

**1 Identification of the substance/mixture and of the company**

- **Product identifier**
- **Trade name:** XP MicroSpray™ Positive Photoresist Spray
- **Product number:** MSP0013
- **Application of the substance / the mixture** Photoresist remover
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MicroChem Corp.  
200 Flanders Road  
Westborough, MA 01581 USA
- **Information department:**  
Product Safety  
Email: productsafety@microchem.com
- **Emergency telephone number:**  
MicroChem Corp : 617-965-5511  
Chemtrec USA Emergency : 800-424-9300  
Chemtrec International Emergency : 703-527-3887

**2 Hazard(s) identification**

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Aerosol 1 H222 Extremely flammable aerosol.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** *Danger*
- **Hazard statements**  
*H222 Extremely flammable aerosol.*  
*H315 Causes skin irritation.*
- **Precautionary statements**  
P210 *Keep away from heat/sparks/open flames/hot surfaces. No smoking.*  
P251 *Do not pierce or burn, even after use.*  
P211 *Do not spray on an open flame or other ignition source.*  
P280 *Wear protective gloves/protective clothing/eye protection/face protection.*  
P264 *Wash thoroughly after handling.*  
P301+P310 *IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.*

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- P305+P351+P338 **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P304+P341 **IF INHALED:** If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P332+P313 **If skin irritation occurs:** Get medical advice/attention.
- P337+P313 **If eye irritation persists:** Get medical advice/attention.
- P370+P378 **In case of fire:** Use for extinction: Alcohol resistant foam.
- P370+P378 **In case of fire:** Use for extinction: Fire-extinguishing powder.
- P370+P378 **In case of fire:** Use for extinction: Carbon dioxide.
- P302+P352 **IF ON SKIN:** Wash with plenty of soap and water.
- P410+P412 **Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.**
- P501 **Dispose of contents/container in accordance with local/regional/national/international regulations.**

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	4	Fire = 4
REACTIVITY	2	Reactivity = 2

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

**3 Composition/information on ingredients**

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

**Dangerous components:**

108-65-6	1-Methoxy-2-propanol acetate Flam. Liq. 3, H226	55-80%
115-10-6	dimethyl ether Flam. Gas 1, H220; Press. Gas, H280	10-25%
1319-77-3	Cresol (mix) Acute Tox. 3, H301; Acute Tox. 3, H311; Skin Corr. 1B, H314; H227	<1%

**Additional Components:**

Mixed Cresol Novolac Resin	Acute Tox. 4, H302; Skin Irrit. 2, H315	10-25%
Diazo Photoactive Compound		5-10%

**4 First-aid measures**

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.

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- **After inhalation:**  
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
Wash eyes immediately with a large amount of water or normal saline, occasionally lifting upper and lower eye lids until no evidence of chemical remains (about 20 minutes). Remove contact lenses if present and easy to remove. Seek immediate medical attention.
- **After swallowing:** Seek immediate medical advice.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** Treat symptomatically.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
Alcohol resistant foam  
Fire-extinguishing powder  
ABC powder
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Wear SCBA.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Keep away from ignition sources  
Ensure adequate ventilation
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Open and handle container with care.  
Keep away from heat and direct sunlight.  
Ensure good ventilation/exhaust at the workplace.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.

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Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material.

· **Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and containers:**

Store in a cool location.

Observe official regulations on storing packagings with pressurized containers.

· **Information about storage in one common storage facility:**

Do not store together with alkalis (caustic solutions).

Do not store together with oxidizing and acidic materials.

· **Further information about storage conditions:**

Keep container well-sealed in cool, dry location.

Protect from heat and direct sunlight.

Store receptacle in a well ventilated area.

· **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

**108-65-6 1-Methoxy-2-propanol acetate**

WEEL 50 ppm

**115-10-6 dimethyl ether**

WEEL 1000 ppm

**1319-77-3 Cresol (mix)**

PEL 22 mg/m<sup>3</sup>, 5 ppm  
Skin

REL 10 mg/m<sup>3</sup>, 2.3 ppm

TLV 20\* mg/m<sup>3</sup>  
Skin; \*as inhalable fraction and vapor

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:** Wash hands before breaks and at the end of work.

· **Respiratory equipment:** Use suitable respiratory protective device in case of insufficient ventilation.

· **Protection of hands:** Contact glove manufacturer for break-through time.

· **Material of gloves** Butyl rubber, BR

· **Penetration time of glove material** Contact glove manufacture for break-through time.

· **Eye protection:**



Tightly sealed goggles

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**9 Physical and chemical properties**

· Information on basic physical and chemical properties	
· General Information	
· Appearance:	
Form:	Aerosol
Color:	Amber colored
· Odor:	Ethereal
· Odour threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	-24 °C (-11 °F)
· Flash point:	-42 °C (-44 °F)
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	235 °C (455 °F)
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	1.5 Vol %
Upper:	18.6 Vol %
· Vapor pressure at 20 °C (68 °F):	5200 hPa (3900 mm Hg)
· Density:	See other information
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with	
Water:	Water miscible No
· Partition coefficient (n-octanol/water): Not determined.	
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
VOC content:	70-80 %
· Other information	No further relevant information available.

**10 Stability and reactivity**

- Reactivity
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions
  - Possible formation of peroxide.

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Used empty containers may contain product gases which form explosive mixtures with air.

· **Conditions to avoid**

Contact with incompatible materials.

Heat, flames and sparks. Extremes of temperature and direct sunlight.

· **Incompatible materials:**

Strong Oxidizing Agents, Strong Bases, Strong Acids, Strong Reducing Agents, Iron, Hydrazine

· **Hazardous decomposition products:**

Nitrogen oxides

Irritant gases/vapors

Aldehyde

Carbon monoxide and carbon dioxide

· **Additional information:** May form peroxides

## 11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **Primary irritant effect:**

· **on the skin:** May cause skin irritation

· **on the eye:** No irritating effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

· **NTP (National Toxicology Program)**

None of the ingredients are listed.

## 12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of as regular garbage/trash. Do not allow product to reach sewage system.

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Disposal must be made in accordance with Federal, State, and Local regulations.

· **Uncleaned packagings:**· **Recommendation:** Disposal must be made in accordance with Federal, State, and Local regulations.**14 Transport information**· **UN-Number**· **DOT, ADR, IMDG, IATA** UN1950· **UN proper shipping name**· **DOT, IATA** AEROSOLS, flammable· **ADR** 1950 AEROSOLS· **IMDG** AEROSOLS· **Transport hazard class(es)**· **DOT**· **Class** 2.1· **Label** 2.1· **ADR**· **Class** 2 5F Gases· **Label** 2.1· **IMDG, IATA**· **Class** 2.1· **Label** 2.1· **Packing group**· **DOT, ADR, IMDG, IATA** Void· **Environmental hazards:**· **Marine pollutant:** No· **Special precautions for user** Warning: Gases· **Danger code (Kemler):** -· **EMS Number:** F-D,S-U· **Transport in bulk according to Annex II of****MARPOL73/78 and the IBC Code** Not applicable.

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· UN "Model Regulation": UN1950, AEROSOLS, 2.1

**15 Regulatory information**

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

## · Section 355 (extremely hazardous substances):

None of the ingredients are listed.

## · Section 313 (Specific toxic chemical listings):

1319-77-3 Cresol (mix)

## · TSCA (Toxic Substances Control Act):

All ingredients are listed or comply with TSCA regulations.

## · Proposition 65

## · Chemicals known to cause cancer:

None of the ingredients are listed.

## · Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

## · Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

## · Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

## · Carcinogenic categories

## · EPA (Environmental Protection Agency)

1319-77-3 Cresol (mix)

C

## · TLV (Threshold Limit Value established by ACGIH)

None of the ingredients are listed.

## · NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients are listed.

## · OSHA-Ca (Occupational Safety &amp; Health Administration)

None of the ingredients are listed.

· California SCAQMD Rule 443.1 VOC's: No information available.

· GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

## · Hazard pictograms



GHS02 GHS07

· Signal word Danger

## · Hazard statements

H222 Extremely flammable aerosol.

H315 Causes skin irritation.

## · Precautionary statements

P210

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

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- P251 Do not pierce or burn, even after use.  
 P211 Do not spray on an open flame or other ignition source.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P264 Wash thoroughly after handling.  
 P301+P310 **IF SWALLOWED:** Immediately call a POISON CENTER or doctor/physician.  
 P305+P351+P338 **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
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 P302+P352 **IF ON SKIN:** Wash with plenty of soap and water.  
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.  
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Product safety department
- **Contact:** Mr. Cole

- **Revision History:** New SDS
- **Date of preparation / last revision** 12/02/2015 / 1

- **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)