

## Aseal 370

<b>1</b>	<b>PRODUCT AND COMPANY IDENTIFICATION</b>
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**Product Identifier:** Aseal 370  
**Common Name:** Alkali Metal Silicate/Molybdenum Disulfide/Graphite Compound  
**SDS Number:** A49  
**Revision Date:** 6/3/2015  
**Version:** 1  
**Chemical Family:** Alkali Metal Silicate/Molybdenum Disulfide Compound  
**Product Use:** Dry film lubricant  
**Supplier Details:** Coatings for Industry, Inc.  
 319 Township Line Road  
 Souderton, PA 18964

**Emergency:** Infotrac  
**Contact:** USA: 1-800-535-5053 / International :352-323-3500  
**Phone:** 215-723-0919  
**Fax:** 215-723-0911  
**Email:** cs@cficoatings.com  
**Web:** www.cficoatings.com

<b>2</b>	<b>HAZARDS IDENTIFICATION</b>
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**Classification of the substance or mixture**

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS):**  
 no GHS classifications indicated

**GHS Label elements, including precautionary statements**

**GHS Signal Word:** **NONE**

no GHS pictograms indicated for this product

**GHS Hazard Statements:**

no GHS hazards statements indicated

**GHS Precautionary Statements:**

P201 - Obtain special instructions before use.  
 P233 - Keep container tightly closed.  
 P262 - Do not get in eyes, on skin, or on clothing.  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
 P353 - Rinse skin with water/shower.  
 P362 - Take off contaminated clothing and wash before reuse.  
 P404 - Store in a closed container.

<b>3</b>	<b>COMPOSITION/INFORMATION OF INGREDIENTS</b>
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**Ingredients:**

Cas#	%	Chemical Name
7732-18-5	55-70%	Water
1312-76-1	10-15%	Silicic acid, potassium salt
1317-33-5	12-18%	Molybdenum sulfide (MoS <sub>2</sub> )
7782-42-5	8-12%	Graphite

## Aiseal 370

**4 FIRST AID MEASURES**

<b>Inhalation:</b>	If inhaled, remove to fresh air. Get immediate medical attention.
<b>Skin Contact:</b>	Remove contaminated clothing and footwear immediately, and wash before reuse. Discard clothing and footwear which cannot be decontaminated. Promptly flush skin with water until all chemical is removed. Get medical attention if irritation develops and persists.
<b>Eye Contact:</b>	Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation. Then remove contact lenses, if easily removeable, and continue irrigation for not less than 15 minutes. Get immediate medical attention.
<b>Ingestion:</b>	Do not induce vomiting. Rinse mouth with water. Give 200-300 ml (8 oz.) of water to drink. Get prompt, qualified medical attention.

**5 FIRE FIGHTING MEASURES**

<b>Flash Point:</b>	Not Applicable
<b>Extinguishing Media -</b>	Use sand or carbon dioxide (CO <sub>2</sub> ).
<b>Special Fire Fighting Procedures -</b>	Do not use extinguishing media containing water as a reaction with aluminum may produce hydrogen gas. Wear protective clothing and NIOSH/OSHA approved positive pressure self contained breathing apparatus in fire conditions.
<b>Unusual Fire and Explosion Hazards -</b>	If material is allowed to evaporate to produce dry aluminum, the aluminum can then react with water to produce hydrogen gas.

**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. Spilled material is a slipping hazard.

**Spill Clean Up**

Soak up with sawdust, sand, oil dry or other absorbent material. Shovel or sweep up.

**Disposal Considerations:**

Preferred options for disposal are: (1) Separate solids from liquid by precipitation and decanting or filtering. Dispose of dry solids in a landfill that is permitted, licensed or registered by a state to manage industrial solid waste. Discharge liquid filtrate to a wastewater treatment system. (2) Incinerate only if incinerator is capable of scrubbing out hydrogen fluoride and other acidic combustion products. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial, and local regulations.

**7 HANDLING AND STORAGE**

<b>Handling Precautions:</b>	Avoid breathing vapors or mist. Avoid contact with eyes, skin, or clothing. Consider normal working hygiene. Launder contaminated clothing. Wash thoroughly after handling.
<b>Storage Requirements:</b>	Protect from freezing.

**8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

<b>Engineering Controls:</b>	Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.
<b>Personal Protective Equipment:</b>	Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Alseal 370**

Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection: Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection: impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Components with workplace control parameters

**Molybdenum sulfide (MoS2) (1317-33-5)**

TWA 15 mg/m3 USA. Occupational Exposure Limits (OSHA) - Table Z- 1 Limits for Air Contaminants  
 TWA 10 mg/m3 USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

TWA 3 mg/m3 USA. ACGIH Threshold Limit Values (TLV)  
 TWA 10 mg/m3 USA. ACGIH Threshold Limit Values (TLV)

**Graphite (7782-42-5)**

TWA 2.5 mg/m3 USA. NIOSH Recommended Exposure Limits  
 Also see specific listing for Graphite (synthetic).

TWA 10 mg/m3 USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000  
 TWA 5 mg/m3 USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000  
 TWA 2.5 mg/m3 USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

TWA 2 mg/m3 USA. ACGIH Threshold Limit Values (TLV)

<b>9</b>	<b>PHYSICAL AND CHEMICAL PROPERTIES</b>
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<b>Appearance:</b>	Gray	<b>Odor:</b>	No distinct odor
<b>Physical State:</b>	Liquid	<b>Percent Volatile:</b>	80-85% by volume
<b>Spec Grav./Density:</b>	1.3	<b>Freezing/Melting Pt.:</b>	32 F
<b>Boiling Point:</b>	212 F		
<b>pH:</b>	12		

<b>10</b>	<b>STABILITY AND REACTIVITY</b>
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<b>Chemical Stability:</b>	Product is stable under normal conditions.
<b>Materials to Avoid:</b>	Strong Acids; Strong Bases.
<b>Hazardous Decomposition:</b>	Not known.
<b>Hazardous Polymerization:</b>	Will not occur.

## Aiseal 370

11

## TOXICOLOGICAL INFORMATION

**Molybdenum sulfide (MoS<sub>2</sub>) (1317-33-5)**

Information on toxicological effects

Acute toxicity:

Oral LD50 Inhalation LC50 LC50 Inhalation - rat - 4 h - > 2,820 mg/m<sup>3</sup> Remarks: Lungs, Thorax, or Respiration:Other changes.

Dermal LD50 no data available

Other information on acute toxicity

Skin corrosion/irritation: Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System): no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System): no data available

Aspiration hazard: no data available

Signs and Symptoms of Exposure: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects: no data available

Additional Information:

RTECS: QA4697000

**Graphite (7782-42-5)**

Information on toxicological effects

Acute toxicity:

LD50 Oral - rat - female - &gt; 2,000 mg/kg (OECD Test Guideline 423)

Inhalation: no data available

Dermal: no data available

Skin corrosion/irritation: Skin - rabbit Result: No skin irritation (OECD Test Guideline 404)

Serious eye damage/eye irritation: Eyes - rabbit Result: No eye irritation (OECD Test Guideline 405)

Respiratory or skin sensitisation: - mouse Did not cause sensitisation on laboratory animals. (OECD Test Guideline 429)

Germ cell mutagenicity: in vitro assay S. typhimurium Result: negative

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

## Aiseal 370

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
 OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available  
 Specific target organ toxicity - single exposure: no data available  
 Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional Information:

Repeated dose toxicity - rat - male - Feed - No observed adverse effect level - 813 mg/kg RTECS: MD9659600

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### Silicic acid, potassium salt (1312-76-1)

#### Acute toxicity

Ingestion All symptoms of acute toxicity are due to high alkalinity. Material will cause irritation. Oral LD50 (rat) >5000 mg/kg bw  
 Inhalation All symptoms of acute toxicity are due to high alkalinity. Mist is irritant to the respiratory tract. Inhalation LC50 (rat) >2.06 g/m<sup>3</sup>  
 Skin Contact Repeated and/or prolonged skin contact may cause slight irritation. Dermal LD50 (rat) >5000 mg/kg bw  
 Eye Contact Liquid or mist may cause discomfort and mild irritation.

#### Skin corrosion/irritation

Repeated and/or prolonged skin contact may cause slight irritation.

**Serious eye damage/irritation** Liquid or mist may cause discomfort and mild irritation.

**Sensitisation** Not sensitising.

**Mutagenicity** No evidence of genotoxicity. In vitro/in vivo negative.

**Carcinogenicity** No structural alerts.

**Reproductive toxicity** No evidence of reproductive toxicity or developmental toxicity.

**STOT - single exposure** Not classified

**STOT - repeated exposure** Not classified. NOAEL oral (rat) 159 mg/kg bw/d

**Aspiration hazard** Not classified

12

## ECOLOGICAL INFORMATION

### Silicic acid, potassium salt (1312-76-1)

#### Toxicity

Fish (*Leuciscus idus*) LC50 (48 hour) >146 mg/l

Aquatic invertebrates: (*Daphnia magna*) EC50 (24 hour) >146 mg/l

Persistence and degradability: Inorganic. Soluble silicates, upon dilution, rapidly depolymerise into molecular species indistinguishable from natural dissolved silica.

Bioaccumulative potential: Inorganic. The substance has no potential for bioaccumulation.

Mobility in soil: Not applicable.

Results of PBT and vPvB assessment: Not classified as PBT or vPvB.

Other adverse effects: The alkalinity of this material will have a local effect on ecosystems sensitive to changes in pH.

Water (7732-18-5) [55-70%]

Information on ecological effects

## Aseal 370

Toxicity: no data available

Persistence and degradability: not applicable

Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: no data available

**Molybdenum sulfide (MoS<sub>2</sub>) (1317-33-5)**

Information on ecological effects

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

**Graphite (7782-42-5)**

Information on ecological effects

Toxicity:

Toxicity to fish semi-static test LC50 - Danio rerio (zebra fish) - > 100 mg/l - 96 h. (OECD Test Guideline 203)

Toxicity to daphnia and static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h. other aquatic (OECD Test Guideline 202) invertebrates

Toxicity to algae static test EC50 - Pseudokirchneriella subcapitata - > 100 mg/l - 72 h. (OECD Test Guideline 201)

Persistence and degradability: no data available

Bioaccumulative potential: There is no evidence indicating that natural graphite is bioaccumulative

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: no data available

**13****DISPOSAL CONSIDERATIONS**

Waste Disposal Method

Waste disposal should be in accordance with existing federal, state and local environmental control laws

Empty Container Precautions

Do not heat or cut container with electric or gas torch. Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning. Label precautions also apply to this container when empty.

Aiseal 370

<b>14</b>	<b>TRANSPORT INFORMATION</b>
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Shipping Name: Class 55, Paint  
 Non-hazardous for air, sea and road freight.

<b>15</b>	<b>REGULATORY INFORMATION</b>
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Component (CAS#) [%] - CODES

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 Water (7732-18-5) [55-70%] TSCA

Silicic acid, potassium salt (1312-76-1) [10-15%] TSCA

Molybdenum sulfide (MoS<sub>2</sub>) (1317-33-5) [12-18%] TSCA

Graphite (7782-42-5) [8-12%] MASS, OSHAWAC, PA, TSCA, TXAIR

Regulatory CODE Descriptions

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 TSCA = Toxic Substances Control Act  
 MASS = MA Massachusetts Hazardous Substances List  
 OSHAWAC = OSHA Workplace Air Contaminants  
 PA = PA Right-To-Know List of Hazardous Substances  
 TXAIR = TX Air Contaminants with Health Effects Screening Level

<b>16</b>	<b>OTHER INFORMATION</b>
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**NOTICE:** This information is presented in good faith and believed to be accurate as of the effective date below. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Coatings For Industry, Inc. assumes no responsibility for personal injury or property damage to vendees, users, or third parties caused by the material. Such vendees or users assume all risks associated with the use of the material. Regulatory requirements are subject to change and may differ from one location to another: it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The preceding specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.