



142 Solvent 66/3

Material Safety Data Sheet

CITGO Petroleum Corporation
1701 Golf Road, Suite 1-1101
Rolling Meadows, IL 60008-4295

MSDS No. 19026
Revision Date 11/12/2004

Hazard Rankings		
	HMIS	NFPA
Health Hazard	* 1	1
Fire Hazard	2	2
Reactivity	0	0

* = Chronic Health Hazard

IMPORTANT: Read this MSDS before handling or disposing of this product and pass this information on to employees, customers and users of this product.

Emergency Overview	
Physical State	Liquid.
Color	Transparent, colorless.
Odor	Characteristic hydrocarbon solvent odor.
CAUTION: Combustible liquid and vapor. Harmful or fatal if swallowed - Can enter lungs and cause damage. Can cause eye, skin or respiratory tract irritation. Spills may create a slipping hazard.	

Protective Equipment
Minimum Recommended See Section 8 for Details
  

SECTION 1. PRODUCT IDENTIFICATION

Trade Name	142 Solvent 66/3	Technical Contact	(800) 967-7601 (8am - 4pm CT M-F)
Product Number	19026	Medical Emergency	(918) 495-4700
CAS Number	Mixture.	CHEMTREC Emergency (United States Only)	(800) 424-9300
Product Family	Petroleum hydrocarbon solvent		
Synonyms	Petroleum hydrocarbon solvent; 140 Flash Solvent; High Flash Stoddard Solvent; High-flash Mineral Spirits; Type IIC Mineral Spirits (meets ASTM D-235 Type 2C specifications); Mineral Spirits (meets Dry Cleaning Fluid Specification PD680 - Type II); CITGO® Material Code No.: 19026 Former Name: Solvent 2026		

SECTION 2. COMPOSITION

This product may be composed, in whole or in part, of any of the following refinery streams:

Petroleum hydrocarbon distillates [CAS No.: 8052-41-3]
Hydrotreated Light Distillate (Petroleum) [CAS No.: 64742-47-8]

This product contains the following chemical components:

Component Name(s)	CAS Registry No.	Concentration (%)
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C10 Alkanes and Isoparaffins	Mixture	40 - 60
C11 Alkanes and Isoparaffins	Mixture	10 - 30
C9 Naphthenes	Mixture	10 - 15
Nonane, all isomers	Mixture	1 - 10
C12 Alkanes and Isoparaffins	Mixture	0 - 5

SECTION 3. HAZARDS IDENTIFICATION

Also see Emergency Overview and Hazard Ratings on the top of Page 1 of this MSDS.

Major Route(s) of Entry Skin contact. Inhalation.

Signs and Symptoms of Acute Exposure

Inhalation	Breathing high concentrations may be harmful. Mist or vapor can irritate the throat and lungs. Breathing this material may cause central nervous system depression with symptoms including nausea, headache, dizziness, fatigue, drowsiness, or unconsciousness. Breathing high concentrations of this material, for example, in an enclosed space or by intentional abuse, can cause irregular heartbeats which can cause death.
Eye Contact	This product can cause transient mild eye irritation with short-term contact with liquid sprays or mists. Symptoms include stinging, watering, redness, and swelling.
Skin Contact	This product can cause mild, transient skin irritation with short-term exposure. The degree of irritation will depend on the amount of material that is applied to the skin and the speed and thoroughness that it is removed. Symptoms include redness, itching, and burning of the skin. Repeated or prolonged skin contact can produce moderate irritation (dermatitis).
Ingestion	If swallowed, this material may irritate the mucous membranes of the mouth, throat, and esophagus. It can be readily absorbed by the stomach and intestinal tract. Symptoms include a burning sensation of the mouth and esophagus, nausea, vomiting, dizziness, staggering gait, drowsiness, loss of consciousness, and delirium, as well as additional central nervous system (CNS) effects. Due to its light viscosity, there is a danger of aspiration into the lungs during vomiting. Aspiration can result in severe lung damage or death.

Chronic Health Effects Summary Chronic effects of ingestion and subsequent aspiration into the lungs may cause pneumatocele (lung cavity) formation and chronic lung dysfunction.

Reports have associated repeated and prolonged occupational overexposure to solvents with irreversible brain and nervous system damage (sometimes referred to as "Solvent or Painter's Syndrome"). Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal.

Conditions Aggravated by Exposure Disorders of the following organs or organ systems that may be aggravated by significant exposure to this material or its components include: Skin, Respiratory System, Liver, Kidneys, Central Nervous System (CNS)

Target Organs May cause damage to the following organs: kidneys, lungs, liver, mucous membranes, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea

Carcinogenic Potential This product is not known to contain any components at concentrations above 0.1% which are considered carcinogenic by OSHA, IARC or NTP.

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OSHA Hazard Classification is indicated by an "X" in the box adjacent to the hazard title. If no "X" is present, the product does not exhibit the hazard as defined in the OSHA Hazard Communication Standard (29 CFR 1910.1200).							
OSHA Health Hazard Classification				OSHA Physical Hazard Classification			
Irritant <input type="checkbox"/>	Sensitizer <input type="checkbox"/>	Combustible <input checked="" type="checkbox"/>	Explosive <input type="checkbox"/>	Pyrophoric <input type="checkbox"/>			
Toxic <input type="checkbox"/>	Highly Toxic <input type="checkbox"/>	Flammable <input type="checkbox"/>	Oxidizer <input type="checkbox"/>	Water-reactive <input type="checkbox"/>			
Corrosive <input type="checkbox"/>	Carcinogenic <input type="checkbox"/>	Compressed Gas <input type="checkbox"/>	Organic Peroxide <input type="checkbox"/>	Unstable <input type="checkbox"/>			

SECTION 4. FIRST AID MEASURES

Take proper precautions to ensure your own health and safety before attempting rescue or providing first aid. For more specific information, refer to Exposure Controls and Personal Protection in Section 8 of this MSDS.

- Inhalation** Immediately move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). If breathing is difficult, 100 percent humidified oxygen should be administered by a qualified individual. Seek medical attention immediately.
- Eye Contact** Check for and remove contact lenses. If irritation or redness develops, flush eyes with cool, clean, low-pressure water for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of the eye and eyelid tissue. Do not use eye ointment. Seek medical attention immediately.
- Skin Contact** Remove contaminated shoes and clothing. Flush affected area with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. Do not use ointments. If skin surface is not damaged, clean affected area thoroughly with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists.
- Ingestion** Do not induce vomiting. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. Never give anything by mouth to a person who is not fully conscious. Do not leave victim unattended. Seek medical attention immediately.
- Notes to Physician** INHALATION: Inhalation overexposure can produce toxic effects. Monitor for respiratory distress. If cough or difficulty in breathing develops, evaluate for upper respiratory tract inflammation, bronchitis, and pneumonitis. Administer supplemental oxygen with assisted ventilation, as required.
- This material (or a component) sensitizes the heart to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. Administration of sympathomimetic drugs should be avoided.
- INGESTION: If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended. Consider activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position.

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SECTION 5. FIRE FIGHTING MEASURES

NFPA Flammability Classification	NFPA Class-III A combustible liquid.		
Flash Point	Closed cup: 63°C (145°F). (Tagliabue (ASTM D-56))		
Lower Flammable Limit	AP 0.8 %	Upper Flammable Limit	AP 6 %
Autoignition Temperature	Not available.		
Hazardous Combustion Products	Carbon dioxide, carbon monoxide, smoke, fumes, and/or unburned hydrocarbons.		
Special Properties	Combustible Liquid! This material releases vapors when heated above ambient temperatures. Vapors can cause a flash fire. Vapors can travel to a source of ignition and flashback. A vapor and air mixture can create an explosion hazard in confined spaces such as sewers. Use only with adequate ventilation. If container is not properly cooled, it can rupture in the heat of a fire.		
Extinguishing Media	SMALL FIRE: Use dry chemicals, carbon dioxide, foam, water fog, or inert gas (nitrogen). LARGE FIRE: Use foam, water fog, or water spray. Water fog and spray are effective in cooling containers and adjacent structures. However, water can cause frothing and/or may not extinguish the fire. Water can be used to cool the external walls of vessels to prevent excessive pressure, autoignition or explosion. DO NOT use a solid stream of water directly on the fire as the water may spread the fire to a larger area.		
Protection of Fire Fighters	Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Evacuate area and fight the fire from a maximum distance or use unmanned hose holders or monitor nozzles. Cover pooling liquid with foam. Containers can build pressure if exposed to radiant heat; cool adjacent containers with flooding quantities of water until well after the fire is out. Withdraw immediately from the area if there is a rising sound from a venting safety device or discoloration of vessels, tanks, or pipelines. Be aware that burning liquid will float on water. Notify appropriate authorities if liquid enter sewers or waterways.		

SECTION 6. ACCIDENTAL RELEASE MEASURES

Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Page 1, Exposure Controls and Personal Protection in Section 8 and Disposal Considerations in Section 13 of this MSDS.

Combustible Liquid! Release causes an immediate fire or explosion hazard. Evacuate all non-essential personnel from immediate area and establish a "regulated zone" with site control and security. A vapor-suppressing foam may be used to reduce vapors. Eliminate all ignition sources. All equipment used when handling this material must be grounded. Stop the leak if it can be done without risk. Do not touch or walk through spilled material. Remove spillage immediately from hard, smooth walking areas. Prevent its entry into waterways, sewers, basements, or confined areas. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to appropriate waste containers. Use clean, non-sparking tools to collect absorbed material.

For large spills, secure the area and control access. Dike far ahead of a liquid spill to ensure complete collection. Water mist or spray may be used to reduce or disperse vapors; but, it may not prevent ignition in closed spaces. This material will float on water and its run-off may create an explosion or fire hazard. Verify that responders are properly HAZWOPER-trained and wearing appropriate respiratory equipment and fire-resistant protective clothing during

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cleanup operations. In an urban area, cleanup spill as soon as possible; in natural environments, cleanup on advice from specialists. Pick up free liquid for recycle and/or disposal if it can be accomplished safely with explosion-proof equipment. Collect any excess material with absorbant pads, sand, or other inert non-combustible absorbent materials. Place into appropriate waste containers for later disposal. Comply with all laws and regulations.

SECTION 7. HANDLING AND STORAGE

Handling

A spill or leak can cause an immediate fire or explosion hazard. Keep containers closed and do not handle or store near heat, sparks, or any other potential ignition sources. Do not contact with oxidizable materials. Do not breathe vapor. Use only with adequate ventilation and personal protection. Never siphon by mouth. Avoid contact with eyes, skin, and clothing. Prevent contact with food and tobacco products. Do not take internally.

When performing repairs and maintenance on contaminated equipment, keep unnecessary persons away from the area. Eliminate all potential ignition sources. Drain and purge equipment, as necessary, to remove material residues. Use gloves constructed of impervious materials and protective clothing if direct contact is anticipated. Provide ventilation to maintain exposure potential below applicable exposure limits. Promptly remove contaminated clothing. Wash exposed skin thoroughly with soap and water after handling.

A static electrical charge can accumulate when this material is flowing through pipes, nozzles or filters and when it is agitated. A static spark discharge can ignite accumulated vapors particularly during dry weather conditions. Always bond receiving containers to the fill pipe before and during loading. Always keep nozzle in contact with the container throughout the loading process. Do not fill any portable container in or on a vehicle. Do NOT use compressed air for filling, discharging or other handling operations.

Product container is not designed for elevated pressure. Do not pressurize, cut, weld, braze solder, drill, or grind on containers. Do not expose product containers to flames, sparks, heat or other potential ignition sources. Empty containers may contain product residues that can ignite with explosive force. Observe label precautions. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.

Storage

Keep container closed. Store in a cool, dry, well-ventilated area. Do not store with oxidizing agents. Do not store at elevated temperatures or in direct sunlight for extended periods of time. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers or waste residues of this product.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits indicated below. All electrical equipment should comply with the National Electric Code. An emergency eye wash station and safety shower should be located near the work-station.

Personal Protective Equipment

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. The following pictograms represent the minimum requirements for personal protective equipment. For certain operations, additional PPE may be required.

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- Eye Protection** Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Chemical goggles should be worn during transfer operations or when there is a likelihood of misting, splashing, or spraying of this material. Suitable eye wash water should be readily available.
- Hand Protection** Avoid skin contact. Use heavy duty gloves constructed of chemical resistant materials such as Viton® or heavy nitrile rubber. Wash hands with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities or leaving work. DO NOT use gasoline, kerosene, solvents or harsh abrasives as skin cleaners.
- Body Protection** Avoid skin contact. Wear long-sleeved fire-retardant garments (e.g., Nomex®) while working with flammable and combustible liquids. Additional chemical-resistant protective gear may be required if splashing or spraying conditions exist. This may include an apron, boots and additional facial protection. If product comes in contact with clothing, immediately remove soaked clothing and shower. Promptly remove and discarded contaminated leather goods.
- Respiratory Protection** For unknown vapor concentrations use a positive-pressure, pressure-demand, self-contained breathing apparatus (SCBA). For known vapor concentrations above the occupational exposure guidelines (see below), use a NIOSH-approved organic vapor respirator if adequate protection is provided. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134).
- General Comments** Warning! Use of this material in spaces without adequate ventilation may result in generation of hazardous levels of combustion products and/or inadequate oxygen levels for breathing. Odor is an inadequate warning for hazardous conditions.

Occupational Exposure Guidelines

Substance	Applicable Workplace Exposure Levels
Petroleum Hydrocarbon Distillates	ACGIH (United States). TWA: 100 ppm
	OSHA (United States). TWA: 500 ppm
Nonane, all isomers	ACGIH (United States). TWA: 200 ppm

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES (TYPICAL)

Physical State	Liquid.	Color	Transparent, colorless.	Odor	Characteristic hydrocarbon solvent odor.
Specific Gravity	0.794 (Water = 1)	pH	Not applicable.	Vapor Density	>1 (Air = 1)
Boiling Range	192° C- 205° C (378° F- 401° F)			Melting/Freezing Point	Not available.
Vapor Pressure	0.07 kPa (0.5 mm Hg) (at 20°C) 0.27 torr at 20°C (68°F) by Isoteniscope (ASTM D-2879).			Volatility	794 g/l VOC (w/v)
Solubility in Water	Very slightly soluble in cold water. (<0.1 % w/w)			Viscosity (cSt @ 40°C)	not available
Flash Point	Closed cup: 63°C (145°F). (Tagliabue (ASTM D-56))				

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Additional Properties

Paraffin, Isoparaffin and Cycloparaffin Hydrocarbons Content = >99 Wt.% (ASTM D-1319);
Aromatic Hydrocarbon Content = <1 Wt. % (ASTM D-1319);
Average Density at 60°F = 6.61 lbs./gal. (Calculated via ASTM D-287);
Aniline Cloud Point Temperature = 162°F (72°C) (ASTM D-611);
Kauri-Butanol (KB) Value = 31 (ASTM D-1133);
Boiling Point Range = 378° to 401°F (192° to 205°C) (ASTM D-86, D-850 or D-1078);
Dry Point Temperature = 401°F (205°C) (ASTM D-86, D-850 or D-1078);
Evaporation Rate = <0.1 (n-Butyl acetate = 1.0);
Heat Value = 20,633 Btu. per pound;
Flash Point = 145° F (63° C) (TCC)

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability

Stable.

Hazardous Polymerization Not expected to occur.

Conditions to Avoid

Keep away from heat, flame and other potential ignition sources. Keep away from strong oxidizing conditions and agents.

Materials Incompatibility

Strong acids, alkalies, and oxidizers such as liquid chlorine and oxygen.

Hazardous Decomposition Products

No additional hazardous decomposition products were identified other than the combustion products identified in Section 5 of this MSDS.

SECTION 11. TOXICOLOGICAL INFORMATION

For other health-related information, refer to the Emergency Overview on Page 1 and the Hazards Identification in Section 3 of this MSDS.

Toxicity Data

Light hydrotreated distillate (petroleum):

Studies on laboratory animals have shown similar materials to cause eye and respiratory tract irritation. Studies of similar materials on laboratory animals have resulted in skin irritation after repeated or prolonged contact. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and rash (dermatitis).

Petroleum hydrocarbon distillates:

Dermal, Acute LD₅₀ (rabbit): >3000 mg/kg
Inhalation, Acute LC₅₀ (rat): >5.5 mg/l (8 hours)

Studies on laboratory animals have associated similar materials with eye and respiratory tract irritation. Studies on laboratory animals have shown similar materials to cause skin irritation after repeated or prolonged contact. Repeated direct application of Stoddard Solvent to the skin can produce defatting dermatitis and kidney damage in laboratory animals. Rats developed kidney damage and elevated blood urea nitrogen levels when exposed to a concentration of 1.9 mg/L for 65 days. The kidney damage occurred only in male rats and appeared to involve both the tubules and glomeruli. The significance of these animal study results to human health is unclear.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity	This mixture contains components that are potentially toxic to freshwater and saltwater ecosystems.
Environmental Fate	This mixture will normally float on water with its lighter components evaporating rapidly. In stagnant or slow-flowing waterways, a hydrocarbon layer can cover a large surface area. As a result, this covering layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway might be enough to cause a fish kill or create an anaerobic environment. This coating action can also be harmful or fatal to plankton, algae, aquatic life, and water birds.

SECTION 13. DISPOSAL CONSIDERATIONS

Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent materials and residues at the time of disposition.

Conditions of use may cause this material to become a "hazardous waste", as defined by federal or state regulations. It is the responsibility of the user to determine if the material is a RCRA "hazardous waste" at the time of disposal. Transportation, treatment, storage and disposal of waste material must be conducted in accordance with RCRA regulations (see 40 CFR 260 through 40 CFR 271). State and/or local regulations may be more restrictive. Contact the RCRA/Superfund Hotline at (800) 424-9346 or your regional US EPA office for guidance concerning case specific disposal issues.

SECTION 14. TRANSPORT INFORMATION

The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside of the United States.

US DOT Status	A U.S. Department of Transportation (DOT) regulated material.		
Proper Shipping Name	Petroleum Distillates, n.o.s., (Solvent Naphtha), Combustible Liquid, UN1268, PG III		
Hazard Class	Combustible liquid.	Packing Group(s)	III
		UN/NA Number	UN 1268
Reportable Quantity	A Reportable Quantity (RQ) has not been established for this material.		

Placard(s)



Emergency Response Guide No.	128
HAZMAT STCC No.	4910256
MARPOL III Status	Not a DOT "Marine Pollutant" per 49 CFR 171.8.

