to enhance hearing loss. Reduced body weight was observed in male rats during one test.



Light Aromatic Naphtha is a moderate skin irritant and a skin photosensitizer in animals. Toxic effects of a single inhalation exposure to very high concentrations include hyperactivity, salivation, in coordination, tremors, irregular respiration, and non-specific effects such as weight loss and irritation. Long term exposure produced no significant effects from exposure up to concentrations of 400 ppm for one year. No animal test reports are available to define carcinogenic, mutagenic, developmental, or reproductive hazards. Workers exposed to 2-ethylhexyl nitrate reports throbbing headaches and heart palpitations. Single ingestion exposure produced weight loss, diarrhea, in coordination, and prostration.

Ethyl glycol butyl ether (EGBE) – Acute inhaled EGBE is a toxic respiratory irritant that produces CNS effects. Acute dermal exposure causes CNS effects and kidney and blood effects in animals. Repeated dermal exposure to EGBE causes blood effects in animals. Acute inhaled EGBE vapour caused blood and CNS effects in rats. Female rats showed significantly higher rates of malignant adrenal gland tumours. Chronic inhalation of EGBE produced anemia, and spleen effects in male and female mice.

The Polymeric Succinimide is a severe skin irritant, eye irritant, and skin sensitizer in animals. Effects of long term dermal exposure include hyperkeratosis and necrosis of the epidermis but no evidence of increased incidence of tumours.

Carcinogenicity

Ingredients	IARC – Carcinogens	ACGIH - Carcinogens
Polymeric Succinimide	Not listed	Not listed
Xylene, Mixture of Isomers	Group 3	A4-Not Classifiable as a Human Carcinogen
2-Ethylhexyl Nitrate	Not listed	Not listed
Heavy Aromatic Naphtha	Not listed	Not listed
Light Aromatic Naphtha	Not listed	Not listed
-1,2,4-Trimethylbenzene		
Light ends of Polyethylbenzene Residue	Not listed	Not listed
Vinyl Acetate Monomer	Not listed	Not listed
Ethylene Glycol N-Butyl Ether	Not listed	A3-Animal Carcinogen

Reproductive Toxicity/Teratogenicity/Embryotoxicity/Mutagenicity

Fetotoxic effects have been observed in the offspring of rats exposed by inhalation to Solvent Naphtha (Petroleum), Light Aromatic in the presence of slight maternal toxicity. Ethylene glycol butyl ether has caused mutagenic effects in human and mammalian cells in vitro. The polymeric succinimide has produced genetic damage in bacterial and mammalian cell cultures, but animal tests have not been carried out. Although abnormal sperm were observed after an interperitoneal injection in rats, xylene did not produce reproductive effects. Xylene has produced fetotoxic effects in animals, in the absence of maternal toxicity. In other studies where rats and mice were exposed by inhalation or ingestion, harmful effects in the offspring were either not observed or were observed in the presence of significant harmful effects in the mothers. There have been few studies investigating the mutagenic potential of xylenes.



SECTION XII Ecological information

Environmental Fate: This product is not expected to be readily biodegradable.

Environmental Effects:

Heavy Aromatic Naphtha:

96 hours LC50, Fathead minnows: 4.2 – 20.8 mg/L

Light Aromatic Naphtha:

The LC50 in white crappie is approximately 4.2 mg/L.

2-Ethylhexyl Nitrate:

24 hour LC50, Trout: 145 mg/L

48 hour LC50, Trout: 116 mg/L

24 hour LC50, Bluegill: 6.5 mg/L

48 hour LC50, Bluegill: 6.0 mg/L

Ethylene Glycol Monobutyl Ether

LC50, Bluegill): 1490 mg/L

LC50, Goldfish): 1650 mg/L

Xylene, Mixture of Isomers

LC50, Fathead minnow 13.4 mg/L

LC50, Bluegill 16.1 mg/L

LC50, Trout 8.05 mg/L

SECTION XIII Disposal Consideration

RCRA 40 CFR 261 Classification

See Section XV

US EPA Waste Number / Classification

See section XV under RCRA.

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.

SECTION XIV Transport Information

DOT Shipping Name: Combustible Liquid, N.O.S. (2-Ethylhexyl Nitrate, Aromatic hydrocarbons)

DOT Hazard Class: 3

UN/NA Number: NA 1993

Packing Group: III

DOT Reportable Quantity: Not Applicable

DOT/TDG Labels: **Primary:** Combustible **Subsidiary:** None required

DOT/TDG Placards: None required

Special Information: **Flash Point : 67°C**

Marine Pollutant 2-Ethylhexyl Nitrate

Reportable Quantity No

TDG (Canada) Shipping Name: Environmentally Hazardous Substance, N.O.S. (2-Ethylhexyl Nitrate), Marine Pollutant

TDG Hazard Class: 9

UN Number: UN 3082

Packing Group: III

Marine Pollutant: Yes

Special Information: No additional remarks



IMO/IMDG
IMO Proper Shipping Name: Environmentally Hazardous Substance, N.O.S. (2-Ethylhexyl Nitrate), Marine Pollutant
Hazard Class: 9
UN Number: 3082
Packing Group: III
IMO Label Environmentally Hazardous. Marine Pollutant
Special Information:
Marine Pollutant 2-Ethylhexyl Nitrate

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 is assessed in accordance with OSHA 29CFR 1910.1200 and determined to be toxic and flammable.
WHMIS Classification: Class B3 Combustible Liquid, Class D2B material with other toxic effects.
CERCLA: This product contains the following hazardous components reportable under CERCLA: Benzene CAS no. 71-43-2, Reportable Quantity: 310,000 liters; Vinyl Acetate Monomer CAS no.108-05-4, Reportable Quantity: 5000 lbs.
SARA Extremely Hazardous Substance: This product does not contain more than 1 % of any chemical substance on the SARA Extremely Hazardous Substances List.
SARA Title III Section 313: < 0.5% Vinyl Acetate CAS no. 108-05-4. 0.001% 1,2,4-trimethylbenzene CAS no. 95-63-6
RCRA: The following components are listed under RCRA with the EPA waste number in bold: Benzene CAS no. 71-43-2 **U019**.
NPRI: < 0.5% Vinyl Acetate CAS no. 108-05-4, <0.001% 1,2,4-trimethylbenzene CAS No. 95-63-6

Chemical Inventory

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

SECTION XVI Other Information

HMIS Information

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

Revision Information

Prepared by: Maryn Research
Phone: 1-403-252-2239
Effective Date: May 10, 2004
Supersedes: Not Applicable
Revision: 0

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