



8210 N. Austin Avenue, Morton Grove, IL 60053-0519, 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: *Racemic Whelk-O 1* Chromatographic Packing
 Code: 786800

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

SECTION 1 PRODUCT IDENTIFICATION

Name: *Racemic Whelk-O 1* Chromatographic Packing
 Code: 786800

SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

Synonyms

Bonded Chromatographic Silica Gel; Bonded Synthetic Amorphous Silica; Bonded Amorphous Silicon Dioxide

CAS #: 112926-00-8

MF: $C_{26}H_{28}N_3O_6Si \cdot (SiO_2)_n$

Ingredients

Concentration (%/wt)

Racemic Whelk-O 1 100 %

SECTION 3 HAZARDS IDENTIFICATION.....

Precautionary Statements

See Sections 8 and 11 for further details.

The properties of this material have not been fully investigated. Use due caution in handling and use of this material.

..... **Emergency Overview**

NFPA Ratings (Scale 0-4); Health = 1; Fire = 0; Reactivity = 0;

Solid: clear to white free flowing powder. Hygroscopic.

May be irritating to skin, eyes, mucous membranes, and upper respiratory tract. May be harmful if ingested or inhaled.

The properties of this material have not been fully investigated. Use due caution in handling and use of this material.

*May emit toxic fumes under fire conditions--*potential chemical or thermal decomposition products: carbon monoxide, carbon dioxide, nitrogen oxides, silicon oxides

Standard chemical handling precautions: Avoid ingestion or breathing dust. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

Target organs: lungs.

See Sections 4, 5, 6, 8, 9, and 10.

Other Hazard Information

This compound has not fully been tested for toxicological, irritation, or similar tendencies.

Primary Route(s) of Entry: Ingestion, Eye or Skin contact, Dust inhalation

Eye: May cause mild irritation, with discomfort, tearing, or blurring of vision.

Skin: May cause skin irritation, drying, or abrasion.

Inhalation: May cause irritation mucous membranes and upper respiratory tract. Excessive or prolonged inhalation may cause lung damage, pneumoconiosis, silicosis, cyanosis, coughing, or difficult breathing.

Ingestion: Except for ingestion of large amounts, unlikely to cause significant harm.

Acute: May be harmful by inhalation. May irritate eyes, skin, mucous membranes, and upper respiratory tract.

Chronic: Excessive or prolonged inhalation may cause lung damage from pneumoconiosis (silicosis)

Target Organs: lungs

Symptoms: See specific route above. *Pre-existing conditions that may be aggravated:* respiratory diseases.

See Section 11 for additional toxicological data.

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



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Special Storage Instructions

Store away from hydrofluoric acid.

Special Handling Instructions

None

SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

<i>Airborne Exposure Limits</i>		TWA (8H)		STEL		Ceiling Limit		Ceiling (skin)	
		ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
Amorphous, Silica Gel 112926-00-8	OSHA PEL/VPPEL	6,000	6	NE	NE	NE	NE	NE	NE
	ACGIH - TLV	10,000	10	NE	NE	NE	NE	NE	NE

Special/Other Control Measures

Odor threshold: NA

Personal Protective Equipment (PPE)

- Chemical safety eyewear
- Compatible chemical-resistant gloves
- NIOSH/MSHA approved respirator with appropriate protections to prevent dust inhalation.
- Protective Clothing (e.g., lab coat)

Other Standard Safety Equipment and Engineering Preventive Measures

- Safety shower and eye wash
- Mechanical exhaust

General Precautions and Handling Measures

- Avoid ingestion, inhalation and contact with eyes, skin, and clothing. Avoid breathing dust.
- Avoid prolonged or repeated exposure. Wash thoroughly after handling.
- Wash contaminated clothing before reuse. Discard contaminated footwear.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES.....

Chemical Family: Silica

Use: Analytical: chromatographic packings

Appearance, Odor, and Other Properties

- | | | | |
|--------------------------|-----------------------|---|------------------------|
| <i>Appearance:</i> | clear to white powder | <i>MP:</i> | 1710°C (3110°F) |
| <i>FW:</i> | 60.09 | <i>Water Reactive:</i> | No |
| <i>Odor:</i> | None | <i>Solubility in Water:</i> | Insoluble, hygroscopic |
| <i>bp (@ 1 atm):</i> | 2230°C (4046°F) | <i>Specific Gravity (H₂O = 1.0):</i> | 2.10 |
| <i>VP (mmHg):</i> | NA | <i>Evap. Rate (BuAc = 1.0):</i> | NA |
| <i>% Volatiles:</i> | NA | <i>pH:</i> | 2.3-8.5 aq. suspension |
| <i>Refractive Index:</i> | NA | <i>Solubility in Organic Solvents:</i> Insoluble; Hydrofluoric acid will dissolve silica gel. | |

SECTION 10 STABILITY AND REACTIVITY

Stability

Stable.

Incompatibilities

- Hydrofluoric Acid (contact with silica produces silicon tetrafluoride gas) and other strong acids
- Water/Moisture (hygroscopic)

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Precautions

Avoid incompatibilities. Avoid generating dust.
 Keep out of water supplies and sewers.

Hazardous Combustion or Decomposition Products

May emit carbon monoxide, carbon dioxide, nitrogen oxides, silicon products

Hazardous Polymerization

None

SECTION 11 TOXICOLOGICAL INFORMATION

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

RTECS #

CAS #

VV7315000	Amorphous synthetic silica gel	112926-00-8
VV7310000	Synthetic amorphous silica*	112945-52-5
VV7565000	Silica*	7631-86-9

*Only selected Registry of Toxic Effects of Chemical
 Substances data (RTECS) is presented here.
 See actual entry in RTECS for complete information.*

* Various types of silica gels and silica—reference only.

Irritation Data

	eye	skin
Amorphous synthetic silica gel	NDA	NDA
Synthetic amorphous silica*	NDA	NDA
Silica*	NDA	NDA

* Various types of silica gels and silica—reference only.

Toxicity Data

	oral	inhalation	dermal or other
Amorphous synthetic silica gel (RTECS VV7315000)	NDA	NDA	NDA
Synthetic amorphous silica* (RTECS VV7310000)	orl rat LD50 3160 mg/kg; orl rat LD50 >31,600 mg/kg/48H (W. R. Grace and Co.); orl rat LD50 >22,500 mg/kg* (*Hartley, D.; Kidd, H.; eds., <i>The Agrochemicals Handbook</i> , 2 nd ; ed. Lechworth, Herts, England; Royal Society of Chemistry, 1987); orl rat LD50 >7500 mg/kg (DuPont)	ihl rat TCLo 154 mg/m3 (multiple dose); ihl rat LC50 >2 mg/L/1H (W. R. Grace and Co.); ihl rat LC50 >250 mg/m3/6H (Dupont)	NDA
Silica* (RTECS VV7565000)	NDA	NDA	NDA

* Various types of silica gels and silica—reference only.

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<i>Carcinogenicity</i>	OSHA	IARC	NTP	ACGIH	NIOSH	Notes
Amorphous synthetic silica gel (RTECS VV7315000)	NL	NL	NL	NL	NL	None
Synthetic amorphous silica* (RTECS VV7310000)	NL	NL	NL	NL	NL	IARC Cancer Review: Group 3; Human and Animal Inadequate Evidence (IMEMDT 68,41,1999; IMEMDT 42,39,1987)
Silica* (RTECS VV7565000)	NL	NL	NL	NL	NL	

* Various types of silica gels and silica—reference only.

Teratogenicity

No data available

Reproductive Effects

No data available

Mutagenicity

Mutagen data available. (RTECS VV7310000)

Miscellaneous

No reports of sensitization. (DuPont)

Acute and Chronic Effects

See specific route responses in Section 3 **Hazards Identification** above.

Target organs: lungs

Prolonged exposure to silica of 6 months to decades may result in silicosis with symptoms of cough, tachypnea, dyspnea, marked by weight loss and weakness. While pulmonary fibrosis has been reported from workers exposed to amorphous silica, established cause of fibrotic response in the lung is the crystalline form. The amorphous form has been reported fibrogenic to a lesser extent.

SECTION 12 ECOLOGICAL INFORMATION.....

No known ecological hazards.

Toxicity

Carp LD50 >10,000 mg/kg* (*Hartley, D.; Kidd, H.; eds., *The Agrochemicals Handbook*, 2nd ed. Lechworth, Herts, England; Royal Society of Chemistry, 1987)

Standard Chemical Precautions

Keep out of water, air, and soil.

SECTION 13 DISPOSAL CONSIDERATIONS

That which cannot be recovered or recycled, should be disposed of in accordance with all applicable Federal, State, and local environmental regulations.

RCRA waste code(s): None

RCRA Hazard Class (40CFR 261): None

SECTION 14 TRANSPORT INFORMATION.....

Ship in accordance with all applicable local, State, Federal, and International transportation regulations.

The following is a summary only. Check regulations for complete information:

U. S. Department of Transportation (49CFR171.101)

Hazard Class or Division: Not regulated.

Land Transport ADR/RID: Not regulated.

Air Transport IATA/ICAO: Not regulated.

Maritime Transport IMDG: Not regulated.

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SECTION 15 **REGULATORY INFORMATION**

Reviews, Standards, and Regulations

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 CAS Number..... 112926-00-8
 TSCA:..... N*
 *This is sold strictly for research and development use..... NA
 EINECS:..... N
 Number..... NA
 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

Hazard Classes

Sara	Acute	Chronic	Fire	Pressure	Reactivity
Title III	Y	Y	N	N	N
	Health	Flammability	Reactivity	Special Hazards	
NFPA	1	0	0	None	
HMIS	1	0	0	None	

Risk Phrases:

Caution: The properties of this material have not been fully investigated.

R20 Harmful by inhalation.
 R36/37/38 Irritating to eyes, respiratory system, and skin

Safety Phrases:

S22/24/25--Do not breathe dust. Avoid contact with skin and eyes.
 S26--In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

SECTION 16 **OTHER INFORMATION**

Miscellaneous

The health and toxicological hazards of this compound have not been fully investigated; therefore, this substance must be handled only by, or under close supervision of those qualified in the handling and use of potentially hazardous substances.

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This MSDS was revised as follows:

Section
 1-16 New MSDS—All sections contain new information.

Disclaimer

The above information is believed to be correct, but does not purport to be all-inclusive and shall be used only as a guide. Regis Technologies, Inc., does not guarantee said information is accurate or complete, *nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of the goods, the merchantability of the goods, or the fitness of the goods for a particular purpose.* Adjustment may be required to conform to the actual conditions of usage. Regis Technologies, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product, nor for the results obtained, or for incidental or consequential damage arising from the use of these data. No freedom from infringement of any patent, copyright or trademark is to be inferred.

Approved of by: MBF

This is the last page of this MSDS.

Reviewed and re-approved of with additional catalog numbers.
by: MBF

09/17/2009