



**Material Safety Data Sheet (MSDS)**  
**lotus<sup>®</sup> PRO Replacement Cartridge**

**Version Date:**  
**June 2011**

<b>SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION</b>	
<b>Product Name:</b> Lotus <sup>®</sup> PRO Replacement Cartridge <b>Synonym(s):</b> Indicating Silica Gel <b>Catalog No:</b> LRFC425K	<b>Contact Information:</b> Tersano (International) SRL 14300 Henn Dr. Dearborn MI 48126 <b>Toll-free (U.S.):</b> 1-800-808-1723  support@tersanoprofessional.com www.tersanoprofessional.com
<b>SECTION 2. COMPOSITION AND INFORMATION ON COMPONENTS</b>	
<b>Chemical Description:</b> Orange to Green indicating Silica Gel  <b>Formula:</b> SiO <sub>2</sub>  <b>CAS #:</b> 12926-00-8 amorphous silica 98.2%, activated colouring agent 0.2% max.	
<b>SECTION 3. HEALTH HAZARDS IDENTIFICATION</b>	
Do not breathe dust or exceed the exposure limits	
<b>SECTION 4. FIRST AID MEASURES</b>	
<b>Inhalation:</b> Remove from source of exposure.  <b>Skin Contact:</b> Wash spillage from skin with soap and water.  <b>Eyes Contact:</b> Wash immediately with copious amounts of water and obtain medical attention.  <b>Ingestion:</b> Wash out mouth with water. If large amount swallowed or symptoms develop obtain medical attention.	
<b>SECTION 5. FIRE FIGHTING MEASURES</b>	
<b>Extinguishing Media:</b> Not applicable. Inorganic compound. Not combustible.	

## SECTION 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Do not inhale. Wear appropriate protective clothing. Dust mask essential if conditions are dusty. See section 8 for exposure limits.

**Spillages:** Contain spillage. Collect in suitable containers

## SECTION 7. HANDLING AND STORAGE

**Handling :** Avoid creating any dust. Do not smoke. During handling electrostatic charges can accumulate (see BS 5958 for advice on the control of static.)

**Storage:** All containers must be closed air tight and kept in a dry place.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Occupational Exposure Standards:

#### Synthetic amorphous silica

Silica amorphous, total inhalable dust: UK EH40: OES 6mg/m<sup>3</sup> 8h TWA.

Silica amorphous, respirable dust: UK EH40: OES 2.4mg/m<sup>3</sup> 8h TWA.

Silica Gel: ACGIH: TLV 10mg/m<sup>3</sup> 8h TWA.

Activation agent: ACGIH: 0.5mg/m<sup>3</sup> 8h TWA.

#### Engineering Control Measures

Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.

#### Respiratory Protection

Avoid inhalation of dust. Wear suitable respiratory protective equipment if working in confined spaces with inadequate ventilation or whenever there is any risk of the exposure limits being exceeded.

**Hand Protection:** Wear protective gloves.

**Eyes Protection:** Wear suitable eye protection.

**Protection During Application:** Handle in well ventilated conditions in accordance with good industrial hygiene and safety practices.

## SECTION 9. PHYSICAL/CHEMICAL PROPERTIES

**Aspect:** Beads

**Colour Dry:** yellow/orange

**Saturated:** Green

**Odour:** Odourless

**Ph:** 2-10 at 5% w/w in water

**Melting Point (oC):** >1000

**Boiling Point:** Not Applicable

**Flash Point:** Not Applicable

**Explosion Limits:** Not Applicable

**Bulk Density:** 720kg per cu meter (typical)

**Solubility in Water:** less 1.0% in weight

**Thermal Decomposition:** Stable except when saturated water released during regeneration

## SECTION 10. STABILITY AND REACTIVITY DATA

**Stability Indicator:** Hygroscopic

**Stability Condition to Avoid:** High temperatures in excess of 155oC

**Materials to Avoid:** None known

**Hazardous Decomposition Products:** Hygroscopic material

## SECTION 11. TOXICOLOGICAL INFORMATION

**Toxicity:** The lethal dose for humans for synthetic amorphous silica is estimated at over 15,000mg/kg.

**Health Effects Inhalation:** Synthetic amorphous silica gel has little adverse effect on lungs and does not produce significant disease or toxic effect when exposure is kept below the permitted limits. However existing medical conditions (eg asthma, bronchitis) may be aggravated by exposure to dust. Effects of dust may be greater, and occur at lower levels of exposure in smokers compared to non-smokers.

**Eye Contact:** Dust may cause discomfort and mild irritation.

**Skin Contact:** Dust may have a drying effect on the skin.

**Carcinogenicity:** Amorphous silica is not classifiable as to its carcinogenicity to humans (Group 3).

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity:** Synthetic amorphous silica is virtually inert and has no known adverse effect on the environment.

## SECTION 13. DISPOSAL CONSIDERATIONS

**Product Disposal:** This material is not classified as hazardous waste under EEC Directive 91/689/EEC. Dispose of in accordance with all applicable local and national regulations. This material is not classified as special waste under UK Special Waste Regulations 1996 and can be disposed of by landfill at an approved site.

## SECTION 14. TRANSPORT INFORMATION

**UN Class:** Not classified as dangerous goods under the United Nations Transport Recommendations.

## SECTION 15. REGULATORY INFORMATION

### **EC Classification**

This product is not classified as dangerous.

### **S phrases**

Handle in accordance with good industrial hygiene and safety practices. Avoid inhalation of dust.

**EINECS Listing:** Preparation – all components listed

**TSCA Listing:** Mixture – all components listed

**AICS Listing:** Mixture – all components listed

**DSL/NDSL (Canadian) Listing:** Mixture – all components listed

## SECTION 16. OTHER INFORMATION

**MSDS first issued** 18th April 2000

**MSDS revision** 20th November 2002

**MSDS Revised** 10th December 2008

### 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. Tersano Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.



**Material Safety Data Sheet (MSDS)**  
**lotus® PRO Desiccant Cartridge**

**Version Date:**  
**September 2011**

<b>SECTION 1.</b>	
<b>Product Name:</b> lotus® PRO Desiccant Cartridge	<b>Contact Information:</b> Tersano (International) SRL 14300 Henn Dr. Dearborn, MI 48126  <b>Toll-free (U.S.):</b> 1-800-808-1723  support@tersanoprofessional.com www.tersanoprofessional.com
<b>SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS</b>	
<b>Chemical Description:</b> Orange to Green Indicating Silica Gel <b>Formula:</b> SiO <sub>2</sub> <b>CAS (R Phrase Classification):</b> 112926-00-8 amorphous silica 98.2%, activated colouring agent (food additive) 0.2% max.	
<b>SECTION 3. HEALTH HAZARD IDENTIFICATION</b>	
Do not breathe dust or exceed the exposure limits.	
<b>SECTION 4. FIRST AID MEASURES</b>	
<b>Inhalation:</b> Remove from source of exposure. <b>Skin Contact:</b> Wash spillage from skin with soap and water <b>Eyes Contact:</b> Wash immediately with copious amounts of water and obtain medical attention. <b>Ingestion:</b> Wash out mouth with water. If large amount swallowed or symptoms develop, consult a doctor.	
<b>SECTION 5. FIRE FIGHTING MEASURES</b>	
<b>Extinguishing Media:</b> Not applicable. Inorganic compound. Not combustible.	
<b>SECTION 6. ACCIDENTAL RELEASE MEASURES</b>	
<b>Personnel Precautions:</b> Do not inhale. Wear appropriate protective clothing. Dust mask essential if conditions are dusty. See section 8 for exposure limits.	

**Spillages:** Contain spillage. Collect in suitable containers for recovery or disposal. During collection avoid creating dust.

## SECTION 7. HANDLING AND STORAGE

**Handling:** Avoid creating any dust. Do not smoke. During handling electrostatic charges can accumulate.

**Storage:** All containers must be closed air tight and kept in a dry place.

## SECTION 8. EXPOSURE CONTROL / PERSONAL PROTECTION

### Occupational Exposure Standards:

#### Synthetic amorphous silica:

Silica amorphous, total inhalable dust: UK EH40: OES  
6mg/m<sup>3</sup> 8h TWA.

Silica amorphous, respirable dust: UK EH40: OES  
2.4mg/m<sup>3</sup> 8h TWA.

Silica Gel: ACGIH: TLV 10mg/m<sup>3</sup> 8h TWA.

Activation agent: ACGIH: 0.5mg/m<sup>3</sup> 8h TWA.

### Engineering Control Measures:

Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.

### Respiratory Protection:

Avoid inhalation of dust. Wear suitable respiratory protective equipment if working in confined spaces with inadequate ventilation or whenever there is any risk of the exposure limits being exceeded.

**Hand Protection:** Wear protective gloves.

**Eyes Protection:** Wear suitable eye protection.

**Protection During Application:** Handle in well ventilated conditions in accordance with good industrial hygiene and safety practices.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Form:** Beads

**Colour:** Dry: Yellow/Orange Saturated: Green

**Odour:** Odourless

**pH:** 2-10 at 5% w/w in water

**Melting Point (°C):** >1000

**Boiling Point:** Not determined

**Inflammability:** No

**Ignition temperature:** Not determined

**Spontaneous flammability:** Not determined

**Fire Promoting Properties:** No

**Explosive Limits:** Not determined

**Vapor Pressure:** Not relevant

**Bulk Density:** 720 kg per cu meter (typical)

**Solubility in Water:** less 1.0% in weight

**Fat Solubility:** Not determined  
**Partition coefficient n-octanol/ water:** Not determined

## SECTION 10. STABILITY AND REACTIVITY

**Stability:** Hygroscopic  
**Conditions to Avoid:** High temperatures in excess of 155 °C  
**Materials to Avoid:** None known  
**Hazardous Decomposition:** Hygroscopic material

## SECTION 11. TOXICOLOGICAL INFORMATION

**Toxicity:** The lethal dose for humans for synthetic amorphous silica is estimated at over 15,000mg/kg.  
**Health Effects Inhalation:** Synthetic amorphous silica gel has little adverse effect on lungs and does not produce sighting disease or toxic effect when exposure is kept below the permitted limits. However existing medical conditions (eg asthma, bronchitis) may be aggravated by exposure to dust. Effects of them may be greater, and occur at lower levels exposure in smokers compared to non-smokers.  
**Eye Contact:** Dust may cause discomfort and mild irritation.  
**Skin Contact:** Dust may have a drying effect on the skin.  
**Carcinogenicity:** Amorphous silica is not classifiable as to it carcinogenicity to humans (Group 3).

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity:** Synthetic amorphous silica is virtually inert. Has no known adverse effect on the environment.

## SECTION 13. DISPOSAL CONSIDERATIONS

**Product Disposal:** Product can be reactivated in an oven for re-use.  
This material is not classified as hazardous waste under EEC Directive 91/689/EEC.  
  
Dispose of in accordance with all applicable local and national regulations.  
  
This material is not classified as special waste under UK Special Waste Regulations 1996 and can be disposed of by landfill at an approved site.

## SECTION 14. TRANSPORT INFORMATION

**UN Class:** Not classified as dangerous goods under the United Nations Transport Recommendations.

## SECTION 15. REGULATORY INFORMATION

**EC Classification:** This product is not classified as dangerous.  
**S phrases:** Handle in accordance with good industrial hygiene and safety practices. Avoid inhalation of dust.  
**EINECS Listing:** Preparation – all components listed.  
**TSCA Listing:** Mixture – all components listed.  
**AICS Listing:** Mixture – all components listed.  
**DSL/NDSL (Canadian) Listing:** Mixture – all components listed.

## SECTION 16. REGULATORY INFORMATION

**Reportable for SARA Title III, S.313 (Form R):** None

The information herein has been compiled from sources believed to be reliable and is accurate to the best of our knowledge. However, Tersano (International) SRL. cannot give any guarantees regarding information from other sources, and expressly does not make any warranties, nor assumes any liability, for its use.