

MPS Series

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : MPS Series

1.2. Relevant identified uses of the substance or mixture and uses advised against

Solvent based ink for POS

1.3. Details of the supplier of the safety data sheet

Polymeric Imaging
117 East 14th Avenue
North Kansas City, MO 64116 - United States
T 816-221-5567

1.4. Emergency telephone number

Emergency number : CHEMTREC: 800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Flam. Liq. 2	H226 - Flammable liquid and vapor
Acute Tox. 4 (Inhalation:dust,mist)	H332 - Harmful if inhaled
Muta. 1B	H340 - May cause genetic defects
Carc. 1B	H351 - Suspected of causing cancer (single component)

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H226 - Flammable liquid and vapor
H332 - Harmful if inhaled
H340 - May cause genetic defects
H351 - Suspected of causing cancer (single component)

Precautionary statements (GHS-US) : 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
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P308+P313 - If exposed or concerned: Get medical advice/attention
P312 - Call a poison center/doctor if you feel unwell
P403+P235 - Store in a well-ventilated place. Keep cool
P501 - Dispose of contents to approved waste container

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

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Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
2-butoxyethylacetate	(CAS No) 112-07-2	1 - 25	Flam. Liq. 4, H227 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332
1,2,4-trimethylbenzene	(CAS No) 95-63-6	< 9.6	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 STOT SE 3, H335 Aquatic Chronic 2, H411
solvent naphtha (petroleum), light aromatic	(CAS No) 64742-95-6	> 0.99	Flam. Liq. 2, H225 Muta. 1B, H340 Carc. 1B, H350 Asp. Tox. 1, H304
cumene	(CAS No) 98-82-8	< 0.33	Flam. Liq. 3, H226 Carc. 2, H351 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.
First-aid measures after eye contact : Rinse eyes with water as a precaution.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard : flammable liquid and vapor.
Reactivity : flammable liquid and vapor.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : NO open flames, NO sparks, and NO smoking. Only qualified personnel equipped with suitable protective equipment may intervene. Avoid breathing dust/fume/gas/mist/vapors/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8 Exposure controls/personal protection" ".

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

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- Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8 : Exposure-controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. . Provide local exhaust or general room ventilation. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Avoid breathing dust/fume/gas/mist/vapors/spray.
- Hygiene measures : Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Ground/bond container and receiving equipment.
- Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

solvent naphtha (petroleum), light aromatic (64742-95-6)		
ACGIH	ACGIH TWA (ppm)	50 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	≈ 245 mg/m ³ skin, cumene
OSHA	OSHA PEL (STEL) (mg/m ³)	435 mg/m ³ xylene
cumene (98-82-8)		
ACGIH	ACGIH TWA (ppm)	50 ppm (Cumene; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
1,2,4-trimethylbenzene (95-63-6)		
ACGIH	ACGIH TWA (ppm)	25 ppm (Trimethyl benzene (mixed isomers); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
2-butoxyethylacetate (112-07-2)		
ACGIH	ACGIH TWA (ppm)	20 ppm
ACGIH	Remark (ACGIH)	Hemolysis

8.2. Exposure controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Hand protection : Protective gloves.
- Eye protection : Safety glasses.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : Wear respiratory protection.
- Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Color : Varied
- Odor : Fruity odor
- Odor threshold : No data available
- pH : No data available

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Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Vapor pressure	: No data available
Relative density	: No data available
Relative vapor density at 20 °C	: No data available
Solubility	: Not applicable
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

flammable liquid and vapor.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, No sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Inhalation:dust,mist: Harmful if inhaled.

MPS Series	
ATE US (dust, mist)	2.517 mg/l/4h
cumene (98-82-8)	
LD50 oral rat	> 2000 mg/kg (Rat; Other; Literature study; 4000 mg/kg bodyweight; Rat; Other; Inconclusive, insufficient data)
LD50 dermal rabbit	10578 mg/kg (Rabbit; Literature study; Other)
LC50 inhalation rat (mg/l)	40 mg/l/4h (Rat; Literature study)
LC50 inhalation rat (ppm)	8000 ppm/4h (Rat; Literature study)
ATE US (dermal)	10578.000 mg/kg body weight
ATE US (gases)	8000.000 ppmV/4h
ATE US (vapors)	40.000 mg/l/4h
ATE US (dust, mist)	40.000 mg/l/4h

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1,2,4-trimethylbenzene (95-63-6)	
LD50 oral rat	> 5000 mg/kg (Rat; Equivalent or similar to OECD 401; Literature; 6000 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rat	> 3440 mg/kg (Rat; Read-across; OECD 402: Acute Dermal Toxicity)
LC50 inhalation rat (mg/l)	18 mg/l/4h (Rat)
ATE US (gases)	4500.000 ppmV/4h
ATE US (vapors)	18.000 mg/l/4h
ATE US (dust, mist)	1.500 mg/l/4h

2-butoxyethylacetate (112-07-2)	
LD50 oral rat	2400 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 3000 mg/kg; Rat; Experimental value; 1880 mg/kg; Rat; Experimental value)
LD50 dermal rat	1580 mg/kg (Rat; Literature study)
LD50 dermal rabbit	1500 mg/kg (Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	> 2.7 mg/l/4h (Rat; Literature study)
ATE US (oral)	2400.000 mg/kg body weight
ATE US (dermal)	1500.000 mg/kg body weight
ATE US (gases)	4500.000 ppmV/4h
ATE US (vapors)	11.000 mg/l/4h
ATE US (dust, mist)	1.500 mg/l/4h

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: May cause genetic defects.
Carcinogenicity	: May cause cancer.

cumene (98-82-8)	
IARC group	2B - Possibly Carcinogenic to Humans

Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified

Specific target organ toxicity (repeated exposure)	: Not classified
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Aspiration hazard	: Not classified
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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
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cumene (98-82-8)	
EC50 Daphnia 1	2.14 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)

1,2,4-trimethylbenzene (95-63-6)	
LC50 fish 1	7.72 mg/l (LC50; 96 h; Pimephales promelas; Flow-through system; Fresh water)
EC50 Daphnia 1	3.6 mg/l (LC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
Threshold limit algae 2	2.356 mg/l (EC50; ECOSAR; 96 h; Algae; Fresh water)

2-butoxyethylacetate (112-07-2)	
LC50 fish 2	80 mg/l (LC50; 48 h; Leuciscus idus)
EC50 Daphnia 2	37 mg/l (EC50; 48 h)
Threshold limit algae 2	> 500 mg/l (EC50; 72 h)

12.2. Persistence and degradability

cumene (98-82-8)	
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Persistence and degradability	Inherently biodegradable. Not readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil.
Biochemical oxygen demand (BOD)	1.28 g O ₂ /g substance
Chemical oxygen demand (COD)	2.42 g O ₂ /g substance
ThOD	3.20 g O ₂ /g substance
BOD (% of ThOD)	0.40

1,2,4-trimethylbenzene (95-63-6)

Persistence and degradability	Not readily biodegradable in water. Forming sediments in water. Biodegradable in the soil. Adsorbs into the soil. Low potential for mobility in soil. Photodegradation in the air.
Chemical oxygen demand (COD)	0.44 g O ₂ /g substance

2-butoxyethylacetate (112-07-2)

Persistence and degradability	Readily biodegradable in water. Photodegradation in the air.
ThOD	2.1 g O ₂ /g substance

12.3. Bioaccumulative potential

solvent naphtha (petroleum), light aromatic (64742-95-6)

Log Pow	2.1 - 6
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cumene (98-82-8)

BCF fish 1	35.5 (BCF)
BCF other aquatic organisms 1	94.69 (BCF; BCFBAF v3.00)
Log Pow	3.66 (Experimental value; 3.55; Experimental value; OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method; 23 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

1,2,4-trimethylbenzene (95-63-6)

BCF fish 1	31 - 275 (BCF; Other; 8 weeks; Cyprinus carpio)
Log Pow	3.63 - 4.09 (Experimental value)
Bioaccumulative potential	Potential for bioaccumulation (4 ≥ Log Kow ≤ 5).

2-butoxyethylacetate (112-07-2)

Log Pow	1.51 - 1.79
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

cumene (98-82-8)

Log Koc	Koc,884; Calculated value; log Koc; 2.946; Calculated value
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1,2,4-trimethylbenzene (95-63-6)

Surface tension	0.029 N/m
Log Koc	log Koc,3.04; Calculated value
Ecology - soil	May be harmful to plant growth, blooming and fruit formation.

2-butoxyethylacetate (112-07-2)

Surface tension	0.026 N/m (20 °C)
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12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Follow all local and state regulations regarding disposal.
Sewage disposal recommendations	: Keep out of sewers.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Discharging into rivers and drains is forbidden. Avoid release to the environment. Do not discharge into surface water. Do not discharge into the sewer.
Additional information	: Flammable vapors may accumulate in the container.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

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Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1263 Paint related material (including paint thinning, drying, removing, or reducing compound), 3, III

UN-No.(DOT) : UN1263

Proper Shipping Name (DOT) : Paint related material
including paint thinning, drying, removing, or reducing compound

Hazard Classes (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT) : 3 - Flammable liquid



Packing group (DOT) : III - Minor Danger

DOT Packaging Non Bulk (49 CFR 173.xxx) : 173

DOT Packaging Bulk (49 CFR 173.xxx) : 242

DOT Special Provisions (49 CFR 172.102) : B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.

B52 - Notwithstanding the provisions of 173.24b of this subchapter, non-reclosing pressure relief devices are authorized on DOT 57 portable tanks.

IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

T2 - 1.5 178.274(d)(2) Normal..... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

Other information : No supplementary information available.

TDG

No additional information available

Transport by sea

UN-No. (IMDG) : 1263

Proper Shipping Name (IMDG) : PAINT RELATED MATERIAL

Class (IMDG) : 3 - Flammable liquids

Packing group (IMDG) : III - substances presenting low danger

Air transport

UN-No.(IATA) : 1263

Proper Shipping Name (IATA) : PAINT

Class (IATA) : 3 - Flammable Liquids

Packing group (IATA) : III - Minor Danger

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SECTION 15: Regulatory information

15.1. US Federal regulations

cumene (98-82-8)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
1,2,4-trimethylbenzene (95-63-6)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
xylene, mixture of isomers (1330-20-7)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	100 lb
MPS	
Components are either Listed on or excluded from listing on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

cumene (98-82-8)	
Listed on IARC (International Agency for Research on Cancer)	

15.3. US State regulations

cumene (98-82-8)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes	No	No	No	

cumene (98-82-8)	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List	
1,2,4-trimethylbenzene (95-63-6)	
U.S. - New Jersey - Right to Know Hazardous Substance List	
xylene, mixture of isomers (1330-20-7)	
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List	
2-butoxyethylacetate (112-07-2)	
U.S. - New Jersey - Right to Know Hazardous Substance List	

SECTION 16: Other information

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Other information

: Polymeric makes no warranty, express or implied, as to the accuracy or reliability of information contained herein, except that such information is, to the best of Polymeric's knowledge and belief, accurate as of the date indicated on this document. Final determination of suitability of material is the sole responsibility of the user. All the materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Polymeric urges the customer receiving this safety data sheet to study it carefully to become aware of the hazards, if any, in the product. In the interest of safety, the customer should (1) notify your employees, agents and contractors of the information included in this SDS and (2) furnish a copy to each of your employees, customers and agents.

Full text of H-phrases:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 1B	Carcinogenicity Category 1B
Carc. 2	Carcinogenicity Category 2
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids Category 3
Flam. Liq. 4	Flammable liquids Category 4
Muta. 1B	Germ cell mutagenicity Category 1B
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H227	Combustible liquid
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H340	May cause genetic defects
H350	May cause cancer
H351	Suspected of causing cancer
H411	Toxic to aquatic life with long lasting effects

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product