

KALREZ® perfluoroelastomer semi-finished parts and shapes

Version 2.0

Revision Date 02/16/2009

Ref. 150000003136

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : KALREZ® perfluoroelastomer semi-finished parts and shapes
Product Grade/Type : 1018, 1050LF, 2035, 2044, 2085, 3018, 3035, 4079, 4079AMS, 4079UP, 6185, 6190, 6190UP, 6230, 6230A, 6235, 6375, 6375UP, 6885, 6890, 7075, 7075UP, 7090, AEROSEAL 7777, AEROSEAL 7797, 8900,
MSDS Number : 150000003136
Manufacturer : DuPont Performance Elastomers L.L.C
Bellevue Park Corporate Center, 300 Bellevue Parkway
Wilmington, Delaware 19809
Product Information : 1-800-441-7515 (outside the U.S. 1-302-774-1000)
Medical Emergency : 1-800-441-3637 (outside the U.S. 1-302-774-1139)
Transport Emergency : CHEMTREC: 1-800-424-9300 (outside the U.S. 1-703-527-3887)

SECTION 2. HAZARDS IDENTIFICATION

Potential Health Effects

Skin

Magnesium oxide : May irritate skin.

Perfluoroalkylether : May irritate skin.

Eyes

Carbon black : Particulate matter may cause: mechanical irritation with tearing, pain or visual impairment

Magnesium oxide : May irritate eyes.

Perfluoroalkylether : May irritate eyes.

Inhalation

Perfluoroalkylether : Inhalation of decomposition products from overheating may cause lung irritation or shortness of breath.

Carcinogenicity

Material

IARC

NTP

OSHA

Carbon black

2B

Titanium dioxide

2B

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
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PERFLUOROELASTOMER		70 - 100 %
Carbon black	1333-86-4	0 - 45 %
Magnesium oxide	1309-48-4	0 - 5 %
Perfluoroalkylether	60164-51-4	0 - 5 %

SECTION 4. FIRST AID MEASURES

- Skin contact : Wash off with soap and water.
- Eye contact : Rinse thoroughly with plenty of water, also under the eyelids. Consult a physician.
- Inhalation : If breathed in, move person into fresh air. Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. Consult a physician.
- Ingestion : If victim is conscious: Drink water as a precaution. Consult a physician.

SECTION 5. FIRE-FIGHTING MEASURES

- Fire and Explosion Hazard : Burning produces obnoxious and toxic fumes.
- Suitable extinguishing media : Carbon dioxide (CO₂), Foam, Water, Dry chemical
- Firefighting Instructions : Wear self-contained breathing apparatus and protective suit. Wear neoprene gloves during cleaning up work after a fire. Evacuate personnel to safe areas. Do not allow run-off from fire fighting to enter drains or water courses. The solid polymer can only be burned with difficulty.

SECTION 6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

- Safeguards (Personnel) : Refer to protective measures listed in sections 7 and 8.
- Spill Cleanup : Shovel into suitable container for disposal.

SECTION 7. HANDLING AND STORAGE

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- Handling (Personnel) : Protect from contamination. Provide appropriate exhaust ventilation at dryers, machinery and at places where dust or volatiles can be generated. In case of insufficient ventilation, wear suitable respiratory equipment. Do not breathe dust. Do not breathe fumes evolved from hot polymer. General precaution for all plastics and elastomers: Wash hands before breaks and immediately after handling the product. Regular cleaning of equipment, work area and clothing. When using do not eat, drink or smoke.
- Handling (Physical Aspects) : General precaution for all plastics and elastomers: Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Avoid dust formation.
- Storage : Keep in a dry, cool and well-ventilated place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering controls : Use only in area provided with appropriate exhaust ventilation.
- Personal protective equipment
- Respiratory protection : Where there is potential for airborne exposures in excess of applicable limits, wear NIOSH approved respiratory protection.
- Hand protection : If the product is used at temperatures above 400 °C the surface may contain hydrogen fluoride condensate which may cause severe burns. In this case wear neoprene gloves.
- Eye protection : Safety glasses with side-shields
- Skin and body protection : If there is a potential for contact with hot/molten material wear heat resistant clothing and footwear.

Exposure Guidelines
Exposure Limit Values
Hydrogen fluoride, anhydrous

PEL	(OSHA)	3 ppm	TWA
TLV	(ACGIH)	0.5 ppm	TWA as F
TLV	(ACGIH)	2 ppm	Ceiling as F
Skin designation			

Carbon black

PEL	(OSHA)	3.5 mg/m3	8 hr. TWA	
PEL	(OSHA)	3.5 mg/m3	8 hr. TWA	
TLV	(ACGIH)	3.5 mg/m3	8 hr. TWA	
AEL *	(DUPONT)	0.5 mg/m3	8 & 12 hr. TWA	(Polynuclear Hydrocarbon content <0.1%) Includes Channel, Lamp, and Thermal Black.

Magnesium oxide

PEL	(OSHA)	15 mg/m3	8 hr. TWA	Total particulate.
TLV	(ACGIH)	10 mg/m3	8 hr. TWA	Inhalable fraction.

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* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: Solid parts & shapes
Color	: grey, to, black
Odor	: none
Water solubility	: insoluble

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	: Temperature > 400 °C (32 °F) Avoid heating for prolonged periods above the recommended upper processing limit.
Incompatibility	: Alkali metals Alkaline earth metals
Hazardous decomposition products	: Hazardous decomposition products Hydrogen fluoride, Carbonyl fluoride, Fluorinated hydrocarbons

SECTION 11. TOXICOLOGICAL INFORMATION

Carbon black	
Oral ALD	: > 25,100 mg/kg, rat
Skin irritation	: Species: animals (unspecified species) non-irritant
Eye irritation	: Species: animals (unspecified species) non-irritant
Repeated dose toxicity	: Inhalation inflammation, Respiratory Tract, Lungs, Emphysema
Carcinogenicity	: An increased incidence of tumours was observed in some laboratory animals but not in others., Overall weight of evidence indicates that the substance is not carcinogenic.
Mutagenicity	: Tests on bacterial or mammalian cell cultures did not show mutagenic effects., Evidence suggests this substance does not cause genetic damage in animals.

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Magnesium oxide	
Skin irritation	: Mild skin irritation
Eye irritation	: irritant
Perfluoroalkylether	
Dermal ALD	: ca. > 17,000 mg/kg, rabbit
Oral LD50	: > 37,400 mg/kg, rat
Inhalation 4 h ALC	: ca. > 19.54 mg/l, rat
Skin irritation	: Species: human Patch test non-irritant
Eye irritation	: Species: rabbit Draize Test non-irritant
Mutagenicity	: Did not cause genetic damage in cultured bacterial cells.
Further information	: The substance is a polymer and is not expected to produce toxic effects.

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity	
Carbon black	: Aquatic toxicity is unlikely due to low solubility.
Perfluoroalkylether	
96 h LC50	: <i>Oncorhynchus mykiss</i> (rainbow trout) > 1,000 mg/l
48 h static test EC50	: <i>Daphnia magna</i> (Water flea) > 1,000 mg/l
Additional ecological information	: This product has no known eco-toxicological effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal	: If recycling is not practicable, dispose of in compliance with local regulations. Can be landfilled or incinerated, when in compliance with local regulations. Incinerate only in incinerators capable of scrubbing out acidic combustion products.
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SECTION 14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

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SECTION 15. REGULATORY INFORMATION

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| SARA 313 Regulated Chemical(s) | : | SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313. |
| California Prop. 65 | : | This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects. |
| PA Right to Know Regulated Chemical(s) | : | Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances): Carbon black |
| NJ Right to Know Regulated Chemical(s) | : | Substances on the New Jersey Workplace Hazardous Substance List present at a concentration of 1% or more (0.1% for substances identified as carcinogens, mutagens or teratogens): Carbon black |

SECTION 16. OTHER INFORMATION

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| Restrictions for use | : | Do not use in medical applications involving permanent implantation in the human body. For other medical applications see DuPont Performance Elastomer's caution bulletin No. H-69237. |
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Before use read DuPont Performance Elastomer's safety information.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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