

1. Product and Company Identification

Product Name	Sigma MP-105
Product Identifier	Thinner MP-105
Recommended uses and Restrictions	Diluent
Manufacturer Data	Sigma Inks (USA) 12800 Brook printer place, Poway, CA 92064 USA Telephone: (888) 424-9300 Website: www.sigmainks.com Contact to the distributor: www.printexusa.com
Emergency Number	Chemtrec (And.Or.): (800) 424-9300 Chemtrec (Out of And.Or.): (703) 527-3887 (Collect call)

2. Hazard Identification

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 3), H226
Acute toxicity, Oral (Category 4), H302
Acute toxicity, Inhalation (Category 4), H332
Acute toxicity, Dermal (Category 4), H312
Skin irritation (Category 2), H315
Serious eye damage (Category 1), H318
Short-term (acute) aquatic hazard (Category 3), H402

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

**Identification of the substance or mix
Pictogram**

Thinner MP-105



Signal Word

Danger

Hazard statement(s)

H226	Flammable liquid and vapor.
H302 + H312 + H332	Harmful if swallowed, in contact with skin or if inhaled.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H402	Harmful to aquatic life.

Precautionary statement(s)

P210	Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P210	Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264	Wash skin thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/ eye protection/ face protection.
P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403 + P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. Composition/information on ingredients

3.1 Substances

Formula	: C6H10O
Molecular weight	: 98.14 g/mol
CAS-No.	: 108-94-1



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EC-No. : 203-631-1
Index-No. : 606-010-00-7

Component	Classification	Concentration
Cyclohexanone	Flam. Liq. 3; Acute Tox. 4; Skin Irrit. 2; Eye Dam. 1; Aquatic Acute 3; H226, H302, H332, H312, H315, H318, H402	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available



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5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Dry powder Dry sand

Unsuitable extinguishing media

Do NOT use water jet.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Combustible.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. 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.

For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided.

6.3 Methods and materials for containment and 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 (see section 13).

6.4 Reference to other sections

For disposal see section 13.

7. Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.
 Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
 For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Storage class (TRGS 510): 3: Flammable liquids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Cyclohexanone	108-94-1	TWA	20 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritation Eye irritation Confirmed animal carcinogen with unknown relevance to humans Danger of cutaneous absorption		
		STEL	50 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Eye irritation Confirmed animal carcinogen with unknown relevance to humans Danger of cutaneous absorption		
		TWA	25 ppm 100 mg/m ³	USA. NIOSH Recommended Exposure Limits



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		Potential for dermal absorption		
		TWA	50 ppm 200 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		The value in mg/m ³ is approximate.		
		PEL	25 ppm 100 mg/m ³	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		

Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Cyclohexanone	108-94-1	1,2- Cyclohexanediol	80 mg/l	Urine	ACGIH - Biological Exposure Indices (BEI)
	Remarks	End of shift at end of workweek			
		1,2-Cyclohexanediol	8 mg/l	Urine	ACGIH - Biological Exposure Indices (BEI)
		End of shift (As soon as possible after exposure ceases)			

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	Form: liquid Color: colorless,
b) Odor	characteristic
c) Odor Threshold	No data available
d) pH	Not Determinate
e) Melting point/freezing point	Melting point/range: -47 °C (-53 °F) - lit.
f) Initial boiling point and boiling range	155 °C 311 °F - lit.
g) Flash point	44 °C (111 °F) - closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Upper explosion limit: 9.4 %(V) Lower explosion limit: 1.1 %(V)
k) Vapor pressure	ca.24 hPa at 50 °C (122 °F) ca.4.5 hPa at 20 °C(68 °F)
l) Vapor density	No data available
m) Relative density	0.947 g/cm ³ at 25 °C (77 °F)
n) Water solubility	ca.90 g/l at 20 °C (68 °F)
o) Partition coefficient: n-octane/water	log Pow: 0.86 at 25 °C (77 °F) - Bioaccumulation is not expected.
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available



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9.2 Other safety information

No data available

10. Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

In the event of fire: see section 5

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male - 1,620 mg/kg

Remarks: (ECHA)

LC50 Inhalation - Rat - male and female - 4 h - > 6.2 mg/l

Remarks: (ECHA)

LD50 Dermal - Rabbit - 1,100 mg/kg

Remarks: (External MSDS)

Skin corrosion/irritation

Name of the product: Thinner MP-105

Version:02 Date of emission: 01/02/2022

Skin - Rabbit

Result: irritating - 4 h

(OECD Test Guideline 404)

Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product.

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Irreversible effects on the eye

Remarks: (ECHA)

Risk of corneal clouding.

Respiratory or skin sensitization

Germ cell mutagenicity

Mutagenicity (mammal cell test):

Result: negative

Ames test

Escherichia coli/Salmonella typhimurium

Result: negative

Carcinogenicity

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

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

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity

Specific target organ toxicity - single exposure

Acute oral toxicity - Stomach/intestinal disorders, Risk of aspiration upon vomiting.,

Aspiration may cause pulmonary edema and pneumonitis.

Acute inhalation toxicity - In high doses:, Irritation symptoms in the respiratory tract.

Specific target organ toxicity - repeated exposure

Aspiration hazard

Additional Information

Repeated dose toxicity - Rat - male and female - Oral - 2,160 h - No observed adverse effect level - 143 mg/kg

RTECS: GW1050000

Prolonged or repeated exposure to skin causes defatting and dermatitis., Cough, Shortness of breath, Headache, Nausea, Vomiting, Incoordination., Inhalation of high concentrations may cause:, Central nervous system depression, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Systemic effects:

After absorption of large quantities: Headache, Salivation, Nausea, Vomiting, Dizziness, narcosis, Coma

The following applies to ketones in general: when vapors/aerosols occur, mucosal irritations, coughing, and dyspnoea after inhalation. The absorption of large quantities leads to: CNS depression (narcosis). Repeated skin contact leads to a degreasing effect, with secondary inflammation possible. Toxic effects on the liver and kidneys cannot be excluded after high doses. The inhalation of droplets may result in the formation of edemas in the respiratory tract. Other dangerous properties can not be excluded. and safety practice.

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

12. Ecological information

12.1 Toxicity

Toxicity to fish	flow-through test LC50 - Pimephales promelas (fathead minnow) -527 - 732 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 800 mg/l - 24 h (DIN 38412)
	EC5 - Protozoa - 573 mg/l - 48 h Remarks: (maximum permissible toxic concentration)(IUCLID)
Toxicity to algae	IC5 - Scenedesmus quadricauda (Green algae) - 370 mg/l - 8 d Remarks: (IUCLID)
	static test EC50 - Chlamydomonas reinhardtii (green algae) - 32.9 mg/l - 72 h Remarks: (ECHA)
Toxicity to bacteria	EC5 - Pseudomonas patina - 180 mg/l - 16 h Remarks: (maximum permissible toxic concentration)(Lit.)
	static test EC50 - activated sludge - > 1,000 mg/l - 30 min (OECD Test Guideline 209)

12.2 Persistence and degradability

Biodegradability

Aerobic - Exposure time 14 d
 Result: 87 % - Readily biodegradable.

(MITI test)
 Aerobic - Exposure time 28 d
 Result: 90 - 100 % - Readily biodegradable.
 (OECD Test Guideline 301F)

Theoretical oxygen demand

2,608 mg/g
 ((Calculated))
 Remarks: (Lit.)

12.3 Bioaccumulative potential

12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
 Harmful to aquatic life.

13. Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. Transport information

<p>DOT (US) UN number: 1263 Paint related material Class: 3 Proper shipping name: Paint related Material Reportable Quantity (RQ): 5000 lbs Reportable Quantity (RQ): 100 lbs</p>	<p>Packing group: III</p>	
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Poison Inhalation Hazard: No		
IMDG UN number: 1263 Class: Proper shipping name: Paint related Material	Packing group: III	3 EMS-No: F-E, S-D
IATA UN number: 1263 Class: 3 Proper shipping name: Paint related Material	Packing group: III	

15. Regulatory information

SARA 302 Components

This material does not contain any components with a section 302 EHS TPQ.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

:

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

California Prop 65. Components

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

16. Another information

Additional information

The information and recommendations in this safety sheet with, to our best know and understand, precise to the date of his expedition. At all of the here included will have to be considered to create guarantee, expresses or implicit and will not establish contractual relation legally validates. It is responsibility of the user determine the applicability of this information and the suitability of the material or product for any purpose in particular.