Miller and Company LLC
9700 West Higgins Road
Suite 1000
Rosemont, Illinois 60018

Telephone Number: 847-696-2400

Updated: December 5, 2012

Product: **Milco 19 GP Carbon Raiser**

The subject product is a mechanical blend of the following ingredients:

Component
Milco 15 Calcined Anthracite
Calcined Pitch Coke

Custom blended to specification at time of blending.

Since the mixture presents no greater hazard than any of the individual components, the Material Safety Data Sheets for the individual components are attached and satisfy the requirements of the data sheet for the mixture (Appendix A, Clarifications and Interpretations for the Hazard Communication Standard (HCS), OSHA CPL 2-2, 38B, 15 August 1988).

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Material Safety Data Sheet

Calcined Medium Temperature Pitch Coke

1 Chemical product and company identification

Common name	: **Calcined Medium Temperature Pitch Coke**	**Code**	:
Supplier	: Sasol Synfuels Marketing P.O.BOX 4211 Randburg 2125 Republic of South Africa TEL: +27 11 889 9649 FAX: +27 11 889 9699	**MSDS#**	:
Synonym	: Calcined MTP Coke	**Validation date**	: **23 March 2006**
Trade name	: Calcined Medium Temperature Pitch Coke	**Print date**	: 23 March 2006
Material uses	: Recarburiser, speciality graphite, electrodes.	**Prepared by**	: **Kgomotso Pule**
Manufacturer	: Sasol Synfuels Refining Carbo-Tar P.O. Box 7280 Secunda 2302 South Africa TEL: +27 17 610 8746 FAX: +27 17 610 2112	**In case of emergency**	: SOUTH AFRICA: 0800 11 28 90 INTERNATIONAL: +27 17 610 4444

2 Composition / information on ingredients

Name	CAS #	% by weight	Exposure limits
Fixed carbon	150339-33-6	100	TWA: 10 mg/m^3 Period: 8 hour(s). Form: Dust
May contain traces of sulphur, nitrogen and ash.			

3 Hazards identification

Physical state and appearance : Solid.

Emergency overview : CAUTION!

DUST MAY CAUSE EXPLOSION IF IN CONTACT WITH IGNITION SOURCE.

Keep away from ignition sources. Transfer operations must be electrically grounded to dissipate static buildup. Do not breathe dust. Keep away from incompartibles such as oxidising agents.

Routes of entry : Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eyes : Nuisance particulate.

Skin : No known significant effects or critical hazards.

Inhalation : Nuisance particulate.

Ingestion : Hazardous in case of ingestion.

Continued on next page

Potential chronic health effects : ***CARCINOGENIC EFFECTS*** *Not listed.*
MUTAGENIC EFFECTS *Not listed.*
TERATOGENIC EFFECTS *Not listed.*

Medical conditions aggravated by overexposure: : *Repeated or prolonged exposure may result in increase in the upper respiratory system infections.*

Overexposure /signs/symptoms : *No additional remark.*

See toxicological information (section 11)

4 First aid measures

Eye contact : *Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.*

Skin contact : *In case of irritation, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse.*

Inhalation : *If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if irritation occurs.*

Ingestion : *Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. If large quantities of this material are swallowed, call a physician immediately.*

Notes to physician : *Not available.*

5 Fire fighting measures

Flammability of the product : *May be combustible at very high temperature.*

Autoignition temperature : *Not available.*

Flash points : *Not applicable.*

Flammable limits : *Not available.*

Products of combustion : *carbon oxides (CO, CO_2) sulfur oxides (SO_2, SO_3...)*

Fire hazards in presence of various substances : *Not available.*

Explosion hazards in presence of various substances : *Not available.*

Fire fighting media and instructions : *SMALL FIRE: Use DRY chemical powder.*
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Protective clothing (fire) : *Be sure to use an approved/certified respirator or equivalent.*

Special remarks on fire hazards : *No additional remark.*

Special remarks on explosion hazards : *Dust is an explosion hazard.*

6 Accidental release measures

Small spill and leak : *Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements. Avoid dust while collecting the material.*

Large spill and leak : *Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements. Be careful not to generate dust during the clean-up process.*

Continued on next page

7 Handling and storage

Handling : Avoid breathing dust.

Storage : Keep container tightly closed, away from oxidising agents.
Keep container tightly closed in a cool, well-ventilated place.

8 Exposure controls, personal protection

Engineering controls : Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal protection

Eyes : Safety glasses.

Body : Overalls buttoned to the neck and wrist.

Respiratory : Approved/certified disposable particulate dust mask.

Hands : Gloves.

Feet : Safety boots.

Protective clothing (pictograms) :

Personal protection in case of a large spill : Safety goggles. Overalls. Be sure to use a MSHA/NIOSH approved dust respirator or equivalent. Gloves. Boots. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Product name	Exposure limits
Fixed carbon May contain traces of sulphur, nitrogen and ash.	TWA: 10 mg/m^3 Period: 8 hour(s). Form: Dust

9 Physical and chemical properties

Physical state and appearance : Solid.

Color : Black.

Odor : Not available.

Taste : Not available.

Molecular weight : Not applicable.

Molecular formula : Not applicable.

pH (1% soln/water) : Not applicable.

Boiling/condensation point : Not applicable.

Melting/freezing point : Not available.

Critical temperature : Not available.

Specific gravity : Real density: 2-2.05 g/cm3 (ASTM D 4892/89) Vibrated bulk density: 0.9 g/cm3

Vapor pressure : Not applicable.

Vapor density : Not available.

Volatility : Not available.

Odor threshold : Not available.

Evaporation rate : Not available.

VOC : Not available.

Viscosity : Not available.

LogK_{ow} : The product is insoluble in water and octanol.

Ionicity (in water) : Not available.

Continued on next page

Dispersion properties : Is not dispersed in water.

Solubility : Insoluble in water, methanol, diethyl ether, n-octanol, acetone.

Physical chemical comments : No additional remark.

10 Stability and reactivity

Stability and reactivity : The product is stable.

Conditions of instability : Very high temperatures.

Incompatibility with various substances : Highly reactive with oxidizing agents.

Hazardous decomposition products : Not applicable.

Hazardous polymerization : Will not occur.

11 Toxicological information

Toxicity to animals : Not available.

Chronic effects on humans : Not available.

Other toxic effects on humans : No specific information is available in our database regarding the other toxic effects of this material for humans.

Special remarks on toxicity to animals : Not available.

Special remarks on chronic effects on humans : Repeated overexposure may result in chronic lung deposition.

Special remarks on other toxic effects on humans : Not available.

12 Ecological information

Ecotoxicity : Not available.

BOD and COD : Not available.

Biodegradable/OECD : Not available.

Mobility : Not available.

Products of degradation : Not available.

Toxicity of the products of biodegradation : Not available.

Special remarks on the products of biodegradatior : No additional remark.

13 Disposal considerations

Waste information : Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Waste stream : No data available.

Consult your local or regional authorities.

14 Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Class	Not applicable	Not applied (Non Dangerous Substances)	Not applicable.	Not applicabl		-
TDG Class	Not applicable.	Not applied (Non Dangerous Substances)	Not applicable.	Not applicabl		-
IMDG Class	Not applicable.	Not applied (Non Dangerous Substances)	Not applicable.	Not applicabl		-

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This MSDS summarises at the date of issue our best knowledge of the health, safety and environmental hazard information related to the product, and in particular how to safely handle, use, store and transport the product in the workplace. Since SASOL and its subsidiaries cannot anticipate or control the conditions under which the product may be handled, used, stored or transported, each user must, prior to usage, review this MSDS in the context of how the user intends to handle, use, store or transport the product in the workplace and beyond, and communicate such information to all relevant parties.If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.

We shall not assume any liability for the accuracy or completeness of the information contained herein or any advice given unless there has been gross negligence on our part. In such event our liability shall be limited only to direct damages suffered. Our responsibility for product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request. All risk associated with the possession and application of the product passes on delivery.

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MDL INFORMATION SYSTEMS, INC.
1281 Murfreesboro Road, Suite 300
Nashville, TN 37217-2423
1-615-366-2000

EMERGENCY TELEPHONE NUMBER:
1-800-424-9300 (NORTH AMERICA)
1-703-527-3887 (INTERNATIONAL)

SUBSTANCE: CALCINED ANTHRACITE COAL

TRADE NAMES/SYNONYMS:
COAL, ANTHRACITE, CALCINED; CALCINED ANTHRACITE; DEVOLATIZED ANTHRACITE; COAL DUST; COAL CALCINATE; OHS35039

CHEMICAL FAMILY: polynuclear, aromatic, hydrocarbons

CREATION DATE: Apr 20 1993
REVISION DATE: Oct 31 2007

SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

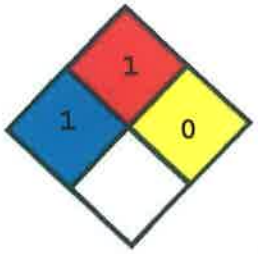
COMPONENT: CALCINED ANTHRACITE COAL
CAS NUMBER: 68187-59-7
EC NUMBER (EINECS): 269-111-1
PERCENTAGE: 100.0

COMPONENT: QUARTZ
CAS NUMBER: 14808-60-7
EC NUMBER (EINECS): 238-878-4
PERCENTAGE: >1

SECTION 3 HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=1 FIRE=1 REACTIVITY=0

NFPA



EC CLASSIFICATION (CALCULATED): Not determined.

EMERGENCY OVERVIEW:
COLOR: black
PHYSICAL FORM: solid
MAJOR HEALTH HAZARDS: cancer hazard (in humans)
PHYSICAL HAZARDS: Dust/air mixtures may ignite or explode.

POTENTIAL HEALTH EFFECTS:
INHALATION:
SHORT TERM EXPOSURE: irritation
LONG TERM EXPOSURE: difficulty breathing, bluish skin color, lung damage, cancer
SKIN CONTACT:
SHORT TERM EXPOSURE: irritation
LONG TERM EXPOSURE: no information is available
EYE CONTACT:

SHORT TERM EXPOSURE: irritation
LONG TERM EXPOSURE: no information on significant adverse effects
INGESTION:
SHORT TERM EXPOSURE: no information on significant adverse effects
LONG TERM EXPOSURE: no information is available

CARCINOGEN STATUS:
OSHA: N
NTP: Y
IARC: Y

SECTION 4 FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

SKIN CONTACT: Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

EYE CONTACT: Flush eyes with plenty of water for at least 15 minutes. Then ge immediate medical attention.

INGESTION: If a large amount is swallowed, get medical attention.

SECTION 5 FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Slight fire hazard. Dust/air mixtures may ignite or explode.

EXTINGUISHING MEDIA: regular dry chemical, carbon dioxide, water, regular foa

Large fires: Use regular foam or flood with fine water spray.

FIRE FIGHTING: Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Dike for later disposal. Use extinguishing agents appropriate for surrounding fire. Avoid inhalation of material or combustion by-products. Stay upwind and kee out of low areas.

SECTION 6 ACCIDENTAL RELEASE MEASURES

WATER RELEASE:
Subject to California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Keep out of water supplies and sewers.

OCCUPATIONAL RELEASE:
Large spills: Collect spilled material in appropriate container for disposal. Avoid generating dust. Clean up residue with a high-efficiency particulate filter vacuum.

SECTION 7 HANDLING AND STORAGE

Store and handle in accordance with all current regulations and standards.
Keep separated from incompatible substances.

Use methods to minimize dust.

SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:
CALCINED ANTHRACITE COAL:
COAL DUST:
2 mg/m3 OSHA TWA (respirable particulate) (<5% crystalline silica)
0.1 mg/m3 OSHA TWA (respirable particulate) (>=5% crystalline silica)
2 mg/m3 UK OES TWA (respirable dust)

MEASUREMENT METHOD: Particulate filter; Gravimetric; NIOSH IV # 0600, Nuisance Dust (Respirable); ALSO # 7500

COAL DUST - ANTHRACITE:
0.4 mg/m3 ACGIH TWA (respirable particulate)

QUARTZ:
0.3 mg/m3 OSHA TWA (total particulate)
0.1 mg/m3 OSHA TWA (respirable particulate)
0.05 mg/m3 ACGIH TWA (respirable fraction)
0.05 mg/m3 NIOSH recommended TWA 10 hour(s) (respirable dust)
0.3 mg/m3 UK MEL TWA (respirable particulate)

MEASUREMENT METHOD: Particulate filter; Low-temperature ashing; X-ray diffraction spectrometry; NIOSH IV # 7500; ALSO # 7601, # 7602

VENTILATION: Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles. Provide an emergency ey wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.
Any chemical cartridge respirator with organic vapor cartridge(s) and dust and mist filter(s).
Any chemical cartridge respirator with organic vapor cartridge(s) and high-efficiency particulate filter(s).
Any air-purifying respirator with a full facepiece, an organic vapor canister and a dust, mist, and fume filter.
Any powered, air-purifying respirator with a full facepiece and a

high-efficiency particulate filter.
For Unknown Concentrations or Immediately Dangerous to Life or Health -
Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.
Any self-contained breathing apparatus with a full facepiece.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: solid
COLOR: black
ODOR: Not available
BOILING POINT: Not applicable
MELTING POINT: Not available
VAPOR PRESSURE: Not applicable
VAPOR DENSITY: Not applicable
SPECIFIC GRAVITY: Not available
WATER SOLUBILITY: Not available
PH: Not applicable
VOLATILITY: Not applicable
ODOR THRESHOLD: Not available
EVAPORATION RATE: Not applicable
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available
FLASHPOINT: Not determined

SECTION 10 STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: Avoid generating dust.

INCOMPATIBILITIES: oxidizing materials, metals, metal salts, halogens, combustible materials, reducing agents, bases, acids

CALCINED ANTHRACITE COAL:
OXIDIZERS (STRONG): Fire and explosion hazard.

QUARTZ:
ALKALIES (STRONG): May be attacked.
CHLORINE TRIFLUORIDE: Possible explosion.
HYDROCHLORIC ACID: Exothermic reaction.
HYDROFLUORIC ACID: May be attacked.
MANGANESE TRIFUORIDE: Violent reaction.
METALS: May produce violent explosion.
OXIDIZERS (STRONG): Fire and explosion hazard.
OXYGEN TRIFUORIDE: Possible explosive reaction.
OZONE: Possible explosive reaction in presence of organic materials.
VINYL ACETATE: Vigorous reaction.
XENON HEXAFLUORIDE: Possible detonation.

COAL DUST:
OXIDIZERS (STRONG): Fire and explosion hazard.

HAZARDOUS DECOMPOSITION:

Thermal decomposition products: oxides of carbon

POLYMERIZATION: Will not polymerize.

SECTION 11 TOXICOLOGICAL INFORMATION

QUARTZ:
TOXICITY DATA:
16 mppcf/8 hour(s)-17.9 year(s) intermittent inhalation-human TCLo; 300 ug/m3/10 year(s) intermittent inhalation-human LCLo; 90 mg/kg intravenous-rat LDLo; 200 mg/kg intratracheal-rat LDLo; 40 mg/kg intravenous-mouse LDLo; >20 mg/kg intratracheal-mouse LD; 20 mg/kg intravenous-dog LDLo; 80 mg/m3/26 week(s) intermittent inhalation-rat TCLo; 108 mg/m3/6 hour(s)-3 day(s) intermittent inhalation-rat TCLo; 58 mg/m3/13 week(s) intermittent inhalation-rat TCLo; 1475 ug/m3/8 hour(s)-21 week(s) intermittent inhalation-mouse TCLo; 4932 ug/m3/24 hour(s)-39 week(s) continuous inhalation-mouse TCLo; 28 mg/m3/3 week(s) intermittent inhalation-guinea pig TCLo; 3 mg/m3/6 hour(s)-78 week(s) intermittent inhalation-hamster TCLo
CARCINOGEN STATUS: NTP: Known Human Carcinogen; IARC: Human Sufficient Evidence, Animal Sufficient Evidence, Group 1; EC: Category 2
Adenocarcinomas and squamous-cell carcinomas of the lung in rats were produced after inhalation or repeated intratracheal instillation of various forms of crystalline silica. Malignant lymphomas developed in rats after intrapleural and intraperitoneal injections of quartz suspensions and intrapleural injection of cristobalite and tridymite. Epidemiologic studies indicate lung cancer occurs more frequently among silicotics than in the general population.
ACUTE TOXICITY LEVEL: Insufficient Data.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: respiratory disorders
TUMORIGENIC DATA:
50 mg/m3 inhalation-rat TCLo/6 hour(s)-71 week(s) intermittent; 45 mg/kg intraperitoneal-rat TDLo; 90 mg/kg intravenous-rat TDLo; 90 mg/kg intrapleural-rat TDLo; 111 mg/kg intratracheal-rat TDLo; 100 mg/kg intratracheal-rat TDLo/19 week(s) intermittent; 900 mg/kg implant-rat TDLo; 4000 mg/kg implant-mouse TDLo; 83 mg/kg intrapleural-hamster TDLo; 90 mg/kg intraperitoneal-rat TD/4 week(s) intermittent; 450 mg/kg intraperitoneal-rat TD/4 week(s) intermittent; 4554 mg/kg implant-rat TD; 200 mg/kg intrapleural-rat TD; 100 mg/kg intrapleural-rat TD; 100 mg/kg intrapleural-rat TD; 100 mg/kg intrapleural-rat TD
MUTAGENIC DATA:
micronucleus test - human lung 40 ug/cm2; micronucleus test - hamster lung 160 ug/cm2
ADDITIONAL DATA: Smoking may enhance the toxic effects.

HEALTH EFFECTS:
INHALATION:
ACUTE EXPOSURE:
CALCINED ANTHRACITE COAL: May cause irritation.

QUARTZ: Exposure to high concentrations may cause physical discomfort of the upper respiratory tract.

CHRONIC EXPOSURE:
CALCINED ANTHRACITE COAL: Inhalation of anthracite coal dust for several

years may cause coal workers pneumoconiosis. Coal workers pneumoconiosis exists in 2 forms: Simple, which results from carbon particles alone, and complicated, from a mixture of particles resulting in progressive massive fibrosis. Simple pneumoconiosis is slow in onset with nonspecific symptoms including coughing, wheezing, dyspnea, and black sputum. Simple pneumoconiosis may occur concomitantly with chronic bronchitis and emphysema and is associated with minimal respiratory impairments. Diagnosis is made on the presence of small opacities on chest X-ray. As the simple pneumoconiosis progresses to an advanced stage, some reduction in ventilatory function may occur. Coal worker's pneumoconiosis appears to stop when exposure ceases, but progressive massive fibrosis may still develop. Complicated pneumoconiosis is diagnosed by large opacities on chest X-ray. Complicated pneumoconiosis is associated with reduction in ventilatory capacity, low diffusing capacity, abnormalities of gas exchange, low arterial oxygen tension, severe emphysema, pulmonary hypertension, right heart failure, and premature death. Tuberculosis and bacterial pneumonia are serious complications. Caplan's syndrome, depressed interferon activity, and cytotoxic effects have been reported. Freshness and increased surface area of dust particles increases cytotoxicity.

QUARTZ: Inhalation of very high concentrations of finely divided crystalline silica dust, exposure ranging from a few weeks to 4-5 years, may cause a rapidly developing silicosis, characterized by pulmonary insufficiency with severe dyspnea, violent coughing, tachypnea, weight loss, and cyanosis leading to the development of cor pulmonale and death within a relatively short period of time. A slowly developing silicosis may result from exposure for 6 months-30 years to relatively low levels of the dust. The first symptom is usually a slowly increasing, non-disabling exertional dyspnea due to pulmonary fibrosis and the emphysema associated with it. Continued exposure may increase the rate of progression of the disease. Also, the fibrogenic action may continue when exposure ceases. As the fibrosis advances, other symptoms may include shortness of breath, productive cough, wheezing, chest tightness or pain, marked weakness, decreased capacity for work, and repeated non-specific chest illnesses. Cyanosis, clubbing of digits, orthopnea, or serious weight loss are not usually evident until the disease is advanced. Pulmonary infections, which may be indicated by hemoptysis, and cardiac decompensation may exacerbate the symptoms. Three major complications, which are the most frequent causes of death, are pulmonary tuberculosis, respiratory insufficiency which is due to the massive emphysematous and fibrotic changes and is sometimes accompanied by chronic cor pulmonale, and acute bronchopulmonary infection. A number of studies have shown that persons diagnosed as having silicosis have an increased risk for dying from lung cancer. This increase has been seen among miners, quarry workers, foundry workers, ceramic workers, granite workers, and stone cutters. In some of these studies, the risk of lung cancer increased with the duration of employment. Various forms and preparations of crystalline silica produced adenocarcinomas and squamous cell carcinomas of the lungs in rats.

SKIN CONTACT:

ACUTE EXPOSURE:

CALCINED ANTHRACITE COAL: No data available.

QUARTZ: May cause irritation of intact skin due to mechanical abrasion. If the skin is abraded, a heavy growth of scar tissue may be induced.

CHRONIC EXPOSURE:
CALCINED ANTHRACITE COAL: No data available.

QUARTZ: No data available.

EYE CONTACT:
ACUTE EXPOSURE:
CALCINED ANTHRACITE COAL: No data available.

QUARTZ: May cause irritation due to mechanical action. Particles of silic in the range of 2-3 micrometers introduced into the corneal stroma of rabbit eyes caused very little reaction. These same particles introduced into the anterior chamber resulted in an inflammatory reaction in 3-5 weeks with the formation of fibrotic nodules in the iridocorneal angle. Finely divided silica injected into the vitreous of rabbit eyes has caused necrosis of the retina and atrophy of the choroid.

CHRONIC EXPOSURE:
CALCINED ANTHRACITE COAL: No data available.

QUARTZ: An abnormally high silicon content in the cornea, and a gradual decrease in visual acuity due to corneal opacities in the pupillary area, have been reported in a group of foundry workers.

INGESTION:
ACUTE EXPOSURE:
CALCINED ANTHRACITE COAL: No data available.

QUARTZ: Effects of ingestion are due to mechanical action as crystalline silicas are biologically inert.

CHRONIC EXPOSURE:
CALCINED ANTHRACITE COAL: No data available.

QUARTZ: No data available.

SECTION 12 ECOLOGICAL INFORMATION

Not available

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable regulations.

SECTION 14 TRANSPORT INFORMATION

No classification assigned.

LAND TRANSPORT ADR/RID: No classification assigned.

AIR TRANSPORT IATA/ICAO: No classification assigned.

MARITIME TRANSPORT IMDG: No classification assigned.

SECTION 15 REGULATORY INFORMATION

U.S. REGULATIONS:
  TSCA INVENTORY STATUS: Y

  TSCA 12(b) EXPORT NOTIFICATION: Not listed.
  CERCLA SECTION 103 (40CFR302.4): N
  SARA SECTION 302 (40CFR355.30): N
  SARA SECTION 304 (40CFR355.40): N
  SARA SECTION 313 (40CFR372.65): N
  SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):
    ACUTE: N
    CHRONIC: Y
    FIRE: N
    REACTIVE: N
    SUDDEN RELEASE: N
  OSHA PROCESS SAFETY (29CFR1910.119): N
STATE REGULATIONS:
  California Proposition 65: Y
    Known to the state of California to cause the following:
      Silica, crystalline (airborne particles of
      respirable size)
        Cancer (Oct 01, 1988)
EUROPEAN REGULATIONS:
  EC NUMBER (EINECS): 269-111-1

SECTION 16 OTHER INFORMATION
