1. MATERIAL AND COMPANY IDENTIFICATION

Material Name	:	**VM&P Naphtha HT**
Product Code	:	Q6002
Company	:	**Shell Chemical LP** PO Box 2463 HOUSTON TX 77252-2463 USA
MSDS Request	:	1-800-240-6737
Customer Service	:	1-800-872-7435

Emergency Telephone Number

Chemtrec Domestic (24 hr)	:	1-800-424-9300
Chemtrec International (24 hr)	:	1-703-527-3887

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration
Solvent Naphtha (Petroleum), Light Aliphatic	64742-89-8	100.00 %W

Contains n-Heptane, CAS # 142-82-5

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance and Odour	:	Light coloured. Liquid. Hydrocarbon..
Health Hazards	:	Vapours may cause drowsiness and dizziness. Irritating to skin. Harmful: may cause lung damage if swallowed.
Safety Hazards	:	Flammable liquid and vapour. Vapours are heavier than air. Vapours may travel across the ground and reach remote ignition sources causing a flashback fire danger. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire.

Health Hazards

Inhalation	:	Vapours expected to be slightly irritating. Vapours may cause drowsiness and dizziness.
Skin Contact	:	Irritating to skin. Repeated exposure may cause skin dryness or cracking.
Eye Contact	:	Vapours may be irritating to the eye.
Ingestion	:	Harmful: may cause lung damage if swallowed.
Other Information	:	Possibility of organ or organ system damage from prolonged exposure; see Chapter 11 for details. Target organ(s): Cardiovascular system.

Central nervous system (CNS).

Signs and Symptoms	:	Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing. Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness and death. Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever.
Aggravated Medical Condition	:	Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Eyes. Skin. Respiratory system.

4. FIRST AID MEASURES

General Information	:	In general no treatment is necessary, however, obtain medical advice.
Inhalation	:	Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
Skin Contact	:	Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.
Eye Contact	:	Flush eyes with water while holding eyelids open. Rest eyes for 30 minutes. If redness, burning, blurred vision, or swelling persist, transport to the nearest medical facility for additional treatment.
Ingestion	:	If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
Advice to Physician	:	Causes central nervous system depression. Dermatitis may result from prolonged or repeated exposure. Potential for chemical pneumonitis. Consider: gastric lavage with protected airway, administration of activated charcoal.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Flash point	:	14 - 18 °C / 57 - 64 °F (Tagliabue Closed Cup)
Explosion / Flammability limits in air	:	0.9 - 7.0 %(V)
Specific Hazards	:	Carbon monoxide may be evolved if incomplete combustion occurs. Will float and can be reignited on surface water. The vapour is heavier than air, spreads along the ground and distant ignition is possible.
Extinguishing Media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. Do not

discharge extinguishing waters into the aquatic environment.

Unsuitable Extinguishing Media	:	Do not use water in a jet.
Protective Equipment for Firefighters	:	Wear full protective clothing and self-contained breathing apparatus.
Additional Advice	:	Keep adjacent containers cool by spraying with water.

6. ACCIDENTAL RELEASE MEASURES

Observe all relevant local and international regulations.

Protective measures	:	Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Material Safety Data Sheet. Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Monitor area with combustible gas indicator.
Clean Up Methods	:	For small liquid spills (< 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.
Additional Advice	:	See Chapter 13 for information on disposal. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Vapour may form an explosive mixture with air. U.S. regulations may require reporting releases of this material to the environment which exceed the reportable quantity (refer to Chapter 15) to the National Response Centre at (800) 424-8802. Under Section 311 of the Clean Water Act (CWA) this material is considered an oil. As such, spills into surface waters must be reported to the National Response Centre at (800) 424-8802. This material is covered by EPA's Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Petroleum Exclusion. Therefore, releases to the environment may not be reportable under CERCLA.

7. HANDLING AND STORAGE

General Precautions : Avoid breathing of or contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

Handling : Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (<= 1 m/sec until fill pipe submerged to twice its diameter, then <= 7 m/sec). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations. Handle and open container with care in a well-ventilated area. Avoid contact with skin, eyes, and clothing. Extinguish any naked flames. Do Not smoke. Remove ignition sources. Avoid sparks. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Ventilate workplace in such a way that the Occupational Exposure Limit (OEL) is not exceeded. Do not empty into drains.

Storage : Must be stored in a diked (bunded) well- ventilated area, away from sunlight, ignition sources and other sources of heat. Bulk storage tanks should be diked (bunded). Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable products which are not harmful or toxic to man or to the environment. Storage Temperature: Ambient. Maximum storage time: 6 months

Product Transfer : Keep containers closed when not in use. Do not use compressed air for filling, discharging or handling.

Recommended Materials : For containers, or container linings use mild steel, stainless steel. For container paints, use epoxy paint, zinc silicate paint.

Unsuitable Materials : Avoid prolonged contact with natural, butyl or nitrile rubbers

Container Advice : Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

In the absence of occupational exposure standards for this product, it is recommended that the following are adopted.

Material	Source	Type	ppm	mg/m3	Notation
VM & P Naphtha	ACGIH	TWA	300 ppm		
	OSHA Z1A	TWA	300 ppm	1,350 mg/m3	

	OSHA Z1A	STEL	400 ppm	1,800 mg/m3	
Octane	OSHA Z1	PEL	500 ppm	2,350 mg/m3	
	OSHA Z1A	TWA	300 ppm	1,450 mg/m3	
	OSHA Z1A	STEL	375 ppm	1,800 mg/m3	
	ACGIH	TWA	300 ppm		
n-Heptane	ACGIH	TWA	400 ppm		
	ACGIH	STEL	500 ppm		
	OSHA Z1	PEL	500 ppm	2,000 mg/m3	
	OSHA Z1A	TWA	400 ppm	1,600 mg/m3	
	OSHA Z1A	STEL	500 ppm	2,000 mg/m3	

Additional Information : Shell has adopted as Interim Standards, the OSHA PELs that were established in 1989 and later rescinded. Wash hands before eating, drinking, smoking and using the toilet. Skin notation means that significant exposure can also occur by absorption of liquid through the skin and of vapour through the eyes or mucous membranes.

Exposure Controls : The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits. Eye washes and showers for emergency use.

Personal Protective Equipment : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory Protection : If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for organic gases and vapours [boiling point <65 °C (149 °F)] Where air-filtering respirators are unsuitable (e.g., airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus.

Hand Protection : Longer term protection: Nitrile rubber gloves Incidental contact/Splash protection: PVC or neoprene rubber gloves

Eye Protection : Chemical splash goggles (chemical monogoggles).

Protective Clothing : Use protective clothing which is chemical resistant to this material. Safety shoes and boots should also be chemical resistant.

Environmental Exposure Controls : Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Light coloured Liquid

Odour	:	Hydrocarbon.
Boiling point	:	118 - 150 °C / 245 - 302 °F
Flash point	:	14 - 18 °C / 57 - 64 °F (Tagliabue Closed Cup)
Explosion / Flammability limits in air	:	0.9 - 7.0 %(V)
Vapour pressure	:	1.5 - 2 kPa at 20.0 °C / 68.0 °F
Specific gravity	:	0.74 - 0.76 at 15.6 °C / 60.0 °F
Water solubility	:	0.05 g/l Negligible.
Vapour density (air=1)	:	4.1
State of aggregation	:	Liquid/Solid
Stability		Stable.
Volatile organic carbon content		100 %

10. STABILITY AND REACTIVITY

Stability	:	Stable under normal conditions of use.
Conditions to Avoid	:	Avoid heat, sparks, open flames and other ignition sources.
Materials to Avoid	:	Strong oxidising agents.
Hazardous Decomposition Products	:	Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment	:	Information given is based on product testing, and/or similar products, and/or components.
Acute Oral Toxicity	:	Expected to be of low toxicity: LD50 >2000 mg/kg , Rat Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.
Acute Dermal Toxicity	:	Expected to be of low toxicity: LD50 >2000 mg/kg , Rat
Acute Inhalation Toxicity	:	Expected to be of low toxicity: LC50>5000 ppm / 1 hours, Rat High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.
Skin Irritation	:	Irritating to skin. Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.
Eye Irritation	:	Expected to be non-irritating to eyes.
Sensitisation	:	Not expected to be a skin sensitiser.
Repeated Dose Toxicity	:	Central nervous system: repeated exposure affects the nervous system. Kidney: caused kidney effects in male rats which are not considered relevant to humans Cardiovascular system: chronic abuse of similar materials has been associated with irregular heart rhythms and cardiac arrest.

Material	:	**Carcinogenicity Classification**
Xylene, Mixed Isomers	:	ACGIH Group A4: Not classifiable as a human carcinogen.

Xylene, Mixed Isomers	:	IARC 3: Classification not possible from current data.

12. ECOLOGICAL INFORMATION

This section will be updated as ecological reviews are completed.

13. DISPOSAL CONSIDERATIONS

Material Disposal	:	Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.
Container Disposal	:	Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Refer to Section 7 before handling the product or containers. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Send to drum recoverer or metal reclaimer.
Local Legislation	:	Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

14. TRANSPORT INFORMATION

US Department of Transportation Classification (49CFR)

Identification number	UN 1268
Proper shipping name	Petroleum distillates, n.o.s.
Class / Division	3
Packing group	II
Contains OIL	
Emergency Response Guide .	128
Additional Information	This material is an 'OIL' under 49 CFR Part 130 when transported in a container of 3500 gallon capacity or greater.

IMDG

Identification number	UN 1268
Proper shipping name	PETROLEUM DISTILLATES, N.O.S.
Class / Division	3
Packing group	II
Marine pollutant:	No

IATA (Country variations may apply)

Identification number	UN 1268
Proper shipping name	Petroleum distillates, n.o.s.
Class / Division	3
Packing group	II

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material

Federal Regulatory Status

Notification Status

AICS	Listed.	
DSL	Listed.	
INV (CN)	Listed.	
TSCA	Listed.	
EINECS	Listed.	265-192-2
KECI (KR)	Listed.	KE-31661
PICCS (PH)	Listed.	

Comprehensive Environmental Release, Compensation & Liability Act (CERCLA)

VM&P Naphtha HT (64742-89-8)	Reportable quantity: 66,667 lbs
Xylene, Mixed Isomers (1330-20-7)	Reportable quantity: 100 lbs
meta-Xylene (108-38-3)	Reportable quantity: 1,000 lbs
Ethylbenzene (100-41-4)	Reportable quantity: 1,000 lbs
Benzene (71-43-2)	Reportable quantity: 10 lbs
Toluene (108-88-3)	Reportable quantity: 1,000 lbs

Shell classifies this material as an "oil" under the CERCLA Petroleum Exclusion, therefore releases to the environment are not reportable under CERCLA.The components with RQs are given for information.

Clean Water Act (CWA) Section 311

Xylene, Mixed Isomers (1330-20-7)	Reportable quantity: 100 lbs
meta-Xylene (108-38-3)	Reportable quantity: 100 lbs
Ethylbenzene (100-41-4)	Reportable quantity: 1,000 lbs
Benzene (71-43-2)	Reportable quantity: 10 lbs
Toluene (108-88-3)	Reportable quantity: 1,000 lbs

Under Section 311 of the Clean Water Act (CWA) this material is considered an oil. As such, spills into surface waters must be reported to the National Response Centre at (800) 424-8802. The components with RQs are given for information.

SARA Hazard Categories (311/312)

Immediate (Acute) Health Hazard. Fire Hazard.

SARA Toxic Release Inventory (TRI) (313)

Xylene, Mixed Isomers (1330-20-7)	0.13%
meta-Xylene (108-38-3)	0.05%
Ethylbenzene (100-41-4)	0.03%

Benzene (71-43-2)	0.015%
Toluene (108-88-3)	0.0118%

State Regulatory Status

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

Known to the State of California to cause birth defects or other reproductive harm.
Known to the state of California to cause cancer

Benzene (71-43-2) 0.015%	Carcinogenic. Developmental toxin. Male reproductive toxin.
Toluene (108-88-3) 0.0118%	Developmental toxin.

New Jersey Right-To-Know Chemical List

Octane (111-65-9) 1.50%	Listed.
n-Heptane (142-82-5) 1.16%	Listed.
Xylene, Mixed Isomers (1330-20-7) 0.13%	
meta-Xylene (108-38-3) 0.05%	
Ethylbenzene (100-41-4) 0.03%	
Benzene (71-43-2) 0.015%	
Toluene (108-88-3) 0.0118%	

Pennsylvannia Right-To-Know Chemical List

Octane (111-65-9) 1.50%	Listed.
n-Heptane (142-82-5) 1.16%	Listed.
Xylene, Mixed Isomers (1330-20-7) 0.13%	Environmental hazards Listed.
meta-Xylene (108-38-3) 0.05%	Environmental hazards Listed.
Ethylbenzene (100-41-4) 0.03%	Environmental hazards Listed.
Benzene (71-43-2) 0.015%	Special hazard. Environmental hazards Listed.
Toluene (108-88-3) 0.0118%	Environmental hazards Listed.

16. OTHER INFORMATION

HMIS Rating (Health, Fire, Reactivity)	:	1, 3, 0
NFPA Rating (Health, Fire, Reactivity)	:	1, 3, 0
MSDS Version Number	:	12

MSDS Effective Date	:	06/30/2003
MSDS Revisions	:	A vertical bar (|) in the left margin indicates an amendment from the previous version.
MSDS Regulation	:	The content and format of this MSDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
Uses and Restrictions	:	Industrial Solvent.
MSDS Distribution	:	The information in this document should be made available to all who may handle the product
Disclaimer	:	The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.