Safety Data Sheet

Issue Date: 02-26-2013

MSDS Number: Z10211

SECTION 1: Identification

1.1. Product identifier

Trade Name/Designation: **Zeotherm 100-80B**

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

Use: Molded and extruded goods compounding.

1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier Name and Address:	Zeon Chemicals L.P. 4111 Bells Lane Louisville, Kentucky 40211	Customer Service:	1-800-735-3388 (502)-775-2000

1.4. Emergency telephone number

24 hours per day/7 days per week (English only):	CHEMTREC: (800) 424 - 9300 Outside the U.S. Call Collect: 001 (703) 527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS Classification: Does not meet classification criteria.

GHS Signal Word: None

2.2. Label elements

GHS Label Elements: Not Applicable

NFPA Ratings*		**HMIS Ratings****	Key: 0=least; 1=slight; 2=moderate; 3=high; 4=extreme
Health Hazard:	2	Health Hazard:	1
Fire:	1	Fire:	1
Reactivity:	0	Physical Hazard:	0
Special Hazards:	None	PPE:	PPE should be determined based on workplace conditions.

*National Fire Protection Association (NFPA) ratings identify hazards during a fire emergency.

**Hazardous Materials Identification System (HMIS) ratings apply to products as packaged.

2.3. Other hazards

Processing operations may produce vapors or dust that may cause eye, skin, and respiratory tract irritation. Toxic combustion products may be released under fire conditions. Processing and use of this product may cause static charge which may ignite flammable materials. This product contains a small amount of carbon black within the cured TPV matrix. Carbon black is listed by IARC as a 2B carcinogen. Limited studies have shown that this product may release trace quantities of aniline (CASRN 62-53-3). Overexposure may cause nausea, dizziness, headaches,

shortness of breath, and cyanosis. Aniline may cause blood abnormalities and liver injury. Spontaneous ignition of hot material is possible during start-up and purging operations. Precautions should be taken prevent ignition of hot material.

SECTION 3: Composition/information on ingredients

Chemical Name	Amount (wt %)	CAS #
Cured Acrylate Elastomer / Polyamide Blend	>98	Proprietary Mixture
Talc (within a TPV matrix)	<2	14807-96-6
Carbon Black (within a TPV matrix)	<2	1333-86-4

Refer to Section 8 for Occupational Exposure Limits (OELs)

SECTION 4: First-aid measures

4.1. 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.

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.

4.2. 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. Inhalation of high concentrations may result in central nervous system (CNS) effects such as dizziness, weakness, fatigue, nausea, headache, and lack of coordination.

SECTION 5: Fire-fighting measures

5.1. 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.

5.2. Special hazards arising from the substance or mixture

Spontaneous ignition of hot material is possible during start-up and purging operations. Precautions should be taken prevent ignition of hot material. 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.

5.3. 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

6.1. Personal precautions, protective equipment and emergency procedures

No special requirements.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Vacuum or sweep up material and place in a disposal container.

6.4. Reference to other sections Refer to Section 8, Exposure Control/Personal Protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

This product has a melting point of 220ºC. Care should be taken during normal operation and during machine start-up and purging that the material not exceed 290ºC.

This product may release smoke when processed under normal processing conditions. Larger quantities of smoke may be generated during machine cleanout or purge. Local exhaust ventilation should be provided to minimize employee exposure.

During start-up and purging of the processing equipment, purged material should be collected and either quenched in water or placed in a closed, vented container until cool to minimize smoke generation. Purged material should not be allowed to accumulate uncovered or unquenched. Recommended processing conditions for this product should be followed at all times. Processing recommendations can be found at http://www.zeotherm.com/processing.

Thermoplastic vulcanizates (TPV) may accumulate electrostatic charges during unloading and transport operations. Electrostatic charges may cause a flash fire in the presence of volatile or flammable materials. Eliminate ignition sources, including static buildup; provide adequate ventilation; bond, ground, and properly vent containers, conveyors, process control devices, and other transfer equipment. Ground all equipment and pour the product slowly into chute or vessel under inert gas when flammable materials are present. 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).

Combustible dust clouds may be created where operations produce dust. Minimize dust generation and accumulation, especially on horizontal surfaces and duct work. Handling and processing operations should be conducted in accordance with NFPA-654 or similar best practices.

Abnormal conditions such as equipment malfunction or using improper equipment or procedures, or hangup or stagnation of material during processing may cause decomposition. Employees involved in removing decomposing material should be provided suitable air-supplied respirators, such as an approved positive pressure self-contained breathing apparatus.

Compounding ingredients added to elastomer products may require special handling. It is the user's responsibility to follow the recommended precautions of the individual additive suppliers.

Post-processing operations involving heat sufficient to result in polymer breakdown emitting smoke and fumes should be conducted in such a manner to avoid inhalation of fumes. Local exhaust ventilation and respiratory protection may be required.

7.2. Conditions for safe storage, including any incompatibilities

No special requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

	OSHA			ACGIH	
Chemical Name:	**PEL**	**AL**	**STEL**	**TLV**	**STEL**
Cured Acrylate Elastomer / Polyamide Blend	NE	NE	NE	NE	NE
Talc (within a TPV matrix)	20 mppcf	NE	NE	2 mg/m3 TWA RD (particulate matter containing no asbestos and < 1% crystalline silica)	NE
Carbon Black (within a TPV matrix)	3.5 mg/m3 TWA	NE	NE	3.5 mg/m3 TWA	NE

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

8.2. Exposure controls

Appropriate Engineering Controls: Exhaust ventilation is strongly recommended due to the formation of smoke and toxic pyrolysis products during start-up, purging and normal operation.

Individual Protection Measures

Eye/Face Protection: Follow facility guidelines in the absence of dusts. Snug fitting chemical goggles should be worn in dusty work environments. 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 Protection: Use of proper chemical hygiene practices is recommended. When material is heated, wear chemically resistant thermally insulating gloves to protect against 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. 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

9.1. Information on basic physical and chemical properties

Physical State:	Solid
Odor:	Mild Characteristic rubber odor
Vapor Pressure:	Negligible
Volatiles (minus H2O) w/w%:	<0.01

Color:	Black
Water Solubility:	Insoluble
Specific Gravity:	1.1

SECTION 10: Stability and reactivity

10.1. Reactivity	Hazardous polymerization will not occur.
10.2. Chemical stability	This material is stable when properly handled and stored.
10.3. Possibility of hazardous reactions	None Known
10.4. Conditions to avoid	Overheating; Keep away from sources of ignition; Minimize dust generation and accumulation.
10.5. Incompatible materials	Oxidizing materials, Strong acids, Strong alkalis
10.6. Hazardous decomposition products	Carbon monoxide, Carbon dioxide, Hydrocarbons, Nitrogen oxides, Aniline, Caprolactam, Alcohols, Fatty acids, Esters

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute Toxicity:	**ORAL LD_{50} (rat)**	**DERMAL LD_{50} (rabbit)**	**INHALATION LC_{50} (rat)**
Cured Acrylate Elastomer / Polyamide Blend			
Talc (within a TPV matrix)	>5000 mg/kg		
Carbon Black (within a TPV matrix)	>8,000 mg/kg (rat)	>3 g/kg (rabbit)	

Carcinogenicity	IARC	NTP
Cured Acrylate Elastomer / Polyamide Blend	Not Listed	Not Listed
Talc (within a TPV matrix)	Group 3	Not Listed
Carbon Black (within a TPV matrix)	Group 2B	Not Listed

Section Comments: This product has not been tested in animal experiments. The data has been taken from available literature on the components.

SECTION 12: Ecological information

Toxicity: This product has not been tested as a whole. The data has been taken from available literature on the components.

Aquatic LC50 (96h): LC50 (Brachydanio rerio) - >1000 mg (Carbon Black)/L

SECTION 13: Disposal considerations

13.1. 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: Not classified as a hazardous material for transport.

International Air Transport Authority (IATA) UN Number: Not classified as a dangerous good for transport.

International Maritime Organization (IMO) UN Number: Not classified as a dangerous good for transport.

SECTION 15: Regulatory information

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

Chemical Inventory Status:

Australia (AICS):	Listed	**Canada (DSL):**	Listed
China:	Listed	**EU (EINECS/ELINCS):**	Monomers Listed
Japan (ENCS):	Listed	**Korea (KECL):**	Listed
Philippines (PICCS):	Listed	**Taiwan (NECSI):**	Listed
United States (TSCA):	Listed		

United States Regulatory Status

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

This product contains the following chemical(s) exceeding the *de minimis* amount subject to reporting under SARA 313: Carbon black

State Right to Know This product contains chemical(s) exceeding the *de minimis* amount subject to disclosure under the following State Right-to-Know regulations:

Chemical Name	CAS #	Key (See Below)
Cured Acrylate Elastomer / Polyamide Blend	Proprietary Mixture	PA NH
Talc (within a TPV matrix)	14807-96-6	PA HS NJ HS MA HS
Carbon Black (within a TPV matrix)	1333-86-4	PA HS NJ HS MA HS

KEY:	Description	KEY:	Description
PA HS	Pennsylvania Hazardous Substance	NJ SP	New Jersey Special Health Hazard
PA SP	Pennsylvania Special Hazardous Substance	NJ TS	New Jersey Trade Secret Number
PA NH	Pennsylvania Non Hazardous Substance >3%	MA E	Massachusetts Extraordinary Hazardous Substance
NJ HS	New Jersey Hazardous Substance	MA HS	Massachusetts Hazardous Substance

California Proposition 65 WARNING: Contains the following chemical(s) known to the State of California to cause cancer or reproductive harm:

Aniline

Canada This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

WHMIS Hazard Class Not a controlled product under WHMIS

Ingredient Disclosure List This product contains the following component(s) included on the Canadian Hazardous Products Ingredient Disclosure List exceeding the *de minimis* concentration subject to disclosure:

Silica, talc, non-asbestos form
Carbon black

SECTION 16: Other information

Prepared by:	This MSDS was prepared by Zeon Chemicals L.P.
Revision Summary:	This document supersedes MSDS dated: 10-16-2012
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.
Disclaimer of Liability	As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of this material. Information contained herein is believed to be true and accurate but all statements or suggestions are made without warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material or the results to be obtained from the use thereof. Compliance with all applicable federal, state, and local laws and regulations remains the responsibility of the user.

END OF SDS