Sigma Ink Inc.
12800 Brookprinter Place
Poway Ca, 92064

SAFETY DATA SHEET

1. Product and Company Identification

Name of the product	Sigma MP-206
Identifier of the product	MP-206
Uses recommended and restrictions	Ink Series MP for Print with pad
Data of the manufacturer	Sigma Inks (USA) 12800 Brookprinter place, Poway, CA 92064 USA Telephone: (888) 424-9300 Website: www.sigmainks.com Contact to the distributor: www.printexusa.com
Number of emergencies	Chemtrec (And.Or.): (800) 424-9300 Chemtrec (Out of And.Or.): (703) 527-3887

2. Hazard Identification

2.1 Classification of the substance or mixture

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

Flammable liquids (Category 4), H227
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336
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 MP-206

Pictogram

Signal word Warning

Hazard statement(s)

H227	Combustible liquid.
H351	Suspected of causing cancer.
H226	Flammable liquid and vapor.
H336	May cause drowsiness or dizziness.
H402	Harmful to aquatic life.

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
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.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/ eye protection/ face protection.
P304 + P340 + P312	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P303 + P361 + P353	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P370 + P378	In case of fire: Use dry sand, dry chemical, or alcohol-resistant foam to extinguish.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

3. Composition/information on Ingredients

Chemical identity of the substance	Common or synonymous name	CAS Number	Impurities and additives	Percentage
Xylene	Xylene	1330-20-7	-	40-70 %
n-butyl Acetate	n-butyl acetate	123-86-4	-	15-35 %

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

Flush eyes with water as a precaution.

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.

5. Fire-Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide, dry powder, and dry sand.

Unsuitable extinguishing media

Do NOT use water jet.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Sulphur oxides

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. 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). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. Handling and storage

7.1 Precautions for safe handling

Avoid inhalation of vapor or mist.
Keep away from sources of ignition - No smoking. Take measures to prevent the buildup 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): 10: Combustible 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
n-Butyl acetate	123-86-4	TWA	150 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritation Eye irritation Adopted values or notations enclosed are those for which changes are proposed in the NIC See Notice of Intended Changes (NIC)		
		STEL	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Eye irritation Adopted values or notations enclosed are those for which changes are proposed in the NIC See Notice of Intended Changes (NIC)		
		TWA	150 ppm 710 mg/m3	USA. NIOSH Recommended Exposure Limits
		ST	200 ppm 950 mg/m3	USA. NIOSH Recommended Exposure Limits
		TWA	150 ppm 710 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		The value in mg/m3 is approximate.		
		PEL	150 ppm 710 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		STEL	200 ppm 950 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		TWA	50 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Eye irritation		

		STEL	150 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation Eye irritation		
Xylene	1330-20-7	STEL	150 ppm 655 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		C	300 ppm	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		PEL	100 ppm 435 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		TWA	100 ppm 435 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	Remarks	The value in mg/m3 is approximate.		
		TWA	100 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Central Nervous System impairment Upper Respiratory Tract irritation Eye irritation Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Not classifiable as a human carcinogen		
		STEL	150 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Central Nervous System impairment Upper Respiratory Tract irritation Eye irritation Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Not classifiable as a human carcinogen		

Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Xylene	1330-20-7	Methylhippuric acids	1.5g/g creatinine	Urine	ACGIH – Biological Exposure Indices (BEI)
	Remarks	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

Face shield and safety glasses 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

Physical state and appearance	Viscous Liquid
Color	Transparent Yellow
Odor	Characteristic
Odor Threshold	Value no determinate
Potential of hydrogenate pH	Value no determinate
Melting point / freezing point	Value no determinate
Initial point and interval of ebullition	135 °C (275 °F)
Flashpoint	27 °C (80 °F)
Evaporation Rate	Value no determinate
Inflammable	It does not apply.
You limit upper/inferior of inflammable or explosive	1.1 % Vol. Inferior
	10.8 % Vol. Upper
Vapor Pressure	5 hPa (4 mmHg) @ 20°C (68 °F)
Vapor Density	Value no determinate

Relative density	0.945-0.965
Density	0.9535 g/cm3 @ 20.0 °C
Solubility	No miscible. Difficult to mix.
Partition Coefficient	Without available data
Auto-ignition Temperature	290 °C (554 °F)
Thermal decomposition	Value no determinate
Viscosity	Value no determinate
Molecular weight	Value no determinate
VOC	77.0%
Other data	NO additional information.

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

Vapors may form explosive mixture with air.

10.4 Conditions to avoid

Heat, flames, and sparks.

10.5 Incompatible materials

Strong oxidizing agents, Strong reducing agents, Strong bases

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 - female - 3,523 mg/kg (EC Directive 92/69/EEC B.1 Acute Toxicity (Oral)) Remarks: (ECHA) LC50 Inhalation - Rat - male - 4 h - 29 mg/l (Regulation (EC) No. 440/2008, Annex, B.2) Remarks: (Regulation (EC) No 1272/2008, Annex VI) LD50 Dermal - Rabbit - male - 12,126 mg/kg

	No data available No data available
Skin corrosion/irritation	Skin - Rabbit Result: Moderate skin irritation - 24 h Remarks: (IUCLID) Drying-out effect resulting in rough and chapped skin. After long-term exposure to the chemical: Dermatitis
Serious eye damage/eye irritation	Eyes - Rabbit Result: Causes serious eye irritation. - 24 h Remarks: (RTECS)
Respiratory or skin sensitization	Local lymph node assay (LLNA) - Mouse Result: negative (OECD Test Guideline 429)
Germ cell mutagenicity	Mutagenicity (mammal cell test): chromosome aberration. Chinese hamster ovary cells Result: negative (National Toxicology Program) Ames test Salmonella typhimurium Result: negative sister chromatid exchange assay Chinese hamster ovary cells Result: negative OECD Test Guideline 478 Mouse - male and female Result: negative
Carcinogenicity	This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification. 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	No data available
Specific target organ toxicity - single exposure	May cause drowsiness or dizziness. - Central nervous system Acute oral toxicity - Gastrointestinal disturbance, risk of aspiration upon vomiting. Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Possible, Aspiration may cause pulmonary oedema and pneumonitis. Damages: damage of respiratory tract, Inhalation may lead to the formation of oedemas in the respiratory tract.
Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	May be fatal if swallowed and enters airways.

Additional Information	Repeated dose toxicity - Rat - male and female - Oral - 90 d - No observed adverse effect level - 150 mg/kg - Lowest observed adverse effect level - 150 mg/kg RTECS: Not available Blurred vision, Incoordination., Headache, Nausea, Vomiting, Dizziness, Weakness, anemia, Prolonged or repeated exposure to skin causes defatting and dermatitis. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

12. Ecological Information

12.1 Toxicity

Toxicity to fish	flow-through test LC50 - *Pimephales promelas* (fathead minnow) – 18 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - *Daphnia magna* (Water flea) - 44 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae static	test ErC50 - *Pseudokirchneriella subcapitata* (green algae) - 397 mg/l - 72 h (OECD Test Guideline 201) Remarks: (in analogy to similar products)
Toxicity to bacteria	static test IC50 - *Tetrahymena pyriformis* - 356 mg/l - 40 h Remarks: (ECHA)

12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 28 d Result: 83 % - Readily biodegradable. (OECD Test Guideline 301D)
Theoretical oxygen demand	2,207 mg/g Remarks: (Lit.)
Ratio BOD/ThBOD	7- 46 % Remarks: (Lit.)

12.3 Bio accumulative potential

No data available

12.4 Mobility in soil

No data available

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.
Discharge into the environment must be avoided.

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

No. UN	1263
Official definition of transport of the UN	Paint related material
Class	3
Group of container/packaging	III
Environmental risks	No applicable.
Special cautions for the user	Caution: flammable liquid.
Transport to gravel	No applicable.

15. Regulatory information

Disposals specify

SARA 355 (substances extremely dangerous)
None of the ingredients are listed

SARA 313
None of the ingredients are listed

TSCA (Law of Control of Toxic Substances)
763-69-9 Ethyl 3-etoxipropionato
108-94-1 Cyclohexanone
108-65-2 2-metoxy-1-acetate of methyl ethyl
763-69-9 Ethyl 3-etoxipropionate

Proposition 65.
Chemists that knows that they cause cancer
None of the ingredients are listed

Chemists that knows that they cause reproductive toxicity in women
None of the ingredients are listed.

Chemists that knows that cause reproductive toxicity in humans
None of the ingredients are Listed.

Chemists that knows that causing developing toxicity
None of the ingredients are listed

Categories cancerogenic

EPA (Agency of environmental Protection)
Any of the ingredients this enlisted.

TLV (Value Limit of Threshold Established by ACGIH)

NIOSH-Ca (National institute for the Health and Labor Security)
Any of the ingredients this enlisted.

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 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.