1 Identification of the substance/mixture and of the company

- **Product identifier**
  - **Trade name:** KMPR Series Resists
  - **Product number:** Y211045, Y211055, Y211064, Y211066, Y211067
  - **Application of the substance / the preparation** Photoresist

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    - MicroChem Corp.
    - 90 Oak Street
    - P.O. Box 426
    - Newton, MA 02464-0002 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 Composition/information on ingredients

- **Chemical characterization:** Mixtures

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

  - **Dangerous components:**
    - 120-92-3 cyclopentanone
      - H226; H315; H319
      - 20-60%
    - 71449-78-0 hexafluoroantimonate salt
      - H400; H410; H317
      - 1-5%
    - 108-32-7 propylene carbonate
      - H319
      - 1-5%
    - 89452-37-9 triarylsulfonium salt
      - H400; H410; H317
      - 1-5%

  - **Additional Components:**
    - Epoxy Resin (CAS Proprietary)
      - 40-80%

3 Hazards identification

- **Classification of the substance or mixture**

  - **GHS02 Flame**
    - H226  Flammable liquid and vapor.

  - **GHS09 Environment**
    - H411  Toxic to aquatic life with long lasting effects.

  - **GHS07**
    - H315  Causes skin irritation.
    - H319  Causes serious eye irritation.

(Contd. on page 2)
Trade name: KMPR Series Resists

H317 May cause an allergic skin reaction.

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

  ![GHS02 GHS07 GHS09]

- **Signal word** Warning

- **Hazard-determining components of labelling:**
  - Hexafluoroantimonate salt
  - Triarylsulphonium salt

- **Hazard statements**
  - H226 Flammable liquid and vapor.
  - H315 Causes skin irritation.
  - H319 Causes serious eye irritation.
  - H317 May cause an allergic skin reaction.
  - H411 Toxic to aquatic life with long lasting effects.

- **Precautionary statements**

  - P101 If medical advice is needed, have product container or label at hand.
  - P102 Keep out of reach of children.
  - P103 Read label before use.
  - P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - P241 Use explosion-proof electrical/ventilating/lighting/equipment.
  - P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

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

  ![2 3 0]

  Health = 2
  Fire = 3
  Reactivity = 0

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

  ![2 3 0]

  Health = 2
  Fire = 3
  Reactivity = 0

- **First aid measures**

  - **After inhalation:** Supply fresh air and to be sure call for a doctor.
  - **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
  - **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
5 Firefighting measures

- **Suitable extinguishing agents:** CO2, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture:** No further relevant information available.
- **Protective equipment:** Wear SCBA.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
  Do not allow product to reach sewage system or any drains.
  Inform respective authorities in case of seepage into water course or sewage system.
  Do not allow to enter sewers/surface or ground water.
- **Methods and material for containment and cleaning up:**
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  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**
    Ensure good ventilation/exhaust at the workplace.
    Prevent formation of aerosols.
  - **Information about protection against explosions and fires:**
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.
  - **Storage:**
    - **Requirements to be met by storerooms and containers:** No special requirements.
    - **Information about storage in one common storage facility:** Not required.
    - **Further information about storage conditions:**
      Keep container tightly sealed.
      Protect from exposure to the light.
- **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.
- **Components with limit values that require monitoring at the workplace:**
  The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
· Personal protective equipment:
  - General protective and hygienic measures:
    Keep away from food and beverages.
    Immediately remove all soiled and contaminated clothing.
    Wash hands before breaks and at the end of work.
    Avoid contact with the eyes and skin.
  - Respiratory equipment:
    In case of low exposure, use cartridge respirator. In case of intensive or longer exposure, use SCBA.
  - Protection of hands:
    Protective gloves
    Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
    · Material of gloves: Nitrile rubber, NBR
    · Penetration time of glove material: Contact glove manufacture for break-through time.
  - Eye protection:
    Tightly sealed goggles

9 Physical and chemical properties

· General Information
  · Appearance:
    Form: Fluid
    Color: Light yellow
    Clear
  · Odor:
    Slightly sweet
  · Odour threshold:
    Not determined.
  · pH-value:
    Not determined.

· Change in condition
  · Melting point/Melting range: Undetermined.
  · Boiling point/Boiling range: 130°C (266 °F)

· Flash point:
  30°C (86 °F)

· Flammability (solid, gaseous):
  Not applicable.

· Ignition temperature:
  430°C (806 °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: Not determined.
  Upper: Not determined.

· Vapor pressure:
  Not determined.
Trade name: KMPR Series Resists

- Density: Not determined.
- Relative density: Not determined.
- Vapour density: Not determined.
- Evaporation rate: Not determined.

- Solubility in / Miscibility with Water: Not miscible or difficult to mix.

- Segregation coefficient (n-octonol/water): Not determined.

- Viscosity:
  - Dynamic: Not determined.
  - Kinematic: Not determined.

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<td>340</td>
</tr>
</tbody>
</table>

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Acute toxicity:
- Primary irritant effect:
  - on the skin: Irritant to skin and mucous membranes.
  - on the eye: Irritating effect.
- Sensitization: Sensitization possible through skin contact.

12 Ecological information

- 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.
- Ecotoxic effects: Remark: Toxic for fish
- 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.
  Also poisonous for fish and plankton in water bodies.
  Toxic for aquatic organisms
13 Disposal considerations

- Waste treatment methods
  - Recommendation:
    Must not be disposed of as regular garbage/trash. Do not allow product to reach sewage system.

- Uncleaned packagings:
  - Recommendation: Disposal must be made in accordance with Federal, State, and Local regulations.

14 Transport information

- UN-Number
  - DOT, ADR, IMDG, IATA
  - UN1866

- UN proper shipping name
  - DOT, IMDG, IATA
  - ADR
  - RESIN SOLUTION
  - 1866 RESIN SOLUTION

- Transport hazard class(es)
  - DOT
    - Class 3
    - Label 3
  - ADR, IMDG, IATA
    - Class 3
    - Label 3

- Packing group
  - DOT, ADR, IMDG, IATA
  - III

- Special precautions for user
  - Warning: Flammable liquids
  - Danger code (Kemler): 33
  - EMS Number: F-E,S-E

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
  - Not applicable.

- UN "Model Regulation":
  - UN1866, RESIN SOLUTION, 3, III

15 Regulatory information

- Sara

- Section 355 (extremely hazardous substances):
  - None of the ingredients is listed.
### Trade name: KMPR Series Resists

#### Section 313 (Specific toxic chemical listings):
- 71449-78-0 hexafluoroantimonate salt
- 89452-37-9 triarylsulfonium salt

#### 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 is listed.
- **Chemicals known to cause reproductive toxicity for males:** None of the ingredients is listed.
- **Chemicals known to cause developmental toxicity:** None of the ingredients is listed.

#### Carcinogenic categories
- **EPA (Environmental Protection Agency)** None of the ingredients is listed.
- **IARC (International Agency for Research on Cancer)** None of the ingredients is listed.
- **NTP (National Toxicology Program)** None of the ingredients is listed.
- **TLV (Threshold Limit Value established by ACGIH)** None of the ingredients is listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)** None of the ingredients is listed.

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

#### Hazard pictograms
- GHS02
- GHS07
- GHS09

#### Signal word **Warning**

#### Hazard-determining components of labelling:
- hexafluoroantimonate salt
- triarylsulfonium salt

#### Hazard statements
- H226 Flammable liquid and vapor.
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Precautionary statements

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P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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. Bedet
- 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
  - NFPA: National Fire Protection Association (USA)
  - HMIS: Hazardous Materials Identification System (USA)