



8210 N. Austin Avenue, Morton Grove, IL 60053-3205, U.S.A.  
 847-967-6000 800-323-8144  
 (Monday - Friday: 7:30 a.m. - 4:00 p.m. CST)

**Emergency Contact:**  
 INFOTRAC 800-535-5053 [U.S.A.]

Name: (R,R)Whelk-O1 5/100 EXSIL  
 Code: 1-786200-200, 1-786200-500

..... **SAFETY DATA SHEET** .....

**SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY** .....

- 1.1 Product Identifier
  - Name (R,R)Whelk-O1 5/100 EXSIL
  - Code 1-786200-200, 1-786200-500
- 1.2 Use of Substance/Mixture
  - Use Analytical and Preparative Chromatography
- 1.3 Details of Manufacturer/Supplier
  - Company Regis Technologies, Inc.  
 8210 N. Austin Avenue  
 Morton Grove, IL 60053  
 847-967-6000; 800-323-8144 (toll free)  
 Email: cservice@registech.com  
 www.registech.com
- 1.4 Emergency Telephone
  - INFOTRAC 800-535-5053 [U.S.A.]

**SECTION 2 HAZARDS IDENTIFICATION** .....

- 2.1 Classification of the Substance or Mixture
  - GHS Classification
 

|  |            |      |
|--|------------|------|
| Acute toxicity                               | Category 4 | H315 |
| Serious Eye Damage / Irritation              | Category 2 | H320 |
| STOT-Single Exposure, respiratory irritation | Category 3 | H335 |

GHS Label Elements  
 Pictograms or hazard symbols



Signal Word                      Warning

Hazard Statement  
 H315 – Harmful if inhaled.  
 H320 – Causes eye irritation.  
 H335 – May cause respiratory irritation.

Precautionary Statements  
 [Prevention] P261 – Avoid breathing dusts.  
 P264 – Wash thoroughly after handling.  
 P271 – Use in a well-ventilated area.  
 P280 – Wear protective gloves/eye protection/face protection.  
 [Response] P304+P341 – IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P314 – Get medical advice/attention if you feel unwell.  
 [Storage] P402+P403+P404 – Store in a closed container, in a dry, well-ventilated place.  
 [Disposal] P501 – Dispose of contents/container in accordance with all applicable governmental and environmental regulations.

Abbreviations: NA—not applicable; NE—not established; U—unknown/No data available; NL—not listed; N—no; Y—yes.



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**SECTION 3 ..... COMPOSITION / INFORMATION ON INGREDIENTS .....**

Name Silica Gel  
 Synonyms Silica dioxide, amorphous

Hazardous components

| Component                  | Classification | Concentration |
|----------------------------|----------------|---------------|
| Silica dioxide, amorphous  |                | 98-100 %      |
| CAS No. 7631-86-9          |                |               |
| EC No. 231-545-4           |                |               |
| Formula SiO <sub>2</sub> * |                |               |
| Molecular Mass 60.08       |                |               |

For full test of the H-Statements mentioned in this Section, see Section 16.

\*As a silica gel.

**SECTION 4 ..... FIRST AID MEASURES .....**

4.1 Description of first aid measures

Eye contact: Rinse eyes with plenty of water for at least 15 minutes; lift eyelids occasionally. If irritation persists, consult physician.  
 Skin contact: Immediately remove contaminated clothing and shoes, then wash skin with soap and plenty of water. If irritation persists, consult physician.  
 Inhalation: Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and keep person warm and at rest. Consult physician.  
 Ingestion: Wash out mouth with water provided person is conscious. Consult physician if feel unwell.  
 Physician note: Symptomatic and supportive care. There is no specific antidote.

4.2 Most important symptoms and effects, both acute and delayed.  
 Redness of eyes or skin, dermatitis, lacrimation (tearing), or cough.

4.3 Indication of immediate medical attention and special treatment needed.  
 No information available.

**SECTION 5 ..... FIRE-FIGHTING MEASURES .....**

5.1 Suitable Extinguishing Media

Material is non-flammable and non-oxidizing. Use extinguishing media which are appropriate to the environment. Water spray, dry chemical, carbon dioxide or foam.

No extinguishing media restrictions.

5.2 Specific hazards arising from the chemical.

Non-flammable. Non-explosive  
 Water spray may be used to cool fire-exposed containers, as appropriate to surrounding fire conditions.  
 Combustions products: None identified.

5.3 Advice for fire-fighters

Wear personal protective equipment, as appropriate for surrounding fire. Wear self-contained breathing apparatus (SCBA) if necessary.

**SECTION 6 ..... ACCIDENTAL RELEASE MEASURES .....**

6.1 Personal precautions, protective equipment, and emergency procedures

For non-emergency personnel - Do not breath dusts. Protect eyes from dusty conditions. Evacuate unnecessary personnel from area, observe emergency procedures, consult an expert.

For emergency responders – Protective equipment for dust conditions. See Section 8.3.

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- 6.2 Environmental precautions  
Prevent material from entering drains.
- 6.3 Methods of clean up  
Evacuate unnecessary people from area. Isolate spilled material.  
Ventilate area. Avoid creating dust.  
Sweep up, seal in appropriate hazardous waste container, and hold for proper waste disposal.  
Keep out of water supplies and sewers. Wash spill site after material pickup is complete.

**SECTION 7 ..... HANDLING AND STORAGE.....**

- 7.1 Safe Handling Precautions  
Wear suitable protective equipment to prevent contact with skin, eyes, or inhalation of dusts.  
Use only in a well ventilated area equipped with local mechanical exhaust.  
  
May be irritating to eyes. May be irritating to mucous membranes, if mists are inhaled. May be harmful if ingested.  
Wash after handling.
- 7.2 Storage Conditions  
Store tightly closed in a cool, dry, and well ventilated place. Hygroscopic. Store away from incompatible materials (See Section 10.).

**SECTION 8 ..... EXPOSURE CONTROLS / PERSONAL PROTECTION.....**

- 8.1 Control parameters  
Exposure limits: Silica-Amorphous, precipitated (112926-00-8) –  
 OSHA – PEL 20 mppcf\* [2 mg/m<sup>3</sup>], 80 mg/m<sup>3</sup>/%SiO<sub>2</sub><sup>+2</sup> 8H TWA  
 \*mppcf = million particles of amorphous silica per cubic foot of air;  
 OSHA-adopted conversion factor: 1 mppcf = 0.1 mg/m<sup>3</sup> respirable dust  
  
 Environmental Do not empty into drains.
- 8.2 Appropriate engineering controls  
Safety shower and eye wash  
Local exhaust and mechanical ventilation required. Hood recommended. Fume scrubber.
- 8.3 Personal protection  
 Eye/Face Chemical safety eyewear or goggles  
 Hand Compatible chemical-resistant gloves: Rubber (e.g., natural rubber, neoprene, nitrile, or equivalent)  
 Respiratory NIOSH/MSHA or European Standard EN 149 approved respirator for dust if exposure limits are exceeded or irritation or other symptoms are experienced.  
 Dermal (not hand) Protective Clothing (e.g., lab coat).  
 Hygiene Avoid inhalation, ingestion; contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.  
 Wash thoroughly after handling. Wash contaminated clothing before reuse. Discard contaminated footwear.

**SECTION 9 ..... PHYSICAL AND CHEMICAL PROPERTIES .....**

- 9.1 Information on physical and chemical data
 

|                        |                           |
|------------------------|---------------------------|
| Form                   | solid                     |
| Appearance             | clear to white powder     |
| Odor                   | odorless                  |
| Odor threshold         | No data available         |
| pH                     | 5.5-7.5 (10g/L) at (20°C) |
| Melting/freezing point | 2230°C (4046°F)           |

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|  |  |
|--|--|
| Initial boiling point and range:       | No data available  |
| Flammability (liquid, solid)           | Not flammable. Not explosive.  |
| Flash Point                            | Not applicable   |
| Flammable limits (%v/v)                | LEL (lower explosive limit) No data available<br>UEL (upper explosive limit) No data available |
| Autoignition temperature               | No data available  |
| Decomposition temperature              | No data available  |
| OSHA Flammability Class                | No data available  |
| Evaporation Rate (BuAc = 1.0)          | No data available  |
| Vapor pressure (mmHg)                  | No data available  |
| Vapor density (air=1):                 | No data available  |
| Relative density (g/cm <sup>3</sup> )  | 2.10 (approx. 1.4-1.7 mg/mL)   |
| Bulk density                           | No data available  |
| Water Solubility                       | Insoluble; hygroscopic   |
| Water reactive                         | Not reactive   |
| Solubility (other)                     | Hydrofluoric acid will dissolve silica gel.  |
| Partition coefficient: N-octanol/water | No data available  |
| Viscosity                              | No data available  |

**SECTION 10** ..... **STABILITY AND REACTIVITY** .....

- 10.1 Reactivity  
See section 10.3 below.
- 10.2 Chemical Stability  
Stable under standard ambient conditions (room temperature).
- 10.3 Possibility of hazardous reactions  
Exothermic reaction: Hydrogen halides, alkali metals.
- 10.4 Conditions to avoid  
Avoid incompatibilities.  
Avoid generating dust.  
Keep out of water supplies, sewers, and environment.
- 10.5 Incompatible materials  
Strong oxidizers, Strong acids. Alkali metals. Hydrogen fluoride.  
Moisture—hygroscopic.
- 10.6 Hazardous decomposition products  
Combustion None.

**SECTION 11** ..... **TOXICOLOGICAL INFORMATION** .....

- 11.1 Toxicological Information
  - Acute toxicity
    - Oral No data available
    - Dermal Silica, amorphous: Dermal Rabbit > 5,000 mg/kg (IUCLID)
    - Inhalation No data available
  - Skin corrosion/irritation Silica, amorphous: Rabbit: Result: No Irritation. OECD Test Guideline 404.
  - Serious eye damage/irritation Silica, amorphous: Rabbit: Result: No Irritation. OECD Test Guideline 404.
  - Respiratory or skin sensitization No data available

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|                          |   |
|--------------------------|---|
| Germ cell mutagenicity   | Silica, amorphous: Ames test: Salmonella typhimurium; Results: negative<br>Silica, amorphous: Chromosomal aberration test: Chinese hamster ovary (CHO) cells; Results: negative |
| Carcinogenicity          |   |
| IARC                     | Group 3: Not classifiable as carcinogenic to humans (Silica-Amorphous, precipitated)  |
| NTP                      | Not listed.   |
| OSHA                     | Not listed.   |
| Reproductive toxicity    | No data available   |
| STOT-single exposure     | May cause respiratory tract irritation: Symptoms: Irritation of mucous membranes: cough, shortness of breath.   |
| STOT-repeated exposure   | No data available   |
| Aspiration hazard        | No data available   |
| 11.2 Further Information |   |
| Miscellaneous            | No data available.  |

**SECTION 12** ..... **ECOLOGICAL INFORMATION**.....

|                                    |   |
|------------------------------------|---|
| 12.1 Ecotoxicity                   |   |
| Fish                               | Silica, amorphous: Brachydanio rerio (Fish, fresh water) LC0 10000 mg/l; 96h; OECD 203                                  |
| Crustacea                          | Silica, amorphous: Daphnia magna (water flea) EC0 >= 10,000 mg/L; 24h; OECD 202   |
| Algae                              | No data available   |
| Bacteria                           | No data available   |
| 12.2 Persistence and degradability | No data available   |
| 12.3 Bioaccumulative potential     | Partition coefficient (N-octanol/water): no data available<br>Silica, amorphous: Bioaccumulation is not expected. (Lit) |
| 12.4 Motility in soil              | No data available   |
| 12.5 Other adverse effects         | No data available   |
| General Notes                      | Do not empty into drains or water courses.  |

**SECTION 13** ..... **DISPOSAL CONSIDERATIONS**.....

|                         |   |
|-------------------------|---|
| 13.1 Disposal methods   |   |
| U . S. EPA Waste Codes  | No data available   |
| Waste Characterization  | RCRA Hazard Class (40CFR 261): No data available  |
| (per U. S. regulations) | Generator is responsible for proper waste characterization. NOTE: U. S. Federal and state hazardous waste regulations may differ considerably.  |
| Waste Disposal          | That which cannot be recovered or recycled, should be disposed of in accordance with all applicable international, national, regional, state, and local laws. Do NOT dump into any sewer, on ground, or into any body of water. |

**SECTION 14** ..... **TRANSPORT INFORMATION** .....

|               |                     |
|---------------|---------------------|
| 14.1 DOT (US) | Not dangerous goods |
| 14.2 IMDG     | Not dangerous goods |
| 14.3 IATA     | Not dangerous goods |

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**SECTION 15** ..... REGULATORY INFORMATION .....

15.1 Safety, health and Environmental regulations specific for the product in question.

NFPA: H2 F0 R0 HMIS: H2 F0 R0

15.2 Chemical Inventory Lists

*Reviews, Standards, and Regulations*

..... Silica amorphous, gel  
 ..... (Chromatography Packing Material)  
 CAS Number..... 7631-86-9  
 TSCA: ..... Y  
 EINECS:..... Y  
 Number ..... 231-545-4  
 CERCLA [Section 103 (40 CFR 302.4)]:..... NL  
 RQ (lbs) ..... NA  
 RCRA Waste Code..... NA  
 OSHA Process Safety [29 CFR 1910.119]: ..... NL  
 State Lists: ..... NL  
 States..... NL on CA, PA,  
 ..... MN, MA, FL, NJ  
 CA No Significant Risk Level ..... NL  
 Clean Air Act  
 [Section 112r (40 CFR 68)]:..... NL  
 TQ (lbs)..... NA  
 Contains Ozone Depleters (Class I or Class II) ..... NL  
 Clean Air Act [Section 103 (40 CFR 302.4)]: ..... NL  
 SARA Title III Notification [40 CFR 302.4]:  
 Section 302/304 (EHS) Ingredient [40 CFR 355.3]..... NL  
 TPQ (lbs)..... NA  
 RQ (lbs) ..... NA  
 Section 313 Ingredient [40 CFR 372.65] ..... NL

**SECTION 16** ..... **OTHER INFORMATION** .....

16.1 Full test of H-Statements referred to under Section 2 and 3.

|           |                                  |
|-----------|----------------------------------|
| Eye Irr.  | Eye Irritation                   |
| H315      | Causes skin irritation           |
| H320      | Causes eye irritation            |
| H335      | May cause respiratory irritation |
| Skin Irr. | Skin Irritation                  |
| STOT-SE   | STOT-Single Exposure             |

The above information is believed to be correct to the best of our present state knowledge, but does not purport to be all-inclusive and shall be used only as a guide. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.

**Prepared by: Regis Technologies**

***This is the last page of this MSDS.***

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