

Molsiv Adsorbents EPG-2 1/8
89308

Version 1.1

Revision Date 03/27/2015

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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Molsiv Adsorbents EPG-2 1/8

MSDS Number : 89308

Product Use Description : Adsorbents

Manufacturer or supplier's details : UOP LLC
25 E. Algonquin Road
Des Plaines, IL 60017-5017
USA

Telephone : +1-847-391-2000
Telefax : +1-847-391-2253

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**
: **Transportation (CHEMTREC): 1-800-424-9300 or +1-703-527-3887**
: (24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : Beads or pellets

Color : tan

Odor : none

Hazard Summary : 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 and aluminosilicate (ceramic) fiber from occupational sources may cause cancer. Repeated or prolonged exposure may irritate eyes, skin and respiratory system.

Potential Health Effects

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- Skin : May cause skin irritation.
The product gets hot as it first adsorbs water.
- Eyes : Dust and/or product may cause eye discomfort and/or irritation
seen as tearing and reddening.
- Ingestion : The product gets hot as it first adsorbs water.
Burns to moist body tissue 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 and aluminosilicate (ceramic) fiber from
occupational sources may cause cancer.
- Chronic Exposure : Prolonged or repeated inhalation may cause lung
injury/cancer.
- Primary Routes of Entry : Contact with skin and eyes.
Exposure may also occur via inhalation or ingestion if product
dust is generated.

Classification of the substance or mixture

Classification of the substance or mixture : Carcinogenicity, Category 1A, Inhalation

GHS Label elements, including precautionary statements

Symbol(s) :



Signal word : Danger

Hazard statements : May cause cancer by inhalation.

Precautionary statements : **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and
understood.
Use personal protective equipment as required.

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Response:

IF exposed or concerned: Get medical advice/ attention.

Storage:

Store locked up.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified : The product gets hot as it first adsorbs water.

Carcinogenicity

| | | |
|--------|--|-------------|
| NTP: | Quartz (SiO ₂) | 14808-60-7 |
| | Known carcinogen. | |
| | Refractory ceramic fibers | 142844-00-6 |
| | Reasonably Anticipated to be a Human Carcinogen. | |
| IARC: | Quartz (SiO ₂) | 14808-60-7 |
| | Group 1: Carcinogenic to humans | |
| | Refractory ceramic fibers | 142844-00-6 |
| | Group 2B: Possibly carcinogenic to humans | |
| ACGIH: | Quartz (SiO ₂) | 14808-60-7 |
| | A2: Suspected human carcinogen | |
| | Refractory ceramic fibers | 142844-00-6 |
| | A2: Suspected human carcinogen | |

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Mixture

| Chemical Name | CAS-No. | Concentration |
|--|-----------|---------------|
| Zeolite, cuboidal, crystalline, synthetic, non-fibrous | 1318-02-1 | >70.00 % |

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| | | |
|----------------|---|----------|
| Mineral binder | - | <30.00 % |
|----------------|---|----------|

| | | |
|----------------------------|------------|---------|
| Quartz (SiO ₂) | 14808-60-7 | <5.00 % |
|----------------------------|------------|---------|

| | | |
|---------------------------|-------------|---------|
| Refractory ceramic fibers | 142844-00-6 | <2.00 % |
|---------------------------|-------------|---------|

Note : Composition as shown represents the chemical composition of the product and is not representing the composition for inventory purposes. See Section 15 for inventory information.

SECTION 4. FIRST AID MEASURES

| | |
|--------------|---|
| Inhalation | : Remove to fresh air. If symptoms persist, call a physician. |
| Skin contact | : Wash off with soap and plenty of water. If skin irritation persists, call a physician. |
| Eye contact | : Rinse immediately with plenty of water for at least 15 minutes. If eye irritation persists, consult a physician. |
| Ingestion | : Drink at least 2 glasses of water. Obtain medical attention. Never give anything by mouth to an unconscious person. |

Notes to physician

| | |
|-----------|--|
| Treatment | : This product is a desiccant and generates heat as it adsorbs water. The used product can contain material of a hazardous nature. Identify that material and treat symptomatically. |
|-----------|--|

SECTION 5. FIREFIGHTING MEASURES

| | |
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| Suitable extinguishing media | : Not combustible. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Specific hazards during | : The product itself does not burn. |

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SECTION 6. ACCIDENTAL RELEASE MEASURES

SECTION 7. HANDLING AND STORAGE

Requirements for storage areas and containers : Store in original container. Keep in a dry place.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Protective measures : Handle in accordance with good industrial hygiene and safety practice.
- Engineering measures : Ensure adequate ventilation, especially in confined areas.
- Eye protection : Safety glasses
Safety goggles
- Hand protection : Protective gloves
- Skin and body protection : Work uniform and gloves to prevent prolonged contact.
- Respiratory protection : In case of insufficient ventilation wear suitable respiratory equipment.
Breathing apparatus with filter: NIOSH classification N-100 or if oil/liquid aerosols are present P-100 (42 CFR 84).

Exposure Guidelines

| Components | CAS-No. | Value | Control parameters | Update | Basis |
|--|------------|---|-------------------------|--------|--|
| Zeolite, cuboidal, crystalline, synthetic, non-fibrous | 1318-02-1 | TWA : time weighted average | 1 mg/m ³ | 2008 | ACGIH:US. ACGIH Threshold Limit Values |
| Further information | : | Form of exposure : Respirable fraction. | | | |
| Quartz (SiO ₂) | 14808-60-7 | TWA : time weighted average | 0.025 mg/m ³ | 2008 | ACGIH:US. ACGIH Threshold Limit Values |
| Further information | : | Form of exposure : Respirable fraction. | | | |

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|----------------------------|------------|---|------------------------|------|--|
| Quartz (SiO ₂) | 14808-60-7 | REL : Recomm ended exposure limit (REL): | 0.05 mg/m ³ | 2005 | NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards |
| Further information | : | Form of exposure : Respirable dust. | | | |

| | | | | | |
|----------------------------|------------|--------------------------------------|-----------------------|------|---|
| Quartz (SiO ₂) | 14808-60-7 | TWA : time weighted average | 0.1 mg/m ³ | 1989 | Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000) |
| Further information | : | Form of exposure : Respirable dust. | | | |

| | | | | | |
|----------------------------|------------|--------------------------------------|--|------|--|
| Quartz (SiO ₂) | 14808-60-7 | TWA : time weighted average | 2.4 millions of particles per cubic foot of air The exposure limit is calculated from the equation, 250/(%SiO ₂ +5) , using a value of 100% SiO ₂ . Lower percentages of SiO ₂ will yield higher exposure limits. | 2000 | Z3:US. OSHA Table Z-3 (29 CFR 1910.1000) |
| Further information | : | Form of exposure : Respirable. | | | |

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|----------------------------|------------|--------------------------------------|--|------|--|
| Quartz (SiO ₂) | 14808-60-7 | TWA : time weighted average | 0.1 mg/m ³ The exposure limit is calculated from the equation, 10/(%SiO ₂ +2), using a value of 100% SiO ₂ . Lower percentages of SiO ₂ will yield higher exposure limits. | 2000 | Z3:US. OSHA Table Z-3 (29 CFR 1910.1000) |
| Further information | : | Form of exposure : Respirable. | | | |

| | | | | | |
|----------------------------|------------|--------------------------------------|---|------|--|
| Quartz (SiO ₂) | 14808-60-7 | TWA : time weighted average | 0.3 mg/m ³ The exposure limit is calculated from the equation, 30/(%SiO ₂ +2), using a value of 100% SiO ₂ . Lower values of % SiO ₂ will give higher exposure limits. | 2000 | Z3:US. OSHA Table Z-3 (29 CFR 1910.1000) |
| Further information | : | Form of exposure : Total dust. | | | |

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|---------------------------|-------------|--------------------------------------|---|------|--|
| Refractory ceramic fibers | 142844-00-6 | TWA : time weighted average | 0.2 fibers/cm ³ F: Respirable fibers: length > 5 micrometers; aspect ration >= 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase- contrast illumination. | 2009 | ACGIH:US. ACGIH Threshold Limit Values |
| Further information | : | Form of exposure : Fiber. | | | |

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|------------------------------|------------------------|
| Physical state | : Beads or pellets |
| Color | : tan |
| Odor | : none |
| pH | : Note: Not applicable |
| Melting point/freezing point | : > 400 °C |
| Boiling point/boiling range | : Note: Not applicable |
| Flash point | : Note: Not applicable |
| Flammability | : Not applicable |

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|--|---------------------------|
| Lower explosion limit | : Note: Not applicable |
| Upper explosion limit | : Note: Not applicable |
| Vapor pressure | : Note: Not applicable |
| Vapor density | : Note: Not applicable |
| Density | : > 2.0 g/cm ³ |
| Specific gravity | : Note: Not applicable |
| Water solubility | : Note: insoluble |
| Solubility in other solvents | : Note: no data available |
| Partition coefficient: n-octanol/water | : Note: no data available |
| Ignition temperature | : Note: Not applicable |
| Viscosity, kinematic | : Note: Not applicable |
| Bulk density | : Note: not determined |

SECTION 10. STABILITY AND REACTIVITY

| | |
|---------------------------------|---|
| Chemical stability | : Stable |
| Incompatible 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. |
| Hazardous decomposition | : No decomposition if used as directed. |

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products

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.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50: > 32,000 mg/kg
Species: Rat

Acute inhalation toxicity : Note: no data available

Acute dermal toxicity : Note: no data available

Skin irritation : Species: Rabbit
Classification: Not classified as a skin irritant in animal testing.

Eye irritation : Species: Rabbit
Classification: Not classified as an eye irritant in animal testing.

Further information : Note: The toxicological data has been taken from products of similar composition.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish : Note: no data available

Toxicity to daphnia and other : Note: no data available

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aquatic invertebrates

Toxicity to algae : Note: no data available

Elimination information (persistence and degradability)

Bioaccumulation : Note: no data available

Mobility : Note: no data available

Biodegradability : Note: no data available

Further information on ecology

Additional ecological information : No information on ecology is available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : 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**DOT** Not dangerous goods**TDG** Not dangerous goods**IATA** Not dangerous goods**IMDG** Not dangerous goods

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SECTION 15. REGULATORY INFORMATION**Inventories**

| | |
|--|---|
| US. Toxic Substances Control Act | : On the inventory, or in compliance with the inventory |
| Australia. Industrial Chemical (Notification and Assessment) Act | : On the inventory, or in compliance with the inventory |
| Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL) | : All components of this product are on the Canadian DSL. |
| Japan. Kashin-Hou Law List | : On the inventory, or in compliance with the inventory |
| Korea. Toxic Chemical Control Law (TCCL) List | : On the inventory, or in compliance with the inventory |
| Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act | : On the inventory, or in compliance with the inventory |
| China. Inventory of Existing Chemical Substances | : On the inventory, or in compliance with the inventory |
| New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand | : On the inventory, or in compliance with the inventory |
| Note | : Zeolites are considered Statutory Mixtures for Inventory purposes, for more information, contact SafetyDataSheet@honeywell.com . |
| TSCA 12B | : US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D) |
| Refractory ceramic fibers | 142844-00-6 |

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National regulatory information

| | | |
|-----------------------------|---|--|
| SARA 302 Components | : | No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302. |
| SARA 313 Components | : | 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. |
| SARA 311/312 Hazards | : | Chronic Health Hazard |
| California Prop. 65 | : | WARNING! This product contains a chemical known to the State of California to cause cancer. Quartz (SiO ₂) 14808-60-7 Refractory ceramic fibers 142844-00-6 |
| Massachusetts RTK | : | Quartz (SiO ₂) 14808-60-7 |
| New Jersey RTK | : | Quartz (SiO ₂) 14808-60-7 Refractory ceramic fibers 142844-00-6 |
| Pennsylvania RTK | : | Quartz (SiO ₂) 14808-60-7 |
| WHMIS Classification | : | D2A: Very Toxic Material Causing Other Toxic Effects This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR. |

SECTION 16. OTHER INFORMATION

| | HMIS III | NFPA |
|-----------------|-----------------|-------------|
| Health hazard | : 1* | 1 |
| Flammability | : 0 | 0 |
| Physical Hazard | : 1 | |
| Instability | : | 1 |

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* - Chronic health hazard

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further 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. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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