

# SAFETY DATA SHEET


**ZEON**

ZEP 520A

## Section 1. Identification

- GHS product identifier** : ZEP 520A
- Other means of identification** : Not available.
- Product code** : Z01599
- Product use** : Electronic applications
- Supplier's details** : Zeon Specialty Materials Inc.  
1731 Technology Drive #595  
San Jose, CA 95110  
USA  
Phone : +1-408-641-7889  
FAX : +1-408-516-9382
- e-mail address of person responsible for this SDS** : Mark Nakamura: mark.nakamura@zeonsmi.com  
Chris Chen: chris.chen@zeonsmi.com
- Emergency telephone number (with hours of operation)** : CHEMTREC: 1-800-424-9300 (24 hours a day/7 days per week)  
Outside the United States (Call Collect): 001-703-527-3887

## Section 2. Hazards identification

- OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
- Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 3
- GHS label elements**
- Hazard pictograms** : 
- Signal word** : Warning
- Hazard statements** : Flammable liquid and vapor.
- Precautionary statements**
- Prevention** : Wear protective gloves. Wear eye or face protection.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.  
Ground/bond container and receiving equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Keep container tightly closed.
- Response** : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
In case of fire: Use carbon dioxide, dry chemical or water fog for extinction.
- Storage** : Store in a well-ventilated place. Keep cool.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** : In a fire, decomposition may produce toxic gases/fumes. See Section 10 for details.

## Section 2. Hazards identification

**Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture  
**Other means of identification** : Not available.  
**Product code** : Z01599

Ingredient name	%	CAS number
anisole	88.5 - 89.5	100-66-3
Methyl styrene/chloromethyl acrylate copolymer	10.5 - 11.5	43127-35-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 30 minutes. Get medical attention immediately.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms develop.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Get medical attention if irritation develops. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Call a POISON CENTER or doctor. Do not induce vomiting unless directed to do so by medical personnel.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Contact may cause eye irritation. Vapor may cause eye irritation.
- Inhalation** : Vapor may be irritating to respiratory system.
- Skin contact** : May cause skin irritation.
- Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam. Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : Do not use water jet.

### Specific hazards arising from the chemical

- : Flammable liquid and vapor. Keep away from heat, sparks and flame. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. In case of fire irritating, corrosive and/or toxic gases can be formed.

### Hazardous thermal decomposition products

- : In a fire, decomposition may produce toxic gases/fumes. See Section 10 for information on decomposition products.

### Special protective actions for fire-fighters

- : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

### Special protective equipment for fire-fighters

- : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Wear protective gloves/clothing and eye/face protection. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wash hands thoroughly after handling. Remove contaminated clothing and wash it before reuse.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### Environmental precautions

- : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. Contain and collect spillage. Absorb remainder with an inert material and place in an appropriate waste disposal container. Wash spill area with soap and water.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage. Soak up remainder with a non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. Wash spill area with soap and water.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Flammable liquid. Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous.

Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

<b>Ingredient name</b>	<b>Exposure limits</b>
anisole	None.
Methyl styrene/chloromethyl acrylate copolymer	None.

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

### Individual protection measures

**Hygiene measures** : Wash hands thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

#### Skin protection

**Hand protection** : Follow good industrial hygiene practice.

## Section 8. Exposure controls/personal protection

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Respiratory protection is not necessary if room is well ventilated. NIOSH approved respiratory protection may be needed if vapor or dust is generated during processing or if the product is ground into a fine powder. Wear a positive pressure air-supplied respirator in situations where there may be potential for elevated airborne exposure such as during equipment malfunction, or product hangup or stagnation during processing that may result in decomposition.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Clear.
- Odor** : Aromatic.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : <-20°C (<-4°F)
- Boiling point** : 155°C (311°F)
- Flash point** : Closed cup: 46°C (114.8°F)
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : FLAMMABLE.
- Lower and upper explosive (flammable) limits** : Lower: 0.3%  
Upper: 6.3%
- Vapor pressure** : 1.3 kPa (10 mm Hg) [42°C (108°F)]
- Vapor density** : 3.72 [Air = 1]
- Relative density** : ~1 [water = 1]
- Solubility** : Not available.
- Solubility in water** : 1.6 g/l [20°C (68°F)]
- Partition coefficient: n-octanol/water** : 2.11 (anisole)
- Auto-ignition temperature** : 473.89°C (885°F)
- Decomposition temperature** : Not available.
- Viscosity** : Not available.

## Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : Stable under recommended storage and handling conditions (see Section 7).
- Possibility of hazardous reactions** : No information available.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Take precautionary measures against static discharge. Do not allow vapor to accumulate in low or confined areas.

## Section 10. Stability and reactivity

**Incompatible materials** : Reactive or incompatible with the following materials:  
oxidizing materials  
strong alkalis  
strong acids

**Hazardous decomposition products** : Decomposition products may include the following materials:  
carbon monoxide  
carbon dioxide

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
anisole	LC50 Inhalation Vapor	Rat	>5000 mg/m <sup>3</sup>	1 hours
	LC50 Inhalation Vapor	Rat	8949 mg/m <sup>3</sup>	2 hours
	LD50 Oral	Rat	3700 mg/kg	-

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

#### Irritation/Corrosion

**Conclusion/Summary** : Not available.

#### Sensitization

**Conclusion/Summary** : Not available.

#### Mutagenicity

**Conclusion/Summary** : Not available.

#### Carcinogenicity

**Conclusion/Summary** : This product contains no components present at concentrations equal to or greater than 0.1% listed by IARC, OSHA, NTP, or ACGIH as a carcinogen.

#### Reproductive toxicity

**Conclusion/Summary** : Not available.

#### Teratogenicity

**Conclusion/Summary** : Not available.

#### Specific target organ toxicity (single exposure)

Not available.

#### Specific target organ toxicity (repeated exposure)

Not available.

#### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Routes of entry anticipated: Dermal, Inhalation, Ocular.

### Potential acute health effects

**Eye contact** : Contact may cause eye irritation. Vapor may cause eye irritation.  
**Inhalation** : Vapor may be irritating to respiratory system.  
**Skin contact** : May cause skin irritation.  
**Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.  
**Inhalation** : No specific data.

## Section 11. Toxicological information

- Skin contact** : No specific data.  
**Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

- Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Potential chronic health effects

Not available.

- Conclusion/Summary** : Not available.  
**General** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
Oral	3700 mg/kg

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
anisole	Acute EC50 162 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	4 days
	Acute LC50 >1 mg/l	Fish - Danio rerio	96 hours
	Acute LC50 120 mg/l	Fish - Leuciscus idus ssp. melanotus	48 hours

- Conclusion/Summary** : Not available.

### Persistence and degradability

- Conclusion/Summary** : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
anisole	-	-	Readily

### Bioaccumulative potential

## Section 12. Ecological information

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
ZEP 520A	2.11	-	low
anisole	2.62	-	low

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.






**Mobility** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
<b>UN number</b>	UN2222	UN2222	UN2222	Not determined.	UN2222	UN2222
<b>UN proper shipping name</b>	Anisole solution	ANISOLE SOLUTION	ANISOLE SOLUTION	-	ANISOLE SOLUTION	Anisole solution
<b>Transport hazard class(es)</b>	3	3	3	-	3	3
<b>Label</b>						
<b>Packing group</b>	III	III	III	-	III	III
<b>Environmental hazards</b>	No.	No.	No.	-	Marine Pollutant: No	No.

### Additional information

#### DOT Classification

: This product may be re-classified as "Combustible Liquid," unless transported by vessel or aircraft. Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials.

**Limited quantity** Yes.

**Packaging instruction** Exceptions: 150. Non-bulk: 203. Bulk: 242.

**Quantity limitation** Passenger aircraft/rail: 60 L. Cargo aircraft: 220 L.

**Special provisions** B1, IB3, T2, TP1



## Section 14. Transport information

- TDG Classification** : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).  
**Explosive Limit and Limited Quantity Index 5**  
**Passenger Carrying Road or Rail Index 60**
- ADR/RID** : Not determined.
- IMDG** : **Emergency schedules** F-E, S-D
- IATA** : **Quantity limitation** Passenger and Cargo Aircraft: 60 L. Packaging instructions: 355. Cargo Aircraft Only: 220 L. Packaging instructions: 366. Limited Quantities - Passenger Aircraft: 10 L. Packaging instructions: Y344.

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to Annex II of MARPOL and the IBC Code** : Not available.

## Section 15. Regulatory information

**U.S. Federal regulations** : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** : FLAMMABLE LIQUIDS - Category 3

#### Composition/information on ingredients

Name	%	Classification
anisole	88.5 - 89.5	FLAMMABLE LIQUIDS - Category 3

### State regulations

- Massachusetts** : None of the components are listed.
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: ANISOLE; BENZENE, METHOXY-
- Pennsylvania** : None of the components are listed.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol (Annexes A, B, C, E)

## Section 15. Regulatory information

Not listed.

### [Stockholm Convention on Persistent Organic Pollutants](#)

Not listed.

### [Rotterdam Convention on Prior Informed Consent \(PIC\)](#)

Not listed.

### [UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

### [Inventory list](#)

- Canada** : At least one component is not listed in DSL but all such components are listed in NDSL.  
**Taiwan** : All components are listed or exempted.  
**United States** : All components are listed or exempted.

## Section 16. Other information

### [Hazardous Material Information System \(U.S.A.\), Fourth Edition](#)

Health	/	1
Flammability		2
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

### [National Fire Protection Association \(U.S.A.\)](#)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

### [Procedure used to derive the classification](#)

Classification	Justification
FLAMMABLE LIQUIDS - Category 3	On basis of test data

### [History](#)

- Date of printing** : 01/04/2018  
**Date of issue/Date of revision** : 01/04/2018  
**Date of previous issue** : 06/02/2015  
**Version** : 3

## Section 16. Other information

**Key to abbreviations** : ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
DOT = Department of Transportation  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
TDG = Transportation of Dangerous Goods  
UN = United Nations

**References** : Not available.

▣ Indicates information that has changed from previously issued version.

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