

SAFETY DATA SHEET

1. Product and Company Identification

Product Name: HMC01, HMC05, HMC55
Product Code: HMC55
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:** (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 Includes (n-Heptane)	426260-76-6 142-82-5	60-70%
Toluene	108-88-3	15-25%
Acetone	67-64-1	10-20%

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

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Eye/Face Protection: The use of eye protection that meets or exceeds ANSI Z.87.1 is recommended to protect against potential eye contact, irritation, or injury. Depending on conditions of use, a face shield may be necessary.

Skin/Hand Protection: The use of gloves impervious to the specific material handled is advised to prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products. Suggested protective materials: Nitrile

Respiratory Protection: Where there is potential for airborne exposure above the exposure limit a NIOSH certified air purifying respirator equipped with organic vapor cartridges/canisters may be used. A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health (IDLH).

Other Protective Equipment: Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before reuse.

Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

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

Chemical Name	ACGIH	OSHA
n-Heptane	TWA-8hr: 400 ppm Heptane, all isomers TWA-8hr: 400 ppm STEL: 500 ppm Heptane, all isomers STEL: 500 ppm	TWA-8hr: 500 ppm TWA-8hr: 2000 mg/m3
Toluene	TWA-8hr: 20 ppm	TWA-8hr: 200 ppm Ceiling: 300 ppm
Acetone	ACGIH 15 min STEL 750 ppm ACGIH 8 hr TWA 500 ppm OSHA 8 hr TWA 1,000 ppm	

9. Physical and Chemical Properties

Appearance: Colorless
Physical Form: Liquid
Odor: Mild
Odor Threshold: No data

Flash Point: 15 °F / -9 °C
Test Method: Tag Closed Cup (TCC), ASTM D56
Initial Boiling Point/Range: 190 °F / 88 °C
Vapor Pressure: 2.3 psia (Reid VP) @ 100°F / 37.8°C

pH: Not applicable	Partition Coefficient (n-octanol/water) (Kow): No data
Vapor Density (air=1): 3.50	Melting/Freezing Point: No data
Upper Explosive Limits (vol % in air): 6.7	Auto-ignition Temperature: No data
Lower Explosive Limits (vol % in air): 1.2	Decomposition Temperature: No data
Evaporation Rate (nBuAc=1): >1	Specific Gravity (water=1): 0.697 @ 60°F (15.6°C)
Particle Size: Not applicable	Bulk Density: 5.81 lbs/gal
Percent Volatile: 100%	Viscosity: 0.83 cST @ 100°F (37.8°C)
Flammability (solid, gas): Not applicable	Solubility in Water: Negligible

10. Stability and Reactivity

Reactivity: Not chemically reactive.

Chemical stability: Stable under normal ambient and anticipated conditions of use.

Possibility of hazardous reactions: Hazardous reactions not anticipated.

Conditions to avoid: Avoid high temperatures and all sources of ignition. Prevent vapor accumulation.

Incompatible materials: Avoid contact with strong oxidizing agents and strong reducing agents.

Hazardous decomposition products: Not anticipated under normal conditions of use.

11. Toxicological Information

Substance / Mixture

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.

Skin Sensitization: Not expected to be a skin sensitizer.

Respiratory Sensitization: No information available.

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

Specific Target Organ Toxicity (Repeated Exposure): Not expected to cause organ effects from repeated exposure.

Carcinogenicity: No information available on the mixture, however none of the components have been classified for carcinogenicity (or are below the concentration threshold for classification).

Germ Cell Mutagenicity: Not expected to cause heritable genetic effects.

Reproductive Toxicity: Not expected to cause reproductive toxicity.

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.

Information on Toxicological Effects of Components

n-Heptane

Reproductive Toxicity: No evidence of developmental toxicity was found in pregnant laboratory animals (rats and mice) exposed to high vapor concentrations of unleaded gasoline and petroleum naphthas via inhalation. A two-generation reproductive toxicity study of vapor recovery gasoline did not adversely affect reproductive function or offspring survival and development.

Toluene

Carcinogenicity: Exposure of rats and mice to toluene at concentrations ranging from 120-1200 ppm for two years did not demonstrate evidence of carcinogenicity. Toluene has not been listed as a carcinogen by IARC.

Reproductive Toxicity: Exposure to toluene during pregnancy has demonstrated limited evidence of developmental toxicity in laboratory animals. Decreased fetal body weight and increased skeletal variations in both inhalation and oral studies, but only at doses that were

maternally toxic. No fetal toxicity was seen at doses that were not maternally toxic. Decreased sperm counts have been observed in male rats in the absence of a reduction in fertility. Toluene has been reported to cause mental or growth retardation in the children of solvent abusers who directly inhale toluene during pregnancy.

Target Organ(s): Epidemiology studies suggest that chronic occupational overexposure to toluene may damage color vision. Subchronic and chronic inhalation studies with toluene produced kidney and liver damage, hearing loss and central nervous system (brain) damage in laboratory animals. Intentional misuse by deliberate inhalation of high concentrations of toluene has been shown to cause liver, kidney, and central nervous system damage, including hearing loss and visual disturbances.

Acute Toxicity Hazard

		LC50/LD50 Data
Inhalation	Unlikely to be harmful	>20 mg/L (vapor)
Dermal	Unlikely to be harmful	>2 g/kg
Oral	Unlikely to be harmful	>5 g/kg

Acetone.

Acute oral toxicity: LD50: 5,800 mg/kg Species: Rat

Acute inhalation toxicity: LC50: 32000 ppm Exposure time: 4 h Species: Rat

Acute dermal toxicity: LD50: > 7,426 mg/kg Species: Guinea pig

Skin irritation: Species: Rabbit Result: Mild skin irritation Exposure time: 24 h

Eye irritation: Species: Rabbit Result: irritating Method: Draize Test

Repeated dose toxicity:

Species: Rat NOEL: 19000 ppm

Note: 8-Week Inhalation Toxicity Study 5 days/week for 8 weeks Slightly reduced weight gain compared to controls:

Species: Rat NOEL: 100 mg/kg

Note: 90-Day Oral Toxicity Study increased liver and kidney weights

Species: Rat Lowest observed effect level: 500 mg/kg

Note: 90-Day Oral Toxicity Study increased liver and kidney weights

12. Ecological Information

Toxicity: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Persistence and Degradability: Heptane is expected to biodegrade in soil based on 100% degradation after 4 and 25 days in screening tests using gasoline contaminated soil and activated sewage sludge, respectively. Based on 100% degradation within 25 days during aerobic biodegradation screening tests, heptane is expected to biodegrade in natural water. Not expected to persist in the environment if spilled or released.

Bioaccumulative Potential: An estimated BCF of 2,000 suggests the potential for bioconcentration in aquatic organisms is very high.

Mobility in Soil: If released to soil, heptane is expected to have no mobility based upon an estimated Koc of 8,200. If released into water, heptane is expected to adsorb to suspended solids and sediment. Expected to have low mobility in soil and sediments with adsorption being the predominant physical process.

Other adverse effects: None anticipated.

13. Disposal Considerations

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal

regulations. This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste. However, it would likely be identified as a federally regulated RCRA hazardous waste for the following characteristic(s) shown below. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the SDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste. Container contents should be completely used and containers should be emptied prior to discard. Container residues and rinseates could be considered to be hazardous wastes.

EPA Waste Number(s) • D001 - Ignitability characteristic

14. Transport Information

UN1993, Flammable Liquids, N.O.S., 3, PGII EMERGENCY GUIDE # 128

15. Regulatory Information

Environmental Regulations

CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds)

This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

CERCLA/SARA - Section 311/312 (Title III Hazard Categories)

US EPA has published a final rule aligning hazardous chemical reporting under sections 311 and 312 of the Emergency Planning and Community Right-to-Know Act (EPCRA) with OSHA HCS. See Section 2 for hazard classifications under EPCRA.


CERCLA/SARA - Section 313 and 40 CFR 372

This material contains the following chemicals subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR 372: Toluene 20%,

EPA (CERCLA) Reportable Quantity (in pounds)

Acetone RQ= 5000#

California Proposition 65

 **WARNING.** This product can expose you to chemicals including Acetaldehyde (75-07-0) Benzene (CASRN 71-43-2) and Cumene (98-82-8) which is known to the State of California to cause cancer, and Benzene (CASRN 71-43-2), Methanol (67-56-1) and Toluene (CASRN 108-88-3) which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

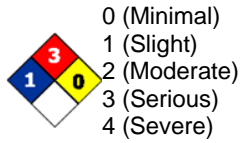
International Inventories

All components are either listed on the US TSCA Inventory, or are not regulated under TSCA. All components are either on the DSL, or are exempt from DSL listing requirements.

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: 1 Flammability: 3 Instability: 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