

SECTION 1: Identification

Product identifier used on the label: Zeonex® 690R
604Z690R000B

Other means of identification: 604Z690R0080
604Z690R00J7

Chemical Abstract Number (CASRN): Mixture

Recommended use of the chemical: Optical / Medical Device / Electrical Applications

Restrictions on use: None

Details of the supplier of the safety data sheet

Manufacturer/Supplier Name and Address:	Zeon Specialty Materials Inc. 25 Metro Drive #238 San Jose, CA 95110 USA www.zeonsmi.com	Customer Service:	+1-408-641-7889 +1-408-516-9382
Email address of person responsible for this SDS:	productstewardship@zeonsmi.com		

Emergency telephone number

24 hours per day/7 days per week: 3E Global Response Hotline: 1 866 519 4752 (+1 760 476 3962) / Customer Code 335467

SECTION 2: Hazard(s) identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200 (HCS 2024): This product is not classified as hazardous in accordance with paragraph (d) of §1910.1200 (Hazard Communication).

GHS Label Elements

GHS Signal Word: None

GHS Hazard Statements: This product is not classified as hazardous according to the criteria of the GHS.

Precautionary Statements (Safety): Not Applicable

Other hazards: None known

Hazards Not Otherwise Classified: None

Hazards Identified When Used: Contact with product at elevated temperatures can result in thermal burns. Processing and use of this product may cause static charge which may ignite flammable materials.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not Applicable

3.2 Mixtures

Hazardous Chemical(s)	%	CAS#	GHS Classification	M-Factor
No hazardous ingredients subject to disclosure				

Section Comments: None

SECTION 4: First-aid measures

Description of first aid measures

Following Inhalation: Remove to fresh air. Seek medical attention if cough or other symptoms develop or persist.

Following Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists. If molten material contacts skin, cool rapidly with water. Do not attempt to remove material from skin. Seek immediate medical attention for thermal burns.

Following Eye Contact: Treat as any foreign particulate matter. Do not rub eyes. Flush eyes with running water for several minutes while holding eyelids open. Consult a physician if irritation persists.

Following Ingestion: Normally not needed. If large quantities are ingested or if you feel unwell, call your local Poison Control Center (1-800-222-1222 in the U.S.) or physician.

Most important symptoms and effects, both acute and delayed

At processing temperatures, the combined ingredients (elastomer and other processing ingredients) may emit fumes and vapors that may cause irritation to the eyes. Contact with product at elevated temperatures can result in thermal burns. Processing operations may create vapors or fumes which may cause respiratory tract irritation.

Indication of any immediate medical attention and special treatment needed

No additional first aid information available

SECTION 5: Fire-fighting measures

Extinguishing media

Use extinguishing media suitable for Class A fires (ordinary combustibles). Carbon dioxide is generally not recommended for use on Class A fires as a lack of cooling capacity may result in reignition.

Special hazards arising from the substance or mixture

Product will burn in a fire. Keep container tightly closed when not in use. Store away from heat, sparks, and other sources of ignition. Processing and use of this product may cause static charge which may ignite flammable materials. Take precautionary measures against static discharges. Special precautions must be taken if this product is ground or otherwise formed into a fine powder or dust since many organic substances in these forms present a dust explosion hazard. Dust in sufficient quantities may be ignited in air. Minimize dust generation and accumulation. Minimize activities which will float or suspend particles in air. Protect from sources of ignition.

Toxic gases may be formed upon combustion and represent a hazard to firefighters. See Section 10 for information on combustion products. Laboratory tests for thermal properties were conducted using OECD Guidelines. The results are indicated below:

93/105/EC Annex VIID 3.10 (Flammability (solids)): Not highly flammable

93/105/EC Annex VIID 3.11 (Explosive properties): Not explosive

93/105/EC Annex VIID 3.12 (Relative self-ignition temperature for solids): Does not self ignite

93/105/EC Annex VIID 3.16 (Thermal stability): Stable at room temperature

According to test method Test method was JIS Z8817-8818:

maximum explosion pressure (Pmax); 7.6 bar

rate of pressure rise (Kst); 133 bar*m/sec

minimum explosion concentration (MEC); 55 ~ 60 g/m3

minimum ignition energy (MIE); 10 ~ 30 mJ (750 g/m³)
minimum ignition temperature (T_c); >400 °C

Hazardous combustion products

Carbon monoxide, Carbon dioxide, Hydrocarbons

Advice for firefighters

As in any fire, wear self-contained breathing apparatus operated in pressure-demand mode (NIOSH approved or equivalent) and full protective gear.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

No special requirements.

Environmental precautions

As with all industrial chemicals, use of good chemical hygiene and environmental stewardship practices is recommended.

Methods and material for containment and cleaning up

With a shovel or scoop place into appropriate containers for reuse, recycle or disposal.

Reference to other sections

Refer to Section 8, Exposure Control/Personal Protection.

SECTION 7: Handling and storage

Precautions for safe handling

Keep away from sources of ignition. Processing and use of this product may cause static charge which may ignite flammable materials. Take precautionary measures against static discharges. Use bonding and grounding when transferring quantities of material. Product will emit fumes and vapors when heated to processing temperatures. Use only with adequate ventilation. Do not breathe (dust, vapor or fumes). Wash thoroughly after handling. Do not eat, drink or smoke in processing areas. Clean up following normal processing must be performed with adequate ventilation. Elastomer may be held at process temperatures for a short time without significant thermal degradation. However exposure to elevated temperatures or excessive time will result in decomposition. Equipment should not be shut down for extended time periods with compound in it or decomposition may occur.

Processing fume condensates, which may include toxic contaminants, may be combustible and should be periodically removed from exhaust hoods, ductwork, and other surfaces. Protective clothing and gloves should be worn during cleanup operations to prevent skin contact (Refer to Section 8, Exposure Controls/Personal Protection).

Conditions for safe storage, including any incompatibilities

Store in a cool, dry place away from direct light to maintain quality.

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters:

OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended:

OSHA			ACGIH	
PEL	AL	STEL	TLV	STEL

No hazardous ingredients
subject to disclosure

PEL = Permissible Exposure Limit; AL = Action Limit; NE = Not Established; RD = Respirable Dust; STEL = Short Term Exposure Limit; TD = Total Dust; TLV = Threshold Limit Value, I = Inhalable Fraction, TWA = Time Weighted Average

Exposure controls

Appropriate Engineering Controls: No exposure limits exist for the primary constituents of this product. Use local exhaust ventilation or other engineering controls to minimize exposures and maintain operator comfort.

Individual Protection Measures

Eye/Face Protection: Follow facility guidelines and requirements set forth in 29 CFR 1910.133. Additionally, chemical splash goggles and a face shield should be worn when handling heated or molten material to prevent thermal burns to the eyes or face.

Skin and Body Protection: Follow requirements set forth in 29 CFR 1910.132. The use of proper chemical hygiene practices is recommended. For hot/molten product, use thermal insulating gloves and other clothing as necessary to protect from thermal burns.

Respiratory Protection: Respiratory protection is not typically required during normal use and handling operations where general dilution or local exhaust ventilation is adequate to control exposures. 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

Information on basic physical and chemical properties

Physical State:	Solid
Color:	Colorless
Odor:	None
Odor Threshold:	Not Determined
pH:	Not Applicable
Melting Point/Freezing Point:	Not Determined
Initial Boiling Point and Boiling Range:	Not Applicable
Flash Point:	Not Applicable
Evaporation Rate (water = 1):	Not Applicable
Flammability (solid/gas):	See Section 5
Particle Characteristics (median particle size):	Not Determined
Lower Explosive (Flammable) Limit:	Not Applicable
Upper Explosive (Flammable) Limit:	Not Applicable
Vapor Pressure:	Negligible
Vapor Density (Air=1):	Not Applicable
Relative Density (water = 1):	1.01
Solubility (water):	Insoluble
Partition Coefficient: n-octanol/water:	Not Determined
Autoignition Temperature:	455
Decomposition Temperature:	Not Determined
Kinematic Viscosity:	Not Applicable

SECTION 10: Stability and reactivity

Reactivity Hazardous polymerization will not occur.

Chemical stability This material is stable when properly handled and stored.

Possibility of hazardous None Known

reactions

Conditions to avoid	Overheating
Incompatible materials	As with all organic materials, avoid contact with strong oxidizers and reducing agents.
Hazardous decomposition products	Not Applicable

SECTION 11: Toxicological information

Description toxicological (health) effects and the available data used to identify those effects:

Routes of Entry: Skin contact; Eye contact; Process Vapor/Dust Inhalation.

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

At processing temperatures, the combined ingredients (elastomer and other processing ingredients) may emit fumes and vapors that may cause irritation to the eyes. Contact with product at elevated temperatures can result in thermal burns. Processing operations may create vapors or fumes which may cause respiratory tract irritation.

Delayed and immediate effects and chronic effects from short- and long-term exposure:

Numerical Values of Toxicity

Acute Toxicity Estimates:

Oral LD ₅₀ (rat)	Dermal LD ₅₀ (rabbit)	Inhalation LC ₅₀ (rat)
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No hazardous ingredients subject to disclosure

Skin Corrosion/Irritation:	Does not meet classification criteria.
Serious Eye Damage/Irritation:	Does not meet classification criteria.
Respiratory or Skin Sensitization:	Not expected to be a sensitizer.
Reproductive Toxicity:	Not known or reported to cause reproductive or developmental toxicity.
Germ Cell Mutagenicity:	Not known or reported to be mutagenic.
STOT – single exposure:	Does not meet classification criteria.
STOT – repeated exposure:	Data lacking for classification

Carcinogenicity Listings by IARC and NTP

IARC	NTP
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No hazardous ingredients subject to disclosure

SECTION 12: Ecological information

Toxicity: No information available.

Numerical Values of Toxicity

Aquatic EC ₅₀ (48H)	Aquatic EC ₅₀ (96H)	Aquatic LC ₅₀ (96H)
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No hazardous ingredients subject to disclosure

Persistence and Degradability:	Not Determined
Bioaccumulative Potential:	Not Determined
Mobility in Soil:	Not Determined

SECTION 13: Disposal considerations

Waste treatment methods

Waste resulting from this product as supplied is not known to be classified as a hazardous waste per the current listings and characteristics contained in 40 CFR Part 261, and its Appendices. It is the generator's responsibility to determine, per the regulation, the applicability of the Resource Conservation and Recovery Act (RCRA), as well as all state, local, or other governmental agency waste disposal regulations, to the particular waste materials prior to treatment or disposal.

SECTION 14: Transport information

U.S. Department of Transportation UN Number: This product is not defined or designated as a hazardous material.

Canadian Transport of Dangerous Goods (TDG): This product is not classified as a dangerous good for transport.

Mexican Regulation for the Land Transport of Hazardous Materials and Wastes: This product is not defined or designated as a hazardous material.

International Air Transport Authority (IATA/ICAO) UN Number: This product is not classified as a dangerous good for transport.

International Maritime Organization (IMO) UN Number: This product is not classified as a dangerous good for transport.

SECTION 15: Regulatory information

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

Chemical Inventory Status:	
Australia (AIRC):	All components of this product are included on this Inventory/List, or are otherwise exempt.
Canada (DSL):	All components of this product are included on this Inventory/List, or are otherwise exempt.
China (IECSC):	All components of this product are included on this Inventory/List, or are otherwise exempt.
Japan (ENCS):	All components of this product are included on this Inventory/List, or are otherwise exempt.
Korea (KECL):	All components of this product are included on this Inventory/List, or are otherwise exempt.
New Zealand (NZIoC):	Some but not all components are listed on this inventory. Please contact productstewardship@zeonchemicals.com for more information.
Philippines (PICCS):	Some but not all components are listed on this inventory. Please contact productstewardship@zeonchemicals.com for more information.
Taiwan (TCSI):	All components of this product are included on this Inventory/List, or are otherwise exempt.
Thailand (TECI)	Some but not all components are listed on this inventory. Please contact productstewardship@zeonchemicals.com for more information.

United States (TSCA):	All components of this product are included on the TSCA Inventory, with a commercial designation of Active, or are otherwise exempt.
Vietnam (VNECI):	Some but not all components are listed on this inventory. Please contact productstewardship@zeonchemicals.com for more information.

United States Regulatory Status

TSCA (Toxic Substance Control Act)

This product contains the following chemical(s) subject to TSCA 12(b) export notification: None

TSCA Significant New Use Rules (SNUR): None

EPCRA (Emergency Planning and Community Right to Know Act)

Section 311/312 (SARA Title III) Hazard Categories: None

Section 313 (SARA Title III) Toxic Chemical Release Inventory Reporting:

This product contains the following EPCRA Section 313 chemical(s) exceeding the *de minimis* amount subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 372):

Chemical Name	CAS Number	Percent by Weight
None		

State Legislation

California Proposition 65: To the best of our knowledge, no substances known to the state of California to cause cancer or reproductive harm are contained in this product. However, please be advised that Zeon Chemicals L.P. does not routinely test for the presence of these substances.

SECTION 16: Other information

National Fire Protection Association:

Health Hazard: 2
Fire Hazard: 1
Instability Hazard: 0
Special Hazard: None

Hazardous Materials Identification System:

Health: 0
Flammability: 1
Physical Hazard: 0
PPE Code To be determined by workplace conditions.

Abbreviations:

ANSI: American National Standards Institute
APS: Average Particle Size in microns
BCF: Bioconcentration Factor
CFR: Code of Federal Regulations
EC₅₀: Effective Concentration, 50%
GHS: Globally Harmonized System for Classification and Labeling of Chemicals
HCS: Hazard Communication Standard
IARC: International Agency for Research on Cancer
ICAO: International Civil Aviation Organization
LC₅₀: Lethal Concentration, 50%
LD₅₀: Lethal Dose, 50%
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
SARA: Superfund Amendment and Reauthorization Act
SDS: Safety Data Sheet
STOT: Specific Target Organ Toxicant
U.S.: United States

Prepared by: This SDS was prepared by Zeon Specialty Materials Inc..

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User's Responsibility: This bulletin cannot cover all possible situations which the user may experience during processing. Each aspect of your operation must be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin must be provided to your employees or customers. It is your responsibility to use this information to develop appropriate work practice guidelines and employee instructional programs for your operation.

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END of SDS