Section 1. Product Identification: Silica Coated TLC Plates.
Part Nos.: 1615026, 1615037, 1615048, 1615067, 1615069, 1615126, 1615137, 1615137PS, 1615148,
1615156, 1615167, 1615190, 1615226, 1615237, 1615248, 1616025, 1616125, 1617024,
1617124, 1618023, 1618123, 1624016, 1624026, 1624047, 1624087, 1624099, 16240B8, 1624116, 1624126,
1624147, 1624187, 1624199, 16241AR, 1634026, 1634035, 1634047, 1634067, 1634099, 16340C5, 1634126, 1634135,
1634147, 1634187, 1634199, 1715026, 1715126, 1824026, 1824047, 1824099, 1824126, 1824147,
1914056, 1914078, 2011132, 2012136, 2115026, 2115037, 2115048, 2115126, 2115137, 2115148,
2115167, 2214037, 2214056, 2214078, 2214137, 2214156, 2214178, 2315026, 2315037,
2315126, 2315137, 2414056, 2414156, 2514056, 2514156, 2514197C, 2612126, 2612156, 2614056,
2614156, 2633156, 2715126, 2715137, 2715147, 2715156, 2717124, 2733126, 2733147, 2733156, 2733167, 2733187,
2815126, 2815137, 2815156, 2835126, 2835187, 2914136, 2914156, 2933126, 2933137, 3014036, 3014056, 3014136,
3014156, 3014197, 3033126, 3033187, 3114126, 3114156, 3114197, 3133126, 3133137, 3215026, 3314037, 3314056,
3415126, 3415131, 3415156, 3415197, 3415199, 3515126, 3515137, 3515156, 3515197, 3534026, 3534047, 3534099,
4115026, 4115037, 4115056, 4115067, 4115126, 4115137, 4115137PS, 4115148, 4115156, 4115167,
4115190, 4115198, 4214037, 4214056, 4214078, 4214137, 4214156, 4214178, 4314026, 4314047, 4314078,
4414037, 4414056, 4414078, 4414137, 4414156, 4414178, 4534056, 4534099, 4634026, 4634035,
4634135, 4634187.

Section 3. Composition / Information on Ingredients
Substrates coated with silica, amorphous, with or without Fluorescent indicator < 3% (SiO2).

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica Gel (SiO2)</td>
<td>7631-86-9; 63231-67-4</td>
<td>231-545-4</td>
<td>99.5—100</td>
</tr>
</tbody>
</table>

This is not a hazardous substance/mixture.
Synonyms: TLC plates coated with amorphous silica gel, partially modified.

Amorphous Silica Gel, Silicon Dioxide, Reversed Phase (RP) Silica Gel, Bonded Phase Silica Gel

Section 2. Hazards Identification
Emergency Overview: Odorless white powder. Caution: May cause irritation to skin/or dermatitis eyes, and respiratory tract. The toxicological properties have not been fully investigated.

Potential Health Effects: Medical conditions aggravated by exposure: Preexisting eye disorders.

Routes of Exposure:
Eyes: Not corrosive, but like most particulate materials, may cause mild physical irritation.
Skin: Not corrosive and not a primary skin irritant. Mild irritation is possible due to dryness and abrasive action of dust.
Ingestion: No adverse effects expected.
Inhalation: May cause dryness and irritation to mucous membranes, nose and throat. Symptoms may include coughing, sore throat, dyspnea, wheezing and non-specific chest illnesses.

Chronic Effects: Repeated exposure may cause similar to those listed for acute effects. Synthetic amorphous silica does not produce silicosis.

Carcinogen: IARC: group 3  NTP: Not listed  OSHA: Not regulated

Section 4. First Aid Measures
Skin: Immediately wash material off skin with soap and water. Seek medical attention if irritation occurs. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes: Flush with copious amounts of water also under the eyelids. Seek medical attention if irritation occurs.

Ingestion: Give one or two glasses of water to drink. Seek medical attention if gastrointestinal symptoms develop. Do not induce vomiting.

Inhalation: Remove to fresh air. Seek medical attention if cough or respiratory symptoms develop.
Section 5. Fire Fighting Measures
Flash Point: Not applicable
Self-heating substance: Not applicable
Flammability Limits in Air: LFL and UFL: Not Applicable.
General Hazard: Not considered to be a fire hazard.
Fire Fighting Instructions: Extinguish fire using water fog, fine water spray, carbon dioxide or foam.
Avoid stirring up dust clouds.
Fire Fighting Equipment: Fire fighting personnel should wear full protective equipment, including self-contained breathing apparatus (SCBA) for all inside fires and large outdoor fires.
Explosion Hazard: Not considered an explosion hazard.
Hazardous Combustion Products: Burning produces irritant fumes.
NFPA Rating: Health: 1  Flammability: 0  Reactivity: 0  Physical Hazards: N/A

Section 6. Accidental Release Measures
If a Spill or Leak Occurs: Ensure adequate ventilation. Clean up spills in a manner that does not disperse dust into the air. Handle in accordance with industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal from eyes, skin, and clothing.
Disposal Method: Avoid dust formation. Dispose material in a facility for non-hazardous wastes.
Spent should be disposed of in accordance with State and Federal laws.
Container Disposal: Do not reuse empty bags or drums. Dispose of used bags in facility permitted for non-hazardous wastes.

Section 7. Handling and Storage
Handling: Avoid prolonged contact with eyes and skin. Keep away from ignition sources. Use in well ventilated areas. Protect containers from physical damage. Wash hands after handling.
Storage: Store in cool, dry, ventilated area and in closed containers. Keep away from oxidizers, heat or flames. Store away from ignition sources.

Section 8. Exposure Controls / Personal Protection
Engineering Controls: Use local exhaust to control emissions near the source. Ventilation systems should be configured to prevent exceeding the recommended or regulated exposure limits (i.e. OSHA PELs).
Eye Protection: Safety glasses with side shields are recommended for any type of handling. Where eye contact or dusty conditions may likely, dust tight goggles are recommended. Have eye washing equipment available.
Skin protection: Avoid skin contact with this product. Wear appropriate dust resistant clothing. Wash contaminated clothing and clean protective equipment before reuse. Wash skin thoroughly after handling.
Respiratory Protection: Keep dust exposure to a minimum with engineering and administrative controls. Use appropriate NIOSH/MSHA approved particulate respirators if necessary. Observe respirator use limitations specified by NIOSH/ MSHA or the manufacturer.
Airborne Exposure Guidelines:

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>OTHER LIMITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica, amorphous</td>
<td>80 mg/m3</td>
<td>10 mg/m3inhale particulate</td>
<td>5 mg/m3 respirable particulate</td>
</tr>
</tbody>
</table>

PEL is the Permissible Exposure Limits established by OSHA.
TLV is the Threshold Limit Value a term ACGIH uses to express the maximum airborne concentration of a material to which most workers can be exposed during a normal daily and weekly work schedule without adverse effects.

Section 9. Physical and Chemical Properties
Physical State: Solid
Appearance and odor: White granular powder with no odor
pH: 3—9 (in 5% slurry in water)
Vapor Pressure: Not applicable
Vapor Density: Not applicable
Section 9. Physical and Chemical Properties
Evaporation Rate: Negligible
Freezing Point: Not applicable
Volatile %: Not applicable
Specific Gravity: 2.20
Solubility: Negligible in water (<0.1%)
Molecular Formula: SiO₂
Molecular weight: 60.08

Section 10. Stability and Reactivity
Stability: This product is stable under the specified conditions of storage, shipment and use. Avoid storing at high temperatures or in direct sunlight.
Incompatibility: Reacts with hydrogen fluoride, fluoride, oxygen difluoride, chlorine trifluoride, strong acids, strong bases and oxidizers.
Hazardous Decomposition Products: Oxides of carbon and silicon may form when heated to decomposition.
Hazardous Polymerization: Does not occur.

Section 11. Toxicological Information
Acute Toxicity:
Component       LD₅₀ Oral   LD₅₀ Dermal   LC₅₀
Silica, amorphous 4500 mg/kg rat  >2000 mg/kg rabbit  2.0 mg/L rat, 1 hour
Carcinogenicity: CAS# 7631-86-9: IARC: group 3  NTP: Not listed  OSHA: Not listed
Target Organs or System: Eyes, skin and upper respiratory system.
Signs and Symptoms of Exposure: Irritation and redness of eyes, irritation of skin and respiratory system may result from exposure to dust. No corrosive effects observed.

Section 12. Ecological Information
Ecotoxicity: This material is not expected to be toxic to aquatic life.
Persistence/ Degradability: When released into the soil, this material is not expected to biodegrade.
When released into water, this material is not expected to biodegrade.
Bioaccumulation/Accumulation: Not determined on the product
Mobility in Environmental Media: Not determined on product

Section 13. Disposal Considerations
Vacuum or shovel material into a closed container for reuse or disposal. Not considered to be a hazardous waste. Storage and disposal should be in accordance with applicable local state and federal laws and regulations. Local regulations maybe more stringent than state or federal requirements.
RCRA P-Series: None listed
RCRA U-Series: None listed

Section 14. Transport Information
Land: US DOT: Not regulated
Canada TDG: Not regulated
Water: IMO/IMDG: Not regulated
Air: IACO/IATA: Not regulated
Section 15. Regulatory Information

US Federal
TSCA: CAS# 7631-86-9; 63231-67-4 is listed on the TSCA inventory.
CERCLA Hazardous Substances and Corresponding RQs: None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances: None of the chemicals in this product have a TPQ.
SARA Codes 311/312: CAS# 7631-86-9: Acute; yes Chronic; yes
SARA Section 313: No chemicals in this product are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants, Class 1 Ozone depletors or Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances, Priority Pollutants or Toxic Pollutants under the CWA.
OSHA: None of the chemicals in this product are considered highly hazardous by OSHA.

States
CAS# 7631-86-9
California Prop 65: Not listed.
Massachusetts: Listed
New Jersey Right to Know: SN 1655
Pennsylvania: Listed
Florida: Listed
Rhode Island: Not listed
Illinois: Not listed
Connecticut - Hazardous Air pollutants: Not listed

Canadian Classification
WHMIS: Not controlled
DSL #: Listed; Silica Gel

EEC Council Directives relating to the classification, packaging, and labeling of dangerous substances and preparations.
Risk and Safety Phrases: R36/37/38: Irritating to eyes, respiratory system and skin.

Section 16. Additional Information

Intended Use: This material is generally used as an absorbent for chromatography
Health Hazard: 1
Fire Hazard: 0
Reactivity: 0
Personal Protection: E (safety glasses, gloves, dust respirator)
S references: S 22, Do not breath dust.

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to these products or handling of these products. Customers/users must comply with all applicable health and safety laws, regulations, and orders.

SDS REVISION SUMMARY: revision 003 replaces revision 002 dated 1/31/14.