



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 20/120 YMC FEC
 Code: 1-781400-200, 1-781400-500

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

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

- 1.1 Product Identifier
 - Name (R,R)-Whelk-O1 20/120 YMC FEC
 - Code 1-781400-200, 1-781400-500
- 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 ₂ *		
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/m³], 80 mg/m³/%SiO₂⁺² 8H TWA
 *mppcf = million particles of amorphous silica per cubic foot of air;
 OSHA-adopted conversion factor: 1 mppcf = 0.1 mg/m³ 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 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 ³)	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 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 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 (per U. S. regulations)	RCRA Hazard Class (40CFR 261): No data available 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.