

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor

Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY (as Used on Label and List)
Shell Sol TS28

Note: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's name Museum Services Corporation	Emergency Telephone Number 651-450-8954
Address (Number, Street, City, State and ZIP Code) 385 Bridgepoint Way South Saint Paul, MN 55075	Telephone Number for Information 651-450-8954
	Date Prepared 02/27/2020
	Signature of Preparer (optional)

Section II—Hazardous Identification

Hazard classification

This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Flammable liquids : Category 3

Aspiration hazard : Category 1

Specific target organ toxicity - single exposure :Category 3 (Respiratory Tract, Narcotic effects)

Chronic aquatic toxicity: Category 2

Label elements

Hazard pictograms



Signal word: **DANGER!**

Hazards

H226 Flammable liquid and vapor

HEALTH HAZARDS:

H304 May be fatal if swallowed and enters airways.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

ENVIRONMENTAL HAZARDS:

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/ protective clothing/ eye protection/face protection.

P273 Avoid release to the environment.

Response

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/shower.

P370+P378 In case of fire: Use appropriate media for extinction.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P331 Do NOT induce vomiting.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER or doctor/ physician if you feel unwell.

P391 Collect spillage.

Storage

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Disposal

P501 Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

Other hazards

This material is a static accumulator.

Even with proper grounding and bonding, this material can still accumulate an electrostatic charge.

If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapor mixtures can occur.

Vapors are heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger.

Repeated exposure may cause skin dryness or cracking.

The classification of this material is based on OSHA HCS 2012 criteria.

Section III—Composition/Information on Ingredients

Component	CASRN	Concentration	
solvent naphtha (petroleum), light aromatic	64742-95-8	80% weight	
solvent naphtha (petroleum), medium aliphatic	64742-88-7	20% weight	

Section IV—First Aid Measures

General advice - DO NOT DELAY. Keep victim calm. Obtain medical treatment immediately.

Skin - Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.

Inhalation - Remove person to fresh air. If signs/symptoms continue, get medical attention. Give oxygen or artificial respiration as needed.

Eyes - Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.

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. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing.

Most important symptoms and effects, both acute and delayed - Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing. Breathing of high vapor concentrations may cause central nervous system (CNS) depression resulting in dizziness, lightheadedness, 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. Auditory system effects may include temporary hearing loss and/or ringing in the ears.

Section V—Fire and Explosion Hazard Data

Extinguishing Media - SMALL FIRE: Use dry chemicals, CO₂, water spray or alcohol-resistant foam. LARGE FIRE: Use water spray, water fog or alcohol-resistant foam. Cool all affected containers with flooding quantities of water.

Special Fire Fighting Procedures – Clear fire area of all non-emergency personnel.

Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke), Carbon monoxide, Unidentified organic and inorganic compounds. Flammable vapors may be present even at temperatures below the flash point.

The vapor is heavier than air, spreads along the ground and distant ignition is possible. Will float and can be reignited on surface water.

Special protective equipment for firefighters: Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards.

Section VI—Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Observe all relevant local and international regulations. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained. Avoid contact with skin, eyes and clothing. Isolate hazard area and deny entry to unnecessary or unprotected personnel. Do not breathe fumes, vapor. Do not operate electrical equipment.

Environmental precautions: 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 vapor 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 all equipment. Monitor area with combustible gas indicator.

Methods and materials for containment and cleaning up: For small liquid spills (< 1 drum), transfer by mechanical means to a labeled, 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.

Ventilate contaminated area thoroughly. If contamination of site occurs remediation may require specialist advice.

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 Center 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 Center 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.

Section VII—Handling and Storage

Precautions for safe handling: Avoid inhaling vapor and/or mists. Avoid contact with skin, eyes and clothing. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Use local exhaust ventilation if there is risk of inhalation of vapors, mists or aerosols. Bulk storage tanks should be diked (bunded). When using do not eat or drink. The vapor is heavier than air, spreads along the ground and distant ignition is possible.

Product Transfer

Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapor mixtures can occur. Be aware of handling operations that may give rise to additional hazards that result from the accumulation of static charges. These include but are not limited to pumping (especially turbulent flow), mixing, filtering, splash filling, cleaning and filling of tanks and containers, sampling, switch loading, gauging, vacuum truck operations, and mechanical movements. These activities may lead to static discharge e.g. spark formation. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 1 m/s until fill pipe submerged to twice its diameter, then ≤ 7 m/s). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations.

Conditions for safe storage: Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.

Storage Temperature: Ambient. Bulk storage tanks should be diked (bunded). Locate tanks away from heat and other sources of ignition. Cleaning, inspection and maintenance of storage tanks is a specialist operation, which requires the implementation of strict procedures and precautions. Must be stored in a diked (bunded) well-ventilated area, away from sunlight, ignition sources and other sources of heat. 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.

Electrostatic charges will be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding all equipment to reduce the risk. The vapors in the head space of the storage vessel may lie in the flammable/explosive range and hence may be flammable.

Packaging material: Suitable material: For containers, or container linings use mild steel, stainless steel., For container paints, use epoxy paint, zinc silicate paint.

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

Container Advice : Do not cut, drill, grind, weld or perform similar operations on or near containers.

Specific use(s) : Not applicable

See additional references that provide safe handling practices for liquids that are determined to be static accumulators: American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practices on Static Electricity). CENELEC CLC/TR 50404 (Electrostatics – Code of practice for the avoidance of hazards due to static electricity).

Section VIII—Exposure Control /Personal Protection

Components with workplace control parameters

Components	Source	Value Type (form of exposure)	Control Parameters/Permissible Concentration	STEL/Ceiling/Notation
Trimethyl Benzene	ACGIH - TLV	TWA	25 ppm	
Trimethyl Benzene	SHELL-PEL Interim Standard	TWA	25 ppm	

Biological occupational exposure limits - No biological limit allocated.

Monitoring Methods - Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples analyzed by an accredited laboratory. Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available. National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods <http://www.cdc.gov/niosh/> Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods <http://www.osha.gov/>

Respiratory Protection (Specify Type) 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 unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. If air-filtering respirators are suitable for conditions of use: Select a filter suitable for organic gases and vapors [Type A boiling point >65°C (149°F)]. Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard, 29 CFR 1910.134.

Engineering Controls: Use explosion-proof local exhaust ventilation with a minimum capture velocity of 100 ft/min (0.5 m/sec) at the point of vapor evolution. Refer to the current edition of Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Protective measures: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Protective Gloves: Chemical-resistant gloves should be worn whenever this material is handled. The glove(s) listed below may provide protection against permeation. (Gloves of other chemically resistant materials may not provide adequate protection): Nitrile rubber. Solvent-resistant gloves. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water.

Eye Protection: Chemical resistant goggles must be worn. Eye protection worn must be compatible with respiratory protection system employed.

Section IX—Physical and Chemical Properties

Appearance:	Liquid.
Color :	clear
Odor :	Hydrocarbon
pH :	Not applicable
Boiling point/boiling range :	320-352 °F
Flash point :	111 °F
Upper explosion limit :	6 %(V)
Lower explosion limit :	0.5 %(V)
Vapor pressure :	9.2 mm hg @ 100 °F
Relative vapor density :	4.4
Relative density :	0.793
Density :	Data not available
Solubility(ies)	
Water solubility :	negligible
Solubility in other solvents :	Data not available

Auto-ignition temperature : 230 °C / 446 °F

Conductivity : Low conductivity: < 100 pS/m, The conductivity of this material makes it a static accumulator., A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive 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, and antistatic additives can greatly influence the conductivity of a liquid,

Section X—Stability and Reactivity

Reactivity: The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph.

Chemical stability: No hazardous reaction is expected when handled and stored according to provisions. Stable under normal conditions of use.

Possibility of hazardous reactions: Reacts with strong oxidizing agents.

Conditions to avoid: Heat, flames, and sparks. Extreme temperatures and direct sunlight. In certain circumstances product can ignite due to static electricity.

Incompatible materials: Avoid contact with the following: Strong oxidizing agents

Hazardous decomposition products: Hazardous decomposition products are not expected to form during normal storage. Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulphur oxides and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation

Section XI—Toxicological Information

Toxicological information appears in this section when such data is available.

Basis for assessment: Information given is based on product testing, and/or similar products, and/or components. Information on likely routes of exposure Inhalation is the primary route of exposure although absorption may occur through skin contact or following accidental ingestion.

Acute toxicity

Acute oral toxicity: LD50 : > 5,000 mg/kg

Remarks: Expected to be of low toxicity:

Acute inhalation toxicity:

Remarks: Expected to be of low toxicity if inhaled. High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea.

Acute dermal toxicity : LD50 : > 5,000 mg/kg

Remarks: Expected to be of low toxicity:

Skin corrosion/irritation

Remarks: Causes mild skin irritation. Repeated exposure may cause skin dryness or cracking

Serious eye damage/eye irritation

Remarks: Expected to be slightly irritating.

Respiratory or skin sensitisation

Remarks: Not expected to be a sensitiser.

Germ cell mutagenicity

Remarks: No evidence of mutagenic activity.

Carcinogenicity

Remarks: Not expected to be carcinogenic.

IARC -No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH - Confirmed animal carcinogen with unknown relevance to humans

OSHA - No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP - No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Remarks: Not expected to impair fertility., Not expected to be a developmental toxicant.

STOT - single exposure

Remarks: May cause respiratory irritation., May cause drowsiness and dizziness.

STOT - repeated exposure

Remarks: Not expected to be a hazard.

Aspiration toxicity

Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

Further information

Remarks: Classifications by other authorities under varying regulatory frameworks may exist.

Remarks: Prolonged and repeated exposures to high concentrations have resulted in hearing loss in rats. Solvent abuse and noise interaction in the work environment may cause hearing loss, Kidney: caused kidney effects in male rats which are not considered relevant to humans

Section XII—Ecological Information

Ecotoxicological information appears in this section when such data is available.

Basis for assessment :

Information given is based on product testing, and/or similar products, and/or components.

Ecotoxicity

Toxicity to fish (Acute toxicity) :

Remarks: Expected to be harmful:

LL/EL/IL50 >10 <= 100 mg/l

Toxicity to daphnia and other aquatic invertebrates (Acute toxicity):

Remarks: Expected to be harmful:

LL/EL/IL50 >10 <= 100 mg/l

Toxicity to algae (Acute toxicity) :

Remarks: Expected to be toxic:

LL/EL/IL50 > 1 <= 10 mg/l

Toxicity to bacteria (Acute toxicity) :

Remarks: Data not available

Biodegradability :

Remarks: Expected to be inherently biodegradable. Oxidizes rapidly by photo-chemical reactions in air. Bioaccumulative potential

Bioaccumulation :

Remarks: Has the potential to bioaccumulate.

Mobility in soil

Mobility : If it enters soil, it will adsorb to soil particles and will not be mobile.

Remarks: Floats on water.

Section XIII—Disposal Considerations

Disposal methods: Waste from residues :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. Do not dispose into the environment, in drains or in water courses. Waste product should not be allowed to contaminate soil or water.

Contaminated packaging :Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Send to drum recoverer or metal reclaimer. Comply with any local recovery or waste disposal regulations.

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.

Section XIV—Transport Information

DOT

Proper shipping name: Petroleum distillates, n.o.s.

UN number: UN 1268

Class: 3

Packing group: III

ERG Code: 128

Marine pollutant: no

Remarks: This material is an 'OIL' under 49 CFR Part 130 when transported in a container of 3500 gallon capacity or greater.

Classification for SEA transport (IMO-IMDG):

Proper shipping name PETROLEUM DISTILLATES, N.O.S. (Naphtha (Petroleum) Hydrotreated Heavy)

UN number UN 1268

Class 3

Packing group III

Marine pollutant: Yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Pollution category: Annex I

Ship type : Annex I or Double hull vessels with carriage of oil certification

Product name : Solvent naphtha

Classification for AIR transport (IATA/ICAO):

Proper shipping name Petroleum distillates, n.o.s.

UN number UN 1268

Class 3

Packing group III

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

Section XV—Regulatory Information

OSHA Hazards:

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312

Hazards: Fire Hazard. Acute Health Hazard

SARA 302:

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313:

1,2,4 Trimethylbenzene (95-63-6), 32% weight

Clean Water Act

This product does not contain any Hazardous Chemicals listed under the U.S. Clean Water Act, Section 311, Table 117.3.

Pennsylvania Right To Know

1,2,4 Trimethylbenzene (95-63-6), 32% weight

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

AICS : Listed

DSL : Listed

IECSC : Listed

KECI : Listed

PICCS : Listed

EINECS : Listed

TSCA : Listed

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

Section XVI—Other Information

Hazard Rating System

HMIS

Health	Flammability	Physical Hazard
2	2	0

Revision

Version: 1.0

Information Source and References

This SDS is from information supplied by internal references within our company.

Museum Services Corporation urges each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that their activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer specific SDSs, we are not and cannot be responsible for (M)SDSs obtained from any other sources. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.