

SAFETY DATA SHEET

1. Product and Company Identification

Product Name: Heptane – MRS 555
Product Code: MRS555
Product Use: Solvent

Chemical Type: Solvent Blend

Manufacturer: Plastic Process Equipment, Inc. **Revision Date:** 1/30/2019
Address: 8303 Corporate Park Drive. **Emergency:** 1-800-262-8200 ID 1195 (UNITED STATES)
Macedonia, OH 44056 **Phone:** 1-800-362-0706

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

H225 -- Flammable liquids -- Category 2
H304 -- Aspiration Hazard -- Category 1
H315 -- Skin corrosion/irritation -- Category 2
H336 -- Specific target organ toxicity (single exposure) -- Category 3
H400 -- Hazardous to the aquatic environment, acute toxicity -- Category 1
H410 -- Hazardous to the aquatic environment, chronic toxicity -- Category 1
PHNOC: Electrostatic charge may be generated during pumping and other operations
HHNOC: None known



Hazard pictograms :

Signal word : Danger

Hazard statements :

Highly flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin irritation. May cause drowsiness or dizziness. Very toxic to aquatic life with long lasting effects

Precautionary statements:

Keep away from heat/sparks/open flames/hot surfaces. - No smoking; Keep container tightly closed; Ground/bond container and receiving equipment; Use explosion-proof electrical ventilation and lighting) equipment; Use only non-sparking tools; Take precautionary measures against static discharge; Avoid breathing dust/fume/gas/mist/vapours/spray; Wash skin thoroughly after handling; Use only outdoors or in a well-ventilated area; Avoid release to the environment; Wear protective gloves/protective clothing and eye/face protection; IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician; Do NOT induce vomiting; IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower; If skin irritation occurs: Get medical advice/attention; IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing; Call a POISON CENTER or doctor/physician if you feel unwell; Take off contaminated clothing and wash before reuse; In case of fire: Use CO2, dry chemical, or foam for extinction; Collect spillage; Store in a well-ventilated place. Keep cool; Dispose of contents/container to an approved waste disposal plant

3. COMPOSTION AND INGREDIENTS

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Concentration</u>
Heptanes, Branched, Cyclic and Linear	426260-76-6	>90%
Includes (n-Heptane & Toluene)	142-82-5 & 108-88-3	

4. First Aid Measures

Eye Contact: If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

Skin Contact: Remove contaminated shoes and clothing, and flush affected area(s) with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops, seek medical attention. Wash contaminated clothing before reuse.

Inhalation: First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. Seek immediate medical attention.

Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is drowsy or unconscious and vomiting, place on the left side with the head down. If possible, do not leave victim unattended and observe closely for adequacy of breathing. Seek medical attention.

Most important symptoms and effects, both acute and delayed: Overexposure to vapors may result in respiratory tract irritation, coughing, nausea, headaches, vomiting, and CNS depression. Prolonged or repeated contact may dry skin and cause irritation

Notes to Physician: Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of hydrocarbon solvents (e.g., in enclosed spaces or with deliberate abuse). The use of other drugs with less arrhythmogenic potential should be considered. If sympathomimetic drugs are administered, observe for the development of cardiac arrhythmias.

5. Fire Fighting Measures

Extinguishing Media: Dry chemical, carbon dioxide, or foam is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Water may be ineffective for extinguishment, unless used under favorable conditions by experienced fire fighters.

Specific hazards arising from the chemical

Unusual Fire & Explosion Hazards: Highly Flammable. This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe) Vapors may travel considerable distances to a source of ignition where they can ignite, flash back, or explode. May create

vapor/air explosion hazard indoors, in confined spaces, outdoors, or in sewers. This product will float and can be reignited on surface water. Vapors are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire.

Hazardous Combustion Products: Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion.

Special protective actions for fire-fighters: For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Highly Flammable. Spillages of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition and hot metal surfaces away from spill/release if safe to do so. The use of explosion-proof electrical equipment is recommended. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

Environmental Precautions: Stop and contain spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use foam on spills to minimize vapors. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

Methods and material for containment and cleaning up: Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations. Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken.

7. Handling and Storage

Handling: FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN

Precautions for safe handling: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Take precautionary measures against static discharge. Use only non-sparking tools. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8). Highly Flammable. May vaporize easily at ambient temperatures. The vapor is heavier than air and may create an explosive mixture of vapor and air. Beware of accumulation in confined spaces and low lying areas. Open container slowly to relieve any pressure. The use of explosion-proof electrical equipment is recommended and may be required (see appropriate fire codes). Refer to NFPA-70 and/or API RP 2003 for specific bonding /grounding requirements. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames.

Static Accumulation Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding of tanks, transfer piping, and storage tank level floats are necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. Special care should be given to ensure that special slow load procedures for "switch loading" are followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil or diesel) is loaded into tanks previously containing low flash point products (such as gasoline or naphtha). For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'

Conditions for safe storage: Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Store only in approved containers. Post area "No Smoking or Open Flame." Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes. "Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

8. Exposure Controls / Personal Protection

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Wear as appropriate:

Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Hand protection : Solvent-resistant gloves. Gloves must be inspected prior to use. Replace when worn.

Skin and body protection : Wear as appropriate: Solvent-resistant apron and boots
Flame retardant antistatic protective clothing If splashes are likely to occur, wear: Protective suit

Respiratory protection : In the case of vapor formation use a respirator with an approved filter. For rescue and maintenance work in storage tanks use self-contained breathing apparatus. Use NIOSH approved respiratory protection.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Other Suggested Equipment: Eye wash station and emergency showers should be available. Spill containment equipment should be available.

Discretion Advised: Chemical Solvents Inc. takes no responsibility for determining what measures are required for personal protection in any specific application. The general information should be used with discretion.

Exposure Guidelines

Heptane, Branched, Cyclic and Linear

ACGIH TWA: 400 ppm STEL: 500 ppm (As n-Heptane)

OSHA TWA: 500 ppm (As n-Heptane)

9. Physical and Chemical Properties

Physical state Liquid. [Mobile liquid.]

Melting point Not available.

Vapor pressure 6 kPa (45 mm Hg) [room temperature]

Relative density 0.708
Vapor density Not available
Solubility Insoluble in the following materials: cold water and hot water
Odor Characteristic. Hydrocarbon.
PH Not available.
Color Clear. Colorless.
Evaporation rate 4.24 (butyl acetate = 1)
Auto-ignition temperature Not available.
Decomposition temperature : Not available
Flash point Closed cup: 14°F [Tagliabue.]
Viscosity Kinematic (40°C (104°F)): <0.01 cm²/s (<1 cSt)
Odor threshold Not available.
Partition coefficient: noctanol/water Not available.
Boiling point : 90.556 to 97.778°C (195 to 208°F)
Evaporation rate 4.24 (butyl acetate = 1)

10. Stability and Reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients

Chemical stability The product is stable.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological Information

Heptane, Branched, Cyclic and Linear

Aspiration Hazard: May be fatal if swallowed and enters airways.

Skin Corrosion/Irritation: Causes skin irritation. Repeated exposure may cause skin dryness or cracking.

Serious Eye Damage/Irritation: Causes mild eye irritation.

Signs and Symptoms: Overexposure to vapors may result in respiratory tract irritation, coughing, nausea, headaches, vomiting, and CNS depression.

Skin Sensitization: No information available.

Respiratory Sensitization: No information available.

Specific Target Organ Toxicity (Single Exposure): May cause drowsiness and dizziness.

Specific Target Organ Toxicity (Repeated Exposure): Inadequate information available.

Carcinogenicity: No information available.

Germ Cell Mutagenicity: Inadequate information available.

Reproductive Toxicity: Inadequate information available.

LC50 Inhalation Dusts and mists Rat >5.2 mg/l 4 hours

LD50 Dermal Rabbit >2000 mg/kg -

LD50 Oral Rat 5.17 g/kg

Skin - Edema Rabbit 1.89

Other Comments: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage (sometimes referred to as Solvent or Painters' syndrome). Intentional misuse by deliberately concentrating and inhaling this material may be harmful or fatal.

12. Ecological Information

Acute EC50 1 to 10 mg/l Algae 72 hours
Acute EC50 1 to 10 mg/l Daphnia 48 hours
Acute LC50 1 to 10 mg/l Fish 96 hours
Chronic NOEL 2.6 mg/l Daphnia 21 days
Chronic NOEL 2.6 mg/l Fish 14 days

13. Disposal Considerations

Dispose of spilled material in accordance with state and local regulations for waste that is non-hazardous by Federal definition. Note that this information applies to the material as manufactured; processing, use, or contamination may make this information inappropriate, inaccurate, or incomplete.

Note that this handling and disposal information may also apply to empty containers, liners and rinsate. State or local regulations or restrictions are complex and may differ from federal regulations. This information is intended as an aid to proper handling and disposal; the final responsibility for handling and disposal is with the owner of the waste.

14. Transport Information

UN1206, HEPTANES, 3, PGII EMERGENCY GUIDE # 128

15. Regulatory Information

Environmental Regulations

SARA 311:

Acute health:	Yes	Chronic health:	Yes
Fire:	Yes	Sudden release of pressure:	No
Reactive:	No		

U.S. Federal regulations TSCA 8(a) CDR Exempt/Partial exemption: Not determined

All components are listed or exempted.

Clean Air Act Section 112

(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals): Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed Check with your local regulators to be sure all local regulations are met.

SARA 304 RQ : Not applicable.

SARA 313 traces: cyclohexane 110-82-7

16. Other Information

Hazard ratings This information is intended solely for the use of individuals trained in the NFPA and/or HMIS systems.

NFPA: Health: 2 Flammability: 3 Reactivity: 0

HMIS: Health: 2 Flammability: 3 Reactivity: 0

RATING: 4-EXTREME 3-HIGH 2-MODERATE 1-SLIGHT 0-INSIGNIFICANT

Note:

For industrial use only. The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. Plastic Process Equipment, Inc makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances. Effects can be aggravated by other materials and/or this material may aggravate or add to the effects of other materials. This material may be released from gas, liquid, or solid materials made directly or indirectly from it. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards. Possession of an MSDS does not indicate that the possessor of the MSDS was a purchaser or user of the subject product. 1/30/2019