

SAFETY DATA SHEET

1. Product and Company Identification

Product Name: MCB 55

Chemical Type: Solvent Blend

Manufacturer: Plastic Process Equipment Inc.

Revision Date: 6/17/2015

Address: 8303 Corporate Park Dr.
Macedonia, Ohio 44056

Emergency: Chemtrec (800)424-9300

Phone: (800) 362-0693

NOTE: 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 provides this information as guidance for providing personal protection to your employees. The user should review the original manufacturer's MSDS and recommendations. The user has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. The user must meet all applicable safety and health standards.

2. Hazards Identification

Signal Word: DANGER

MAJOR HEALTH HAZARDS: HARMFUL IF INHALED. MAY CAUSE DROWSINESS OR DIZZINESS. MAY BE HARMFUL IF SWALLOWED. MAY BE HARMFUL IF SWALLOWED AND ENTERS AIRWAYS. MAY BE HARMFUL IN CONTACT WITH SKIN. CAUSES SKIN IRRITATION. CAUSES EYE IRRITATION. CAUSES DAMAGE TO CENTRAL NERVOUS SYSTEM (CNS), LIVER, RESPIRATORY SYSTEM. MAY CAUSE DAMAGE TO CENTRAL NERVOUS SYSTEM (CNS), LIVER, KIDNEY, RESPIRATORY SYSTEM THROUGH PROLONGED OR REPEATED EXPOSURE. MAY CAUSE CANCER.

AQUATIC TOXICITY: TOXIC TO AQUATIC LIFE WITH LASTING EFFECTS.

PRECAUTIONARY STATEMENTS: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist, vapors, or spray. Use with adequate ventilation and wear respiratory protection when exposure to dust, mist, or spray is possible. Use only outdoors or in a well-ventilated area. Avoid contact with eyes, skin and clothing. Wear protective gloves, protective clothing, eye, and face protection. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment.

2.1 Classification of the substance or mixture

GHS CLASSIFICATION:

GHS: CONTACT HAZARD - SKIN: Category 2 - Causes skin irritation.

GHS: CONTACT HAZARD - EYE: Category 2B - Causes eye irritation

GHS: ACUTE TOXICITY - INHALATION: Category 4 - Harmful if inhaled

GHS: ASPIRATION HAZARD: Category 2 - May be harmful if swallowed and enters airways

GHS: TARGET ORGAN TOXICITY (SINGLE EXPOSURE):

Category 1 - Causes damage to Central Nervous System (CNS), Liver, Respiratory System

GHS: TARGET ORGAN TOXICITY (SINGLE EXPOSURE):

Category 3 - May cause drowsiness or dizziness

GHS: TARGET ORGAN TOXICITY (REPEATED EXPOSURE):
Category 2 - May cause damage to Liver, Kidney, Central Nervous System (CNS), Respiratory System through prolonged or repeated exposure
GHS: CARCINOGENICITY: Category 1B - May cause cancer.
GHS: HAZARDOUS TO AQUATIC ENVIRONMENT – ACUTE HAZARD:
Category 2 - Toxic to aquatic life
GHS: HAZARDOUS TO AQUATIC ENVIRONMENT – CHRONIC HAZARD:
Category 2 - Toxic to aquatic life with long lasting effects

GHS-Labeling
Symbol(s) :



Signal Word: Danger

Hazard statement(s)

May be harmful if swallowed and enters airways
Harmful if inhaled
May cause drowsiness or dizziness
Causes eye irritation
Causes skin irritation
Causes damage to organs : (Central Nervous System (CNS), Liver, Respiratory System)
May cause damage to organs through prolonged or repeated exposure: (Central Nervous System (CNS), Liver, Kidney, Respiratory System)
May cause cancer
Toxic to aquatic life
Toxic to aquatic life with long lasting effect

Precautionary statement(s)

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Do not breathe mist, vapors, or spray
Use only outdoors or in a well-ventilated area
Wear eye protection, face protection, protective gloves
Use personal protective equipment as required
Wash thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid release to the environment
IF INHALED: Remove person to fresh air and keep comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash it before reuse
IF exposed or concerned: Get medical advice/attention
Get medical advice/attention if you feel unwell
Collect spillage. Hazardous to the aquatic environment
Store in a well-ventilated place. Keep container tightly closed

Store locked up

Dispose of contents and container in accordance with applicable local, regional, national, and/or international regulations

NOTICE: Reports have associated repeated and prolonged OVEREXPOSURE to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents of this package may be harmful or fatal.

3. Composition / Information on Ingredients

MATERIAL	CAS#	WT %
Tetrachloroethylene	127-18-4	80-90
Toluene	108-88-3	5-15%
Acetone	67-64-1	0-5%

4. First Aid Measures

INHALATION: If inhaled and adverse effects occur, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician. See Notes to Physician below and Section 11 for more information.

SKIN CONTACT: If on skin, wash with plenty of water. If skin irritation occurs: Get medical advice/ attention. Take off contaminated clothing and wash before reuse. See Notes to Physician below and Section 11 for more information.

EYE CONTACT: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. If eye irritation persists: Get medical advice/attention.

INGESTION: If swallowed, rinse mouth with water (only if the person is conscious). Never give anything by mouth to an unconscious or convulsive person. If feeling unwell, contact a poison center or doctor.

Acute Symptoms/Effects: Listed below.

Inhalation (Breathing): Respiratory System Effects: Central Nervous System (CNS) effects are characteristic following inhalation of chlorinated hydrocarbons and can range from lightheadedness at low level exposures to loss of consciousness at high levels. CNS effects are an early warning that exposure to high levels has occurred and there is risk of cardiac effects (palpitations, low blood pressure, arrhythmia, arrest). CNS effects include the following symptoms: abdominal pain, nausea, vomiting, headache, lightheadedness, blurry or double vision, personality changes, weakness, slurred speech, stupor, incoordination (disequilibrium, ataxia), coma, and respiratory arrest. May irritate upper airways.

Skin: Skin Irritation. Skin exposure may cause irritation, rough red, dry skin, edema, blisters.

Eye: Eye Irritation. Eye exposure may cause irritation, tearing, pain, conjunctivitis, clouding of cornea.

Ingestion (Swallowing): Ingesting this material may cause gastrointestinal irritation, nausea, vomiting, headache, breathing difficulty, reduced blood pressure, weak and rapid pulse, Central Nervous System (CNS) depression, and Central Nervous System (CNS) symptoms such as sedation, headache, tremor, nystagmus and memory problems. Ingestion may cause unconsciousness and death.

Other Health Effects: Most people can smell perchloroethylene at levels of 5-50 ppm (OSHA PEL is 100 ppm). Odor is an adequate warning for high dose acute exposures, but might not be adequate for prolonged exposure due to olfactory fatigue. Vapors are heavier than air, can collect in low lying areas and cause asphyxiation. CNS effects have been observed at exposures of 100 to 300 ppm. Exposures of 1000 to 1500 ppm for less than 2 hours have caused symptoms of

mood changes, slight ataxia, faintness and dizziness. Exposure to higher concentrations for longer periods can lead to collapse, coma, or death.

Delayed Symptoms/Effects:

- Respiratory System Effects: May cause chemical or irritant induced asthma or bronchoconstriction. May cause a chemical pneumonitis. Reduced renal output (oliguria), elevation of liver enzymes, to renal failure and liver failure
- May cause effects to the skin such as chronic dermatitis, dermal hypersensitivity
- May cause eye damage such as corneal damage, decreased vision
- May cause delayed liver and kidney effects
- Prolonged exposures may result in memory and concentration impairment, vision disturbances, dizziness, irritability, ataxia (difficulty walking), and peripheral neuropathy

Interaction with Other Chemicals Which Enhance Toxicity: May potentiate other agents that cause Central Nervous System (CNS) depression and respiratory system depression. Liver toxicity may be enhanced by other agents that cause liver damage, such as alcohol, acetaminophen. Catecholamine administration MAY pose increased risk of cardiac arrhythmias.

Medical Conditions Aggravated by Exposure: May increase potential for cardiac arrhythmia. Liver disorders, kidney disorders, respiratory system disorders.

Protection of First-Aiders: Protect against vapor/gas exposure. Do not breathe gas, fumes, vapor, mist, or spray. Avoid contact with skin and eyes. Use personal protective equipment. Refer to Section 8 for specific personal protective equipment recommendations. Consider the possibility of high levels of gas in confined/unventilated spaces or low-lying areas.

Notes to Physician: There is no antidote for perchloroethylene poisoning. Treatment consists of support of respiratory and cardiovascular functions. Catecholamine administration after exposure to this compound MAY pose enhanced risk of cardiac arrhythmia. For ingestion, nasogastric aspiration is recommended if volume ingested is of sufficient volume to aspirate. Protect the airway. Epinephrine and other sympatomimetic amines may initiate cardiac arrhythmias in individuals exposed and experiencing symptoms from this material. Absorption from skin is slow, and unless prevented from evaporating, systemic toxicity is unlikely. This compound is absorbed rapidly by oral administration and causes similar effects to inhalation exposure. Activated charcoal may be administered. Liver injury may be delayed several days after exposure.

5. Fire Fighting Measures

Fire Hazard: Negligible fire hazard.

Extinguishing Media: Use media appropriate for surrounding fire.

Fire Fighting: Avoid inhalation of material or combustion by-products. Wear NIOSH approved positive-pressure self-contained breathing apparatus. Stay upwind and keep out of low areas. Move container from fire area if it can be done without risk. Cool containers with water from unmanned hose holder or monitor nozzles until well after the fire is out. Flood with fine water spray. Do not scatter spilled material with high-pressure water streams. Keep water runoff out of water supplies and sewers

Hazardous Combustion Products: Thermal decomposition or combustion products: hydrogen chloride, chlorine, phosgene, oxides of carbon

Sensitivity to Mechanical Impact: Not sensitive.

Sensitivity to Static Discharge: Not sensitive.

Lower Flammability Level (air): Not flammable

Upper Flammability Level (air): Not flammable

Flash point: Not flammable

Auto-ignition Temperature: Not applicable

6. Accidental Release Measures

Spill or Leak Instructions

Personal precautions : Use personal protective equipment. Ensure adequate ventilation.

Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions : Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations

7. Handling and Storage

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

Precautions for Safe Handling:

Most vapors are heavier than air and will spread along ground and collect in low or confined areas (drains, basements, tanks). Use only in well-ventilated areas. Avoid breathing vapor, mist, or spray. Avoid contact with skin, eyes and clothing. Wear personal protective equipment as described in Exposure Controls/Personal Protection (Section 8) of the SDS. Do not taste or swallow. Wash thoroughly after handling. Do not eat, drink or smoke in areas where this material is used.

Safe Storage Conditions:

Store and handle in accordance with all current regulations and standards. Keep container properly labeled and tightly closed. Store in a cool, dry area. Store in a well-ventilated area. Store away from open flames, and combustibles. Do not enter confined spaces without following proper confined space entry procedures. Do not store in aluminum container or use aluminum fittings or transfer lines. Protect from sunlight. Do not reuse drum without recycling or reconditioning in accordance with any applicable federal, state or local laws. Do not use cutting or welding torches, open flames or electric arcs on empty or full containers. Keep separated from incompatible substances (see below or Section 10 of the Safety Data Sheet).

Incompatibilities/ Materials to Avoid:

acids. bases. Strong oxidizing agents. Oxygen. Peroxides. Reactive metals. aluminum.

8. Exposure Controls / Personal Protection

Exposure guidelines:

Name	ACGIH	OSHA
tetrachloroethylene	TWA 25 ppm STEL 100 ppm	100 ppm Z 300 ppm Z A
Toluene	TLV- 50 ppm	(TWA)- 200 ppm
Acetone	(TLV)- 500 ppm	(TWA)- 1000 ppm

PEL= Permissible Exposure Limits
TLV= Threshold Limit Value
EL= Excursion Limit

TWA= Time Weighted Average (8 hr.)
STEL= Short Term Exposure Limit (15 min.)
WEEL= Workplace Environmental Exposure Level

Recommended monitoring procedures: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

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.

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.

Respiratory: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eyes: 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 or dusts.

Skin: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls: 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.

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

Discretion Advised: Plastic Process Equipment 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.

9. Physical and Chemical Properties

Physical state Volatile liquid

Color: Colorless

Odor Threshold [ppm]: 50 ppm (may cause olfactory fatigue).

Boiling Point/Range: 250 °F (121 °C)

Appearance: Clear liquid

Odor: Mildly sweet odor,

Freezing Point/Range: -2 °F (-19 °C).

Vapor Pressure: 13 mmHg @ 20 °C
Relative Density/Specific Gravity (water=1): 1.62 @ 25°C
Water Solubility: 0.015%
Volatility: 100%
Partition Coefficient (n-octanol/water): 2.88
Flammability (solid, gas): Not flammable
Upper Flammability Level (air): Not flammable
Viscosity: No data available

Vapor Density (air=1): 5.8
pH: No data available
Evaporation Rate (ether=1): 0.1 (ether=1)
Flash point: Not flammable
Lower Flammability Level (air): Not flammable
Auto-ignition Temperature: Not applicable

10. Stability and Reactivity

Conditions to avoid: Keep away from ignition sources such as heat/sparks/open flame. - No smoking. When exposed to high temperatures may produce hazardous decomposition products. When this product is involved in fires, it can decompose to hydrogen chloride and possible traces of phosgene.

Materials to avoid: Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids. Avoid contamination with caustic soda, caustic potash or oxidizing materials. Shock sensitive compounds may be formed.

Hazardous decomposition products: Depending on conditions, decomposition products may include the following materials: carbon monoxide, carbon dioxide, Hydrogen chloride (HCl). Phosgene gas.

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

11. Toxicological Information

COMPONENT INFORMATION

PRODUCT TOXICITY DATA: Perchloroethylene,

COMPONENT TOXICITY DATA:

Note: The component toxicity data is populated by the LOLI database and may differ from the product toxicity data given.

Component LD50 Oral: LD50 Dermal: LC50 Inhalation:

Tetrachloroethylene [Perc] 127-18-4 2629 mg/kg (Rat) 2800 mg/kg (Mouse) 27.8 mg/L (4 hr-Rat)
Carbon Tetrachloride 56-23-5 2350 mg/kg (Rat) 5070 mg/kg (Rat) 8000 ppm (4 hr-Rat)

Summary of Toxicity Studies:

Single-dose LD50 values of 3835 and 3005 mg/kg were determined for male and female rats by gavage. Death occurred within 24 hours after dosing and was preceded by tremors, ataxia, and CNS depression. Congestion of the lungs was reported in rats exposed intermittently to 1600 ppm for 13 weeks. In mice exposed intermittently at 100 ppm for 103 weeks, acute passive congestion of the lungs was observed. In animals, hypertrophy, fatty degeneration, and peroxisome proliferation characterize liver effects. Kidney effects, including cancer, have been noted in animals, predominantly male rats. The mechanism for the development of kidney effects in rats (protein droplet nephropathy) may differ from that in humans. The carcinogenicity of perchloroethylene has been documented in certain strains of mice and rats exposed by inhalation or oral routes. Other long-term inhalation studies in rats failed to show tumorigenic response. Human data are limited and have not established an association between perchloroethylene exposure and cancer. Hepatic effects were not detected in workers exposed up to 20 ppm for up to 10 years; however, in 141 workers exposed at an average concentration of 11.3 ppm, total GGT was significantly increased. Workers exposed for up to 14 years at an estimated TWA of 10

ppm had increased urinary enzyme levels suggestive of mild tubular damage. Forestomach ulcers were observed in male rats exposed to intermittently to 400 ppm orally for 103 weeks. Classification as a carcinogen is largely based on animal evidence.

Acetone

Inhalation. LC50: >50000 mg/m³ – rats – 8 hrs.
Oral LD50: 5.8 g/kg – rats
Skin absorption LD50: 20000 mg/kg – rabbits

Toluene

Toluene contains small amounts of benzene a known carcinogen which may produce blood changes which include reduced platelets, reduced red blood cells, reduced white blood cells, aplastic anemia, and acute nonlymphocytic anemia. Toluene contains small amounts of Ethylbenzene and Xylene, both have been related to fetotoxicity, liver and kidney injury. Exposure of pregnant rats during gestation to toluene at levels of 250 ppm or higher has produced some maternal toxicity and embryo/fetotoxicity. A lifetime inhalation study in rats did not show any toxic effects even at a high dose of 300 ppm. Behavioral signs of hearing loss were observed in rats exposed to toluene subchronically at levels of 1000 ppm or more. Toluene has an IARC rating of 3.

Chemical Name: **BENZENE** CAS: 71-43-2 < 1.0%
0.5 ppm ACGIH TWA
2.5 ppm ACGIH STEL
1 ppm OSHA PEL
5 ppm OSHA CEILING
10 LBS CERCLA 302.4 RQ

Chemical Name: **BENZENE, ETHYL** CAS: 100-41-4 < 1.0%
100 ppm ACGIH TWA
125 ppm ACGIH STEL
100 ppm OSHA PEL
1,000 LBS CERCLA 302.4 RQ

Chemical Name: **Xylene, all isomers** traces
ACGIH (United States).
TWA: 100 ppm 8 hour(s).
STEL: 150 ppm 15 minute(s).
OSHA (United States).
TWA: 100 ppm 8 hour(s).

12. Ecological Information

Environmental effects : This product shows a low bioaccumulation potential. Water polluting material. May be harmful to the environment if released in large quantities.

13. Disposal Considerations

The information in this MSDS pertains only to the product as shipped. Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a

hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product : The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

14. Transport Information

UN NUMBER: UN1897

PROPER SHIPPING NAME: Tetrachloroethylene Solution

HAZARD CLASS/ DIVISION: 6.1

PACKING GROUP: III

Do not ship in containers made of zinc, aluminum, or copper due to product incompatibility

15. Regulatory Information

EPA REGULATION:

Environmental Regulations

Tertiary butyl acetate was excluded from the Federal definition of a VOC (40 C.F.R. § 51.100(s)(5)) by the U.S. Environmental Protection Agency on November 29, 2004 (69 FR 69304). State and local definitions may vary.

SARA 302/304

This material contains a component(s) with known CAS numbers classified as hazardous substances subject to the reporting of CERCLA (40 CFR 302) and/or to the release reporting requirements of SARA (Section 302) based on reportable quantities (RQs).

Component

RQ 100 lbs (Tetrachloroethylene)

SARA 311:

Acute health: Yes

Chronic health: Yes

Fire: No

Sudden release of pressure: No

Reactive: No

SARA 313: Title III of the 1986 Super fund Amendments and Reauthorization Act (SARA) and 40 CFR PART 372. Trichloroethylene 79-01-6, 2-butylene oxide (CAS 106-88-7).

Toluene 108-88-3, Acetone 67-64-1

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer

All the chemicals used in this product are TSCA listed.

Check with your local regulators to be sure all local regulations are met.

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: 0 Reactivity: 0

HMIS: Health: 2* Flammability: 0 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.

Revision Date: 6/17/2015