Material Safety Data Sheet

C-9

Section 1 - Chemical Product

MSDS: SOLVENT C-9

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
64742-95-6	SOLVENT NAPHTHA (PETROLEUM), LIGHT AROMATIC	100%

Section 3 - Hazards Identification

POTENTIAL PHYSICAL / CHEMICAL EFFECTS

Combustible. Material can release vapors that readily form flammable mixtures. Vapor accumulation could flash and/or explode if ignited. Material can accumulate static charges which may cause an ignition.

POTENTIAL HEALTH EFFECTS Repeated exposure may cause skin dryness or cracking. If swallowed, may be aspirated and cause lung damage. May be irritating to the eyes, nose, throat, and lungs. May be irritating to the respiratory tract - effects are reversible. May cause central nervous system depression.

ENVIRONMENTAL HAZARDS

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Section 4 - First Aid Measures

Inhalation Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

EYE CONTACT Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion Seek immediate medical attention. Do not induce vomiting.

NOTE TO PHYSICIAN If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

Section 5 - Fire Fighting Measures

EXTINGUISHING MEDIA Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water

FIRE FIGHTING Fire Fighting Instructions: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel. Unusual Fire Hazards: Vapors are flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger. Hazardous material: Firefighters should consider protective equipment indicated in Section 8. Hazardous Combustion Products: Smoke, Fume, Incomplete combustion products, Oxides of carbon

FLAMMABILITY PROPERTIES Flash Point [Method]: >42C (108F) [ASTM D-56]

Flammable Limits (Approximate volume % in air): LEL: 0.9 UEL: 6.2

Auto ignition Temperature: 479°C (894°F)

Section 6 - Accidental Release Measures

NOTIFICATION PROCEDURES In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

PROTECTIVE MEASURES Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for Personal Protective Equipment.

SPILL MANAGEMENT Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Use clean nonsparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Large Spills: Water spray may reduce vapor; but may not prevent ignition in closed spaces. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do it without risk. Eliminate sources of ignition. Warn other shipping. If the Flash Point exceeds the Ambient Temperature by 10 degrees C or more, use containment booms and remove from the surface by skimming or with suitable absorbents when conditions

permit. If the Flash Point does not exceed the Ambient Air Temperature by at least 10C, use booms as a barrier to protect shorelines and allow material to evaporate. Seek the advice of a specialist before using dispersants. Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

Section 7 - Handling and Storage

HANDLING Avoid contact with skin. Potentially toxic/irritating fumes/vapors may be evolved from heated or agitated material. Use only with adequate ventilation. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

Loading/Unloading Temperature : [Ambient]

Transport Temperature : [Ambient]

Transport Pressure : [Ambient

Static Accumulator : This material is a static accumulator

A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

STORAGE The container choice, for example storage vessel, may effect static accumulation and dissipation. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Storage containers should be grounded and bonded. Fixed storage containers, transfer containers and associated equipment should be grounded and bonded to prevent accumulation of static charge.

Storage Temperature : [Ambient]

Storage Pressure : [Ambient]

Suitable Containers/Packing : Railcars; Tank Trucks; Barges; Drums; Tankers

Suitable Materials and Coatings (Chemical Compatibility): Carbon Steel; Stainless Steel; Copper Bronze; Inorganic Zinc Coatings; Epoxy Phenolic; Polyamide Epoxy; Amine Epoxy; Viton

Unsuitable Materials and Coatings: Vinyl Coatings; Butyl Rubber; Natural Rubber; Ethylene-proplyene-diene monomer (EPDM); Polyethylene; Polystyrene; Polypropylene; PVC; Polyacrylonitrile

Section 8 - Exposure Controls, Personal Protection

ENGINEERING CONTROLS The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider: Adequate ventilation should be provided so that exposure limits are not exceeded. Use explosion-proof ventilation equipment.

PERSONAL PROTECTION Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable.

Types of respirators to be considered for this material include:

Half-face filter respirator For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include: If prolonged or repeated contact is likely, chemical resistant gloves are recommended. If contact with forearms is likely, wear gauntlet style gloves.

Eye Protection: If contact is likely, safety glasses with side shields are recommended

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include: If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

Section 9 - Physical and Chemical Properties

GENERAL INFORMATION

Physical State : Liquid

Form : Clear

Color : Colorless

Odor : Aromatic

Odor Threshold : N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15.6 C) : 0.874

Density (at 15 ºC) : 873 kg/m³ (7.29 lbs/gal, 0.87 kg/dm³)

Flash Point [Method] : >42C (108F) [ASTM D-56]

Flammable Limits (Approximate volume % in air): LEL: 0.9 UEL: 6.2

Autoignition Temperature : 479°C (894°F)

Boiling Point / Range : 161C (322F) - 171C (340F)

Vapor Density (Air = 1) : 4.2 at 101 kPa

Vapor Pressure : 0.262 kPa (1.97 mm Hg) at 20 C | 0.815 kPa (6.13 mm Hg) at 38C

Evaporation Rate (n-butyl acetate = 1): 0.27

pH : N/A

Log Pow (n-Octanol/Water Partition Coefficient): N/D

Solubility in Water : Negligible

Viscosity : 0.75 cSt (0.75 mm2/sec) at 40 C | 0.9 cSt (0.9 /smm2ec) at 25C

Oxidizing Properties : See Hazards Identification Section.

OTHER INFORMATION

Freezing Point : -14°C (7°F)

Melting Point : N/D

Molecular Weight : 121

Hygroscopic : No

Coefficient of Thermal Expansion : 0.00085 V/VDEGC

Section 10 - Stability and Reactivity

STABILITY : Material is stable under normal conditions.

CONDITIONS TO AVOID: Avoid heat, sparks, open flames and other ignition sources.

MATERIALS TO AVOID : Strong oxidizers, Nitric acid, Sulfuric acid

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

HAZARDOUS POLYMERIZATION: Will not occur

Section 11 - Toxicological Information

Inhalation: Elevated temperatures or mechanical action may form vapors, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs. Based on test data for structurally similar materials.

Ingestion: Minimally Toxic. Based on test data for structurally similar materials.

Skin: Mildly irritating to skin with prolonged exposure. Based on test data for the material.

Eye: May cause mild, short-lasting discomfort to eyes. Based on test data for the material.

CHRONIC/OTHER EFFECTS

For the product itself:

Vapor/aerosol concentrations above recommended exposure levels are irritating to the eyes and respiratory tract, may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects including death. Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

Contains: CUMENE: Repeated inhalation exposure of cumene vapor produced damage in the kidney of male rats only. These effects are believed to be species specific and are not relevant to humans.

Section 12 - Ecological Information

ECOTOXICITY Material -- Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

MOBILITY Material -- Highly volatile, will partition rapidly to air. Not expected to partition to sediment and waste water solids.

PERSISTENCE AND DEGRADABILITY Biodegradation: Material -- Expected to be readily biodegradable.

Hydrolysis: Material -- Transformation due to hydrolysis not expected to be significant.

Photolysis: Material -- Transformation due to photolysis not expected to be significant.

Atmospheric Oxidation: Material -- Expected to degrade rapidly in air

Section 13 - Disposal Considerations

DISPOSAL RECOMMENDATIONS Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

REGULATORY DISPOSAL INFORMATION RCRA Information: Disposal of unused product may be subject to RCRA regulations (40 CFR 261). Disposal of the used product may also be regulated due to ignitability, corrosivity, reactivity or toxicity as determined by the Toxicity Characteristic Leaching Procedure (TCLP). Potential RCRA characteristics: IGNITABILITY

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

Section 14 - Transport Information

LAND (DOT)

Proper Shipping Name : PETROLEUM DISTILLATES, N.O.S.

Hazard Class & Division : COMBUSTIBLE LIQUID

ID Number : 1268

Packing Group : III

Product RQ : 4545.45 LBS – XYLENES

ERG Number : 128

Label(s) : NONE

Transport Document Name: UN1268, PETROLEUM DISTILLATES, N.O.S., COMBUSTIBLE LIQUID, PG III, RQ (Xylenes)

Footnote: The flash point of this material is greater than 100 F. Regulatory classification of this material varies. DOT: Flammable liquid or combustible liquid. OSHA: Combustible liquid. IATA/IMO: Flammable liquid. This material is not regulated under 49 CFR in a container of 119 gallon capacity or less when transported solely by land, as long as the material is not a hazardous waste, a marine pollutant, or specifically listed as a hazardous substance.

LAND (TDG)

Proper Shipping Name : PETROLEUM DISTILLATES, N.O.S.

Hazard Class & Division : 3

UN Number : 1268

Packing Group : III

SEA (IMDG)

Proper Shipping Name : PETROLEUM DISTILLATES, N.O.S.

Hazard Class & Division : 3

EMS Number : F-E, S-E

UN Number : 1268

Packing Group : III

Label(s) : 3

Transport Document Name : UN1268, PETROLEUM DISTILLATES, N.O.S., 3, PG III, (42°C c.c.)

Footnote : This material is not classified as a marine pollutant

AIR (IATA)

Proper Shipping Name : PETROLEUM DISTILLATES, N.O.S.

Hazard Class & Division : 3 LAND (TDG,

UN Number : 1268

Packing Group : III

Section 15 - Regulatory Information

OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purpose, this material is classified as hazardous in accordance with OSHA 29CFR 1910.1200. NATIONAL CHEMICAL INVENTORY LISTING: AICS, IECSC, DSL, EINECS, ENCS, KECI, PICCS, TSCA

EPCRA: This material contains no extremely hazardous substances.

CERCLA: This material is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Contact local authorities to determine if other reporting requirements apply.

CWA / OPA: This product is classified as an oil under Section 311 of the Clean Water Act (40 CFR 110) and the Oil Pollution Act of 1990. Discharge or spills which produce a visible sheen on either surface water, or in waterways/sewers which lead to surface water, must be reported to the National Response Center at 800-424-8802. SARA (311/312) REPORTABLE HAZARD CATEGORIES: Fire delayed health.