

SAFETY DATA SHEET

SECTION 1.

COMPANY IDENTIFICATION AND CHEMICAL PRODUCT

Company Name: Lawrence Factor, Inc.
Address: 4790 NW 157 Street, Miami Lakes, FL 33014
Phone / Fax: 305-430-0550 / 305-430-0864

Chemical Name: Oxysiv 5
Product Use: Adsorbent

SECTION 2.

HAZARDS IDENTIFICATION

Emergency Overview:

Repeated or prolonged exposure may irritate eyes, skin and respiratory system. When first wetted, the product can heat up to the boiling point of water. Flood with water to cool material. Repeated and prolonged inhalation of crystalline silica in the form of quartz from occupational sources may cause cancer.

Form: Beads Color: Tan

Potential Health Effects:

Primary routes of exposure: Contact with skin and eyes. Exposure may also occur via inhalation or ingestion if product dust is generated.

Eye Contact: Dust and/or product may cause eye discomfort and/or irritation seen as tearing and reddening.

Skin Contact: May cause skin irritation. The product gets hot as it first absorbs water.

Ingestion: The product gets hot as it first adsorbs water. Burns to moist body tissues can result if contact is prolonged.

Inhalation: Exposure to dust particles generated from this material may cause irritation of the respiratory tract. Repeated and prolonged inhalation of crystalline silica in the form of quartz from occupational sources may cause cancer.

Chronic Effects: Prolonged or repeated inhalation may cause lung injury/cancer.

Carcinogenicity Classification:

International Agency for Research on Cancer (IARC):
Silicon Oxide (synthetic) – Unclassifiable as to carcinogenicity in humans (Group 3). Inhaled crystalline silica in the form of quartz from occupational sources is carcinogenic to humans (Group 1).

U.S. National Toxicology Program (NTP):
Quartz – Known to be a human carcinogen.

U.S. Occupational Safety and Health Administration (OSHA):
Quartz – Known carcinogen.

American Conference of Governmental Industrial Hygienists (ACGIH):
Aluminum oxide – Not classifiable as a human carcinogen (A4).
Quartz – Suspected human carcinogen (A2)

SECTION 3.

COMPOSITION / INFORMATION ON INGREDIENTS

<u>MATERIAL</u>	<u>CAS No.</u>	<u>% WEIGHT</u>	<u>ACGIH TLV-TWA</u>	<u>OSHA PEL-TWA</u>	<u>UNITS</u>
Silicon Oxide (synthetic)	7631-86-9	<60	N.E.	15 (TD) / 5(R)	mg/m ³
Aluminum Oxide (non-fibrous)	1344-28-1	<40	10	15(TD) / 5(R)	mg/m ³
Sodium Oxide	1313-59-3	<20	N.E.	N.E.	N.A.
Magnesium Oxide	1309-48-4	<5	10(I)	15(Total Particulate)	mg/m ³
Quartz	14808-60-7	<2	0.05(R)	TD: 30/(%SiO ₂ +2) RD: 10/(%SiO ₂ +2)	mg/m ³

Note: The OSHA Permissible Exposure Limits (PEL) is determined from the percentage of quartz from airborne samples.

Abbreviations:

N.A. – Not Applicable	RD – Respirable Dust	Fu – Fume
N.E. – None Established	R – Respirable	I – Inhalable
SC – Soluble Compounds	TD – Total Dust	IS – Insoluble

SECTION 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:	Wash with soap and water. Get medical attention if irritation develops.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion:	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Drink at least 2 glasses of water. Get medical attention immediately.

Notes to Physician: This product is a desiccant and generates heat as it adsorbs water. The used product can retain material of a hazardous nature. Identify that material and treat symptomatically.

SECTION 5.

FIRE AND EXPLOSION DATA

Suitable extinguishing media: Non-combustible. Use extinguishing media for surrounding fire.

Unsuitable extinguishing media: N.A.

Fire and explosion hazards: The product itself does not burn. The used product can retain material of a hazardous nature. Identify that material and inform the fire fighters.

Special protective equipment: In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

Flashpoint: N.A.

HMIS® III

Health	1
Fire	0
Physical Hazard	1
Personal Protection	E



SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal Protection: See section 8.
- Enviro. Precautions: No special environmental precautions required.
- Clean-up: Sweep, shovel or vacuum spilled product into appropriate containers (do not use a vacuum if material has contacted a hydrocarbon material). Pick-up and arrange disposal without creating dust. Never use spilled product. Spilled product should be disposed of in accordance with all applicable government regulations.

SECTION 7. SAFE HANDLING AND STORAGE

- Handling: Handle and open container with care. Avoid formation of dust particles. Avoid contact with skin and eyes. Provide an electrical ground connection during loading and transfer operations to avoid static discharge in an explosive atmosphere and to prevent persons handling the product from receiving static shock. A copy of UOP's booklet, "Precautions and Safe Practices for Handling Zeolite Molecular Sieve Adsorbents in Process Units", can be obtained from www.UOP.com at no cost.
- Storage: Store in original container. Keep in a dry place.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Engineering Measures: Where natural ventilation is inadequate, especially in confined areas, use mechanical ventilation, other engineering controls or respiratory protection to prevent inhalation of product dust.
- Personal Protection: Handle in accordance with good industrial hygiene and safety practice.
- Eye Protection: Safety glasses or goggles.
- Hand Protection: Protective gloves.
- Skin / Body Protection: Work uniform and gloves to prevent prolonged contact.
- Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. Air-purifying respirator with NIOSH classification N-100 filter or P-100 (or equivalent) if oil/liquid aerosols are present (42 CFR 84).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

These data do not represent technical or sales specifications.

Form	Beads	Color	Tan
Odor	None	pH	N.A.
Boiling Point/Range.....	N.A.	Melting Point/Range	N.A.
Flash Point.....	N.A.	Auto-ignition Temp	N.A.
Bulk Density	N.D.	Explosion Limits..	N.A.
Vapor Pressure ...	N.A.	Relative Density/Specific Gravity	N.A.
Vapor Density.....	N.A.	Viscosity	N.A.
Water Solubility..	N.D.	Solubility.....	N.D.

Abbreviations:
AS – Aqueous slurry N.D. – Not Determined N.A. – Not Applicable

HMIS® III

Health	1
Fire	0
Physical Hazard	1
Personal Protection	E



SECTION 10.

STABILITY AND REACTIVITY DATA

Chemical Stability:

The product is stable.

Hazardous decomposition products:

No decomposition if used as directed. Hydrocarbons and other materials that contact the product during normal use can be retained on the product. It is reasonable to expect that decomposition products will come from these retained materials of use.

Conditions/Materials to avoid:

Sudden contact with high concentrations of chemicals having high heats of adsorption such as olefins, HCl, etc. When first wetted, the product can heat up to the boiling point of water. Flood with water to cool material.

SECTION 11.

TOXICOLOGICAL INFORMATION

Acute Toxicity:

LD50/oral/rat > 32000 mg/kg *
 LD50/dermal/rabbit > 2000 mg/kg *
 LC50/inhalation/rat No Data Available

Chronic Toxicity: Classification of Ingredients

EC Carcinogenic Not Listed
 EC Mutagenic Not Listed
 EC Toxic for Reproduction Not Listed

Carcinogenicity (ACGIH):

A4 (Aluminum Oxide)
 A2 (Quartz)

IARC Classification:

Group 3 (Silicon Oxide – synthetic)
 Group 1 (Quartz)

Routes of Exposure:

Exposure may occur via inhalation, contact with skin and eyes.

Irritation:

Skin (Rabbit) Not classified as a skin irritant in animal testing.*
 Eye (Rabbit) Mild eye irritation.*

Additional Product Information:

* The toxicological data has been taken from products of similar composition.

Additional Component Information:

No data available.

SECTION 12.

ECOLOGICAL INFORMATION

Mobility No data available.
 Biodegradation... No data available.
 Bioaccumulation No data available.
 Aquatic toxicity No data available.
 Further Information No information available.

HMIS® III

Health	1
Fire	0
Physical Hazard	1
Personal Protection	E



SECTION 13.

DISPOSAL CONSIDERATIONS

Provisions relating to waste: EPA – Resource Conservation and Recovery Act (RCRA) Hazardous and Solid Waste Management Regulations.

Disposal information: This product (in its fresh unused state) is not listed by generic name or trademark name in the U.S. EPA’s RCRA regulations and does not possess any of the four identifying characteristics of hazardous waste (ignitability, corrosivity, reactivity, or toxicity). Materials of a hazardous nature that contact the product during normal use may be retained on this product. The user of the product must identify the hazards associated with the retained material in order to assess the waste disposal options.

SECTION 14.

TRANSPORT INFORMATION

UN-No.Not Applicable
Proper Shipping NameNot Applicable
Packing GroupNot Applicable

<u>Transport Mode</u>	<u>Class</u>	<u>Additional Info</u>	<u>Remarks</u>
U.S.Dot	Not Regulated	Reportable Qty: N.A. Marine Pollutant: No	N.A.
ADR/RID	Not Regulated	Danger Code: N.A.	N.A.
IMDG	Not Regulated	EmS: N.A. Marine Pollutant: No	N.A.
IATA	Not Regulated	Instr. Passenger: N.A. Instr. Cargo: N.A.	N.A.

SECTION 15.

REGULATORY INFORMATION

United States:

Toxic Substances Control Act (TSCA):

All the ingredients of this mixture are registered on the TSCA Chemical Substance Inventory.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) Reportable Qty:

The following component(s) of this product is/are subject to release reporting under 40 CFR 302 when release exceeds the Reportable Quantity (RQ): None

SARA Title III (Superfund Amendments and Reauthorization Act of 1986):

Section 302 (Extremely Hazardous Substances):

The following component(s) of this product is/are subject to the emergency planning provisions of 40 CFR 355 when there are amounts equal to or greater than the Threshold Planning Quantity (TPQ): None

Section 313 (Toxic Chemicals):

The following component(s) have been specified as Toxic Chemicals under SARA Section 313 and may be subject to the Toxic Release Inventory (TRI) reporting requirements under 40 CFR 372: None

The following components are listed in U.S. State Regulations:

State Reg Reference:

California – Proposition 65

State Reg Reference:

Silica, crystalline

HMIS® III

Health	1
Fire	0
Physical Hazard	1
Personal Protection	E



Massachusetts Right-To-Know	Amorphous silica Aluminum oxide Quartz
New Jersey Right-To-Know	Silica, amorphous Aluminum oxide Magnesium oxide Silica, quartz
Pennsylvania Right-To-Know	Silica Aluminum oxide Magnesium oxide Quartz

Note: Other U.S. State Regulations may exist, check your local sources if available or contact the UOP Product Stewardship Manager (see Section 16).

Canada:

Canadian Hazardous Products Act:

This product is classified as a material causing Other Toxic Effects, carcinogenicity – Class D, Division 2, and Subdivision A.

Canadian Environmental Protection Act:

All the ingredients of this mixture are notified to CEPA and on the DSL (Domestic Substances List).

European Union (EU)

European Inventory of Existing Commercial Chemical Substances:

All components of this product are included in EINECS/ELINCS.

Council of European Communities Directive on Classification, Packaging and Labeling of Dangerous Substances/Preparation (67/548/EEC & 1999/45/EC, as amended):

No dangerous goods label required.

Additional Governmental Inventories:

Australia: Inventory of Chemical Substances (AICS): All the ingredients of this mixture appear on the AICS.

China: All the ingredients of this mixture appear on the China inventory.

Japan: Existing and New Chemical Substances (ENCS): All the ingredients of this mixture appear on the ENCS.

Korea: Existing and Evaluated Chemical Substances (ECL): All the ingredients of this mixture appear on the ECL.

Philippines: Inventory of Chemicals and Chemical Substances (PICCS): All the ingredients of this mixture appear on the PICCS.

HMIS® III		NFPA®	
Health	1	0	1
Fire	0	1	1
Physical Hazard	1		
Personal Protection	E		

HMIS® (USA)	NFPA® (USA)
Health Hazard1*	Health 1*
Fire Hazard0	Flammability 0
Physical Hazard1	Reactivity 1
Personal Protection.....E	

***May cause cancer.**

Personal Protection: Safety glasses, gloves and National Institute for Occupational Safety and Health (NIOSH) approved dust respirator/mask.

HMIS® and NFPA® ratings involve data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this SDS must be considered.

- The information and recommendations set forth herein are believed to be accurate as of the date hereof. We make no warranty with respect thereto and disclaim all liability from reliance thereon.
- Container labeling-uses Hazardous Materials Identification System (HMIS®). Hazardous Index under this system rates degree of hazard from 0 to 4 in each category:
 - 0 = minimal hazard
 - 1 = slight hazard
 - 2 = moderate hazard
 - 3 = serious hazard

SECTION 16.

OTHER INFORMATION

Product emergencies:

If you have a product-related emergency, resulting in an accident such as a spill or release of product or human exposure and need assistance from Lawrence Factor, please contact the following number:

LAWRENCE FACTOR, INC. 800-338-5493 or 305-430-0550

General:

The data and recommendations presented in this data sheet concerning the use of our product and the materials contained therein are believed to be accurate and are based on information which is considered reliable as of the date hereof. However, the customer should determine the suitability of such materials for his purpose before adopting them on a commercial scale. Since the use of our products by others is beyond our control, no guarantee, express or implied, is made and no responsibility assumed for the use of this material or the results to be obtained there from. Information on this form is furnished for the purpose of compliance with Government Health and Safety Regulations and shall not be used for any other purposes. Moreover, the recommendations contained in this data sheet are not to be construed as a license to operate under, or a recommendation to infringe, any existing patents, nor should they be confused with state, municipal or insurance requirements, or with national safety codes.

CAUTION: the user must be aware that this does not necessarily apply to spent product. Depending on the application, significant amounts of regulated, dangerous, hazardous or toxic materials may be adsorbed during normal use. Adsorbed substances can be released during subsequent handling and disposal, especially upon exposure to moisture or heat. The user needs to take appropriate measures for the safe handling and disposal of used product.

This information is furnished without warranty expressed or implied, except that it is accurate to the best knowledge of Lawrence Factor, Inc. The data on this sheet related only to the specific material designed herein. Lawrence Factor, Inc. assumes no legal responsibility for the use or reliance upon the data.