

SAFETY DATA SHEET



Polar Ion APP Kit - 500Mg - 30/Pk, Part Number 12102057

Section 1. Identification

This product is considered an article. This Safety Data Sheet is written based on the encapsulated substance or mixture in this article.

1.1 Product identifier

Product name	: Polar Ion APP Kit - 500Mg - 30/Pk, Part Number 12102057
Part no. (chemical kit)	: 12102057
Part no.	: <input checked="" type="checkbox"/> Silica gel 30511001
	Organosilane bonded silica gel 32531010
	Organosilane bonded silica gel 32531014
	Organosilane bonded silica gel 32531015
	Organosilane bonded silica gel 32531017
	Organosilane bonded silica gel 32531018
Validation date	: 5/17/2022

1.2 Relevant identified uses of the substance or mixture and uses advised against

Material uses	: Analytical chemistry. cartridge
	<input checked="" type="checkbox"/> Silica gel 250 mg
	Organosilane bonded silica gel 250 mg
	Organosilane bonded silica gel 250 mg
	Organosilane bonded silica gel 250 mg
	Organosilane bonded silica gel 250 mg
	Organosilane bonded silica gel 250 mg

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer : Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

This article, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. The substance or mixture is encapsulated in the article. Only if released due to use or processing of the article in a manner not in accordance with the product’s directions for use it may present potential health and safety hazards.

2.1 Classification of the substance or mixture

OSHA/HCS status	: <input checked="" type="checkbox"/> Silica gel	While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
	Organosilane bonded silica gel	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
	Organosilane bonded silica gel	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
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Section 2. Hazards identification

Organosilane bonded silica gel	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
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Classification of the substance or mixture

Organosilane bonded silica gel	COMBUSTIBLE DUSTS
Organosilane bonded silica gel	COMBUSTIBLE DUSTS
Organosilane bonded silica gel	COMBUSTIBLE DUSTS
Organosilane bonded silica gel	COMBUSTIBLE DUSTS
Organosilane bonded silica gel	COMBUSTIBLE DUSTS

2.2 GHS label elements

Signal word	: Silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel	No signal word. Warning Warning Warning Warning Warning
Hazard statements	: Silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel	No known significant effects or critical hazards. May form combustible dust concentrations in air. May form combustible dust concentrations in air. May form combustible dust concentrations in air. May form combustible dust concentrations in air. May form combustible dust concentrations in air.
Precautionary statements		
Prevention	: Silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Response	: Silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Storage	: Silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel	Not applicable. Not applicable. Not applicable. Not applicable. Not applicable. Not applicable.
Disposal	:	

Section 2. Hazards identification

	☑ Silica gel	Not applicable.
	Organosilane bonded silica gel	Not applicable.
	Organosilane bonded silica gel	Not applicable.
	Organosilane bonded silica gel	Not applicable.
	Organosilane bonded silica gel	Not applicable.
Supplemental label elements	: ☑ Silica gel	None known.
	Organosilane bonded silica gel	Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
	Organosilane bonded silica gel	Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
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2.3 Other hazards

Hazards not otherwise classified

: ☑ Silica gel	None known.
Organosilane bonded silica gel	None known.
Organosilane bonded silica gel	None known.
Organosilane bonded silica gel	None known.
Organosilane bonded silica gel	None known.
Organosilane bonded silica gel	None known.

Section 3. Composition/information on ingredients

This article, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. The substance or mixture is encapsulated in the article. Only if released due to use or processing of the article in a manner not in accordance with the product's directions for use it may present potential health and safety hazards.

Substance/mixture	: ☑ Silica gel	Substance (encapsulated in article)
	Organosilane bonded silica gel	Substance (encapsulated in article)
	Organosilane bonded silica gel	Substance (encapsulated in article)
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	Organosilane bonded silica gel	Substance (encapsulated in article)
	Organosilane bonded silica gel	Substance (encapsulated in article)

Ingredient name	%	CAS number
☑ Silica gel Silica Gel	100	112926-00-8
Organosilane bonded silica gel Organosilane bonded silica gel	100	-
Organosilane bonded silica gel Organosilane bonded silica gel	100	-

Section 3. Composition/information on ingredients

Organosilane bonded silica gel Organosilane bonded silica gel	100	-
Organosilane bonded silica gel Organosilane bonded silica gel	100	-
Organosilane bonded silica gel Organosilane bonded silica gel	100	-

Note: The hazard information listed is based on unbonded silica gel CAS Number 112926-00-8. To the best of our knowledge, the acute and chronic toxicological properties of bonded silica gels have not been investigated. This product contains synthetic amorphous silica, and should not be confused with crystalline silica such as quartz, cristobalite, or tridymite, or with diatomaceous earth or other naturally occurring forms of amorphous silica that frequently contain crystalline forms of silica.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact

: Silica gel

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Organosilane bonded silica gel

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Organosilane bonded silica gel

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Inhalation

: Silica gel

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Organosilane bonded silica gel

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be

Section 4. First aid measures

Organosilane bonded silica gel	<p>dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p> <p>Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
Organosilane bonded silica gel	<p>Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>
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Organosilane bonded silica gel	<p>Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.</p>

Section 4. First aid measures

Skin contact	: Silica gel	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
	Organosilane bonded silica gel	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
	Organosilane bonded silica gel	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
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Ingestion	: Silica gel	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
	Organosilane bonded silica gel	Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
	Organosilane bonded silica gel	Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention

Section 4. First aid measures

Organosilane bonded silica gel

immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.

Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Organosilane bonded silica gel

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Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact

: Silica gel

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Organosilane bonded silica gel

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Organosilane bonded silica gel

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Section 4. First aid measures

	Organosilane bonded silica gel	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
	Organosilane bonded silica gel	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
Inhalation	: Silica gel	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
	Organosilane bonded silica gel	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
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	Organosilane bonded silica gel	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
Skin contact	: Silica gel	No known significant effects or critical hazards.
	Organosilane bonded silica gel	No known significant effects or critical hazards.
	Organosilane bonded silica gel	No known significant effects or critical hazards.
	Organosilane bonded silica gel	No known significant effects or critical hazards.
	Organosilane bonded silica gel	No known significant effects or critical hazards.
Ingestion	: Silica gel	No known significant effects or critical hazards.
	Organosilane bonded silica gel	No known significant effects or critical hazards.
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	Organosilane bonded silica gel	No known significant effects or critical hazards.
	Organosilane bonded silica gel	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	: Silica gel	Adverse symptoms may include the following: irritation redness
	Organosilane bonded silica gel	Adverse symptoms may include the following: irritation redness
	Organosilane bonded silica gel	Adverse symptoms may include the following: irritation redness
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Section 4. First aid measures

Inhalation	: Silica gel	Adverse symptoms may include the following: respiratory tract irritation coughing
	Organosilane bonded silica gel	Adverse symptoms may include the following: respiratory tract irritation coughing
	Organosilane bonded silica gel	Adverse symptoms may include the following: respiratory tract irritation coughing
	Organosilane bonded silica gel	Adverse symptoms may include the following: respiratory tract irritation coughing
	Organosilane bonded silica gel	Adverse symptoms may include the following: respiratory tract irritation coughing
Skin contact	: Silica gel	No specific data.
	Organosilane bonded silica gel	No specific data.
	Organosilane bonded silica gel	No specific data.
	Organosilane bonded silica gel	No specific data.
	Organosilane bonded silica gel	No specific data.
Ingestion	: Silica gel	No specific data.
	Organosilane bonded silica gel	No specific data.
	Organosilane bonded silica gel	No specific data.
	Organosilane bonded silica gel	No specific data.
	Organosilane bonded silica gel	No specific data.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	: Silica gel	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Organosilane bonded silica gel	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
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	Organosilane bonded silica gel	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: Silica gel	No specific treatment.
	Organosilane bonded silica gel	No specific treatment.
	Organosilane bonded silica gel	No specific treatment.
	Organosilane bonded silica gel	No specific treatment.
	Organosilane bonded silica gel	No specific treatment.

Section 4. First aid measures

Protection of first-aiders	: Silica gel	No action shall be taken involving any personal risk or without suitable training.
	Organosilane bonded silica gel	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
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See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	: Silica gel	Use an extinguishing agent suitable for the surrounding fire.
	Organosilane bonded silica gel	Use dry chemical powder.
	Organosilane bonded silica gel	Use dry chemical powder.
	Organosilane bonded silica gel	Use dry chemical powder.
	Organosilane bonded silica gel	Use dry chemical powder.
	Organosilane bonded silica gel	Use dry chemical powder.
Unsuitable extinguishing media	: Silica gel	None known.
	Organosilane bonded silica gel	Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.
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	Organosilane bonded silica gel	Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	: Silica gel	No specific fire or explosion hazard.
	Organosilane bonded silica gel	May form explosible dust-air mixture if dispersed.
	Organosilane bonded silica gel	May form explosible dust-air mixture if dispersed.
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	Organosilane bonded silica gel	May form explosible dust-air mixture if dispersed.

Section 5. Fire-fighting measures

Hazardous thermal decomposition products	: Silica gel	Decomposition products may include the following materials: metal oxide/oxides
	Organosilane bonded silica gel	Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides
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	Organosilane bonded silica gel	Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters	: Silica gel	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
	Organosilane bonded silica gel	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
	Organosilane bonded silica gel	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
	Organosilane bonded silica gel	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
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Section 5. Fire-fighting measures

Special protective equipment for fire-fighters

: Silica gel

Organosilane bonded silica gel

Organosilane bonded silica gel

Organosilane bonded silica gel

Organosilane bonded silica gel

Organosilane bonded silica gel

from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: Silica gel

Organosilane bonded silica gel

Organosilane bonded silica gel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing dust. Put on appropriate personal protective equipment.

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

Organosilane bonded silica gel

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For emergency responders : Silica gel

Organosilane bonded silica gel

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Organosilane bonded silica gel

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If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

6.2 Environmental precautions	: Silica gel	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Organosilane bonded silica gel	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Organosilane bonded silica gel	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Organosilane bonded silica gel	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Organosilane bonded silica gel	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
	Organosilane bonded silica gel	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	: Silica gel	Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
	Organosilane bonded silica gel	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
	Organosilane bonded silica gel	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
	Organosilane bonded silica gel	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
	Organosilane bonded silica gel	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
	Organosilane bonded silica gel	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

labeled waste container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures

: Silica gel

Organosilane bonded silica gel

Put on appropriate personal protective equipment (see Section 8). Avoid breathing dust.

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust

Organosilane bonded silica gel

Organosilane bonded silica gel

Section 7. Handling and storage

Organosilane bonded silica gel

coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Organosilane bonded silica gel

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment

Advice on general occupational hygiene

:  Silica gel

Organosilane bonded silica gel

Section 7. Handling and storage

Organosilane bonded silica gel

before entering eating areas. See also Section 8 for additional information on hygiene measures. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Organosilane bonded silica gel

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Organosilane bonded silica gel

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Organosilane bonded silica gel

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

:  Silica gel

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Organosilane bonded silica gel

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Organosilane bonded silica gel

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from

Section 7. Handling and storage

	incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Organosilane bonded silica gel	Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Organosilane bonded silica gel	Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
Organosilane bonded silica gel	Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Section 7. Handling and storage

Recommendations	: Silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel	Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications. Industrial applications, Professional applications.
Industrial sector specific solutions	: Silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel	Not available. Not available. Not available. Not available. Not available.

Section 8. Exposure controls/personal protection

Since the hazardous ingredient in this article is encapsulated, the risk of exposure by inhalation, ingestion, skin contact and eyes contact is minimum.

8.1 Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Silica gel Silica Gel	ACGIH TLV (United States). Particulate matter not otherwise classified: (PNOC): 10 mg/m ³ Form: Inhalable Particulate matter not otherwise classified: (PNOC): 3 mg/m ³ Form: Respirable OSHA PEL (United States). Particulate matter not otherwise classified: (PNOC): 5 mg/m ³ Form: Respirable fraction Particulate matter not otherwise classified: (PNOC): 15 mg/m ³ Form: Total dust
Organosilane bonded silica gel Organosilane bonded silica gel	ACGIH TLV (United States). Particulate matter not otherwise classified: (PNOC): 10 mg/m ³ Form: Inhalable Particulate matter not otherwise classified: (PNOC): 3 mg/m ³ Form: Respirable OSHA PEL (United States). Particulate matter not otherwise classified: (PNOC): 5 mg/m ³ Form: Respirable fraction Particulate matter not otherwise classified: (PNOC): 15 mg/m ³ Form: Total dust
Organosilane bonded silica gel	ACGIH TLV (United States). Particulate matter not otherwise classified: (PNOC): 10 mg/m ³ Form: Inhalable Particulate matter not otherwise classified: (PNOC): 3 mg/m ³ Form: Respirable OSHA PEL (United States). Particulate matter not otherwise classified: (PNOC): 5 mg/m ³ Form: Respirable fraction Particulate matter not otherwise classified: (PNOC): 15 mg/m ³ Form: Total dust
Organosilane bonded silica gel Organosilane bonded silica gel	ACGIH TLV (United States). Particulate matter not otherwise classified:

Section 8. Exposure controls/personal protection

Organosilane bonded silica gel

(PNOC): 10 mg/m³ Form: Inhalable
Particulate matter not otherwise classified:
(PNOC): 3 mg/m³ Form: Respirable
OSHA PEL (United States).
Particulate matter not otherwise classified:
(PNOC): 5 mg/m³ Form: Respirable fraction
Particulate matter not otherwise classified:
(PNOC): 15 mg/m³ Form: Total dust
ACGIH TLV (United States).
Particulate matter not otherwise classified:
(PNOC): 10 mg/m³ Form: Inhalable
Particulate matter not otherwise classified:
(PNOC): 3 mg/m³ Form: Respirable
OSHA PEL (United States).
Particulate matter not otherwise classified:
(PNOC): 5 mg/m³ Form: Respirable fraction
Particulate matter not otherwise classified:
(PNOC): 15 mg/m³ Form: Total dust

Organosilane bonded silica gel
Organosilane bonded silica gel

ACGIH TLV (United States).
Particulate matter not otherwise classified:
(PNOC): 10 mg/m³ Form: Inhalable
Particulate matter not otherwise classified:
(PNOC): 3 mg/m³ Form: Respirable
OSHA PEL (United States).
Particulate matter not otherwise classified:
(PNOC): 5 mg/m³ Form: Respirable fraction
Particulate matter not otherwise classified:
(PNOC): 15 mg/m³ Form: Total dust

Organosilane bonded silica gel

ACGIH TLV (United States).
Particulate matter not otherwise classified:
(PNOC): 10 mg/m³ Form: Inhalable
Particulate matter not otherwise classified:
(PNOC): 3 mg/m³ Form: Respirable
OSHA PEL (United States).
Particulate matter not otherwise classified:
(PNOC): 5 mg/m³ Form: Respirable fraction
Particulate matter not otherwise classified:
(PNOC): 15 mg/m³ Form: Total dust

Organosilane bonded silica gel
Organosilane bonded silica gel

ACGIH TLV (United States).
Particulate matter not otherwise classified:
(PNOC): 10 mg/m³ Form: Inhalable
Particulate matter not otherwise classified:
(PNOC): 3 mg/m³ Form: Respirable
OSHA PEL (United States).
Particulate matter not otherwise classified:
(PNOC): 5 mg/m³ Form: Respirable fraction
Particulate matter not otherwise classified:
(PNOC): 15 mg/m³ Form: Total dust

Organosilane bonded silica gel

ACGIH TLV (United States).
Particulate matter not otherwise classified:
(PNOC): 10 mg/m³ Form: Inhalable
Particulate matter not otherwise classified:
(PNOC): 3 mg/m³ Form: Respirable
OSHA PEL (United States).

Section 8. Exposure controls/personal protection

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state	: Silica gel	Solid. [Powder.]
	Organosilane bonded silica gel	Solid. [Powder.]
	Organosilane bonded silica gel	Solid. [Powder.]
	Organosilane bonded silica gel	Solid. [Powder.]
	Organosilane bonded silica gel	Solid. [Powder.]
Color	: Silica gel	White.
	Organosilane bonded silica gel	White.
	Organosilane bonded silica gel	White.
	Organosilane bonded silica gel	White.
	Organosilane bonded silica gel	White.
Odor	: Silica gel	Odorless.
	Organosilane bonded silica gel	Odorless.
	Organosilane bonded silica gel	Odorless.
	Organosilane bonded silica gel	Odorless.
	Organosilane bonded silica gel	Odorless.
Odor threshold	: Silica gel	Not available.
	Organosilane bonded silica gel	Not available.
	Organosilane bonded silica gel	Not available.
	Organosilane bonded silica gel	Not available.
	Organosilane bonded silica gel	Not available.
pH	: Silica gel	Not available.
	Organosilane bonded silica gel	Not available.
	Organosilane bonded silica gel	Not available.
	Organosilane bonded silica gel	Not available.
	Organosilane bonded silica gel	Not available.
Melting point/freezing point	: Silica gel	>1700°C (>3092°F)
	Organosilane bonded silica gel	>1700°C (>3092°F)
	Organosilane bonded silica gel	>1700°C (>3092°F)
	Organosilane bonded silica gel	>1700°C (>3092°F)
	Organosilane bonded silica gel	>1700°C (>3092°F)
Boiling point, initial boiling point, and boiling range	: Silica gel	2230°C (4046°F)
	Organosilane bonded silica gel	2230°C (4046°F)
	Organosilane bonded silica gel	2230°C (4046°F)
	Organosilane bonded silica gel	2230°C (4046°F)
	Organosilane bonded silica gel	2230°C (4046°F)
Flash point	: Silica gel	Not applicable.
	Organosilane bonded silica gel	Not applicable.
	Organosilane bonded silica gel	Not applicable.
	Organosilane bonded silica gel	Not applicable.
	Organosilane bonded silica gel	Not applicable.

Section 9. Physical and chemical properties and safety characteristics

Evaporation rate	: Silica gel	Not available.
	Organosilane bonded silica gel	Not available.
	Organosilane bonded silica gel	Not available.
	Organosilane bonded silica gel	Not available.
	Organosilane bonded silica gel	Not available.
Flammability	: Silica gel	Not available.
	Organosilane bonded silica gel	Not available.
	Organosilane bonded silica gel	Not available.
	Organosilane bonded silica gel	Not available.
	Organosilane bonded silica gel	Not available.
Lower and upper explosion limit/flammability limit	: Silica gel	Not applicable.
	Organosilane bonded silica gel	Not applicable.
	Organosilane bonded silica gel	Not applicable.
	Organosilane bonded silica gel	Not applicable.
	Organosilane bonded silica gel	Not applicable.
Vapor pressure	: Silica gel	Not available.
	Organosilane bonded silica gel	Not available.
	Organosilane bonded silica gel	Not available.
	Organosilane bonded silica gel	Not available.
	Organosilane bonded silica gel	Not available.
Relative vapor density	: Silica gel	Not applicable.
	Organosilane bonded silica gel	Not applicable.
	Organosilane bonded silica gel	Not applicable.
	Organosilane bonded silica gel	Not applicable.
	Organosilane bonded silica gel	Not applicable.
Relative density	: Silica gel	2.5 to 3.5
	Organosilane bonded silica gel	2.5 to 3.5
	Organosilane bonded silica gel	2.5 to 3.5
	Organosilane bonded silica gel	2.5 to 3.5
	Organosilane bonded silica gel	2.5 to 3.5
Solubility	: Silica gel	Insoluble in the following materials: cold water and hot water.
	Organosilane bonded silica gel	Insoluble in the following materials: cold water and hot water.
	Organosilane bonded silica gel	Insoluble in the following materials: cold water and hot water.
	Organosilane bonded silica gel	Insoluble in the following materials: cold water and hot water.
	Organosilane bonded silica gel	Insoluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Silica gel	Not available.
	Organosilane bonded silica gel	Not applicable.
	Organosilane bonded silica gel	Not applicable.
	Organosilane bonded silica gel	Not applicable.
	Organosilane bonded silica gel	Not applicable.

Section 9. Physical and chemical properties and safety characteristics

Auto-ignition temperature : Silica gel Not applicable.
 Organosilane bonded silica gel Not applicable.
 Organosilane bonded silica gel Not applicable.
 Organosilane bonded silica gel Not applicable.
 Organosilane bonded silica gel Not applicable.
 Organosilane bonded silica gel Not applicable.

Decomposition temperature : Silica gel Not available.
 Organosilane bonded silica gel Not available.
 Organosilane bonded silica gel Not available.
 Organosilane bonded silica gel Not available.
 Organosilane bonded silica gel Not available.
 Organosilane bonded silica gel Not available.

Viscosity : Silica gel Not applicable.
 Organosilane bonded silica gel Not applicable.
 Organosilane bonded silica gel Not applicable.
 Organosilane bonded silica gel Not applicable.
 Organosilane bonded silica gel Not applicable.
 Organosilane bonded silica gel Not applicable.

Particle characteristics

Median particle size : Silica gel Not available.
 Organosilane bonded silica gel Not available.
 Organosilane bonded silica gel Not available.
 Organosilane bonded silica gel Not available.
 Organosilane bonded silica gel Not available.
 Organosilane bonded silica gel Not available.

Section 10. Stability and reactivity

10.1 Reactivity : Silica gel No specific test data related to reactivity available for this product or its ingredients.
 Organosilane bonded silica gel No specific test data related to reactivity available for this product or its ingredients.
 Organosilane bonded silica gel No specific test data related to reactivity available for this product or its ingredients.
 Organosilane bonded silica gel No specific test data related to reactivity available for this product or its ingredients.
 Organosilane bonded silica gel No specific test data related to reactivity available for this product or its ingredients.
 Organosilane bonded silica gel No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : Silica gel The product is stable.
 Organosilane bonded silica gel The product is stable.
 Organosilane bonded silica gel The product is stable.
 Organosilane bonded silica gel The product is stable.
 Organosilane bonded silica gel The product is stable.
 Organosilane bonded silica gel The product is stable.

10.3 Possibility of hazardous reactions : Silica gel Under normal conditions of storage and use, hazardous reactions will not occur.
 Organosilane bonded silica gel Under normal conditions of storage and use, hazardous reactions will not occur.
 Organosilane bonded silica gel Under normal conditions of storage and use, hazardous reactions will not occur.
 Organosilane bonded silica gel Under normal conditions of storage and use, hazardous reactions will not occur.
 Organosilane bonded silica gel Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

	Organosilane bonded silica gel	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	<p>: Silica gel</p> <p>Organosilane bonded silica gel</p> <p>Organosilane bonded silica gel</p> <p>Organosilane bonded silica gel</p> <p>Organosilane bonded silica gel</p> <p>Organosilane bonded silica gel</p>	<p>No specific data.</p> <p>Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.</p> <p>Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.</p> <p>Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.</p> <p>Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.</p> <p>Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.</p>
10.5 Incompatible materials	<p>: Silica gel</p> <p>Organosilane bonded silica gel</p> <p>Organosilane bonded silica gel</p> <p>Organosilane bonded silica gel</p> <p>Organosilane bonded silica gel</p> <p>Organosilane bonded silica gel</p>	<p>May react or be incompatible with oxidizing materials.</p> <p>Reactive or incompatible with the following materials: oxidizing materials</p> <p>Reactive or incompatible with the following materials: oxidizing materials</p> <p>Reactive or incompatible with the following materials: oxidizing materials</p> <p>Reactive or incompatible with the following materials: oxidizing materials</p> <p>Reactive or incompatible with the following materials: oxidizing materials</p>

Section 10. Stability and reactivity

10.6 Hazardous decomposition products	: Silica gel	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Organosilane bonded silica gel	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Organosilane bonded silica gel	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Organosilane bonded silica gel	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Organosilane bonded silica gel	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Organosilane bonded silica gel	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Silica gel Silica Gel	LC50 Inhalation Dusts and mists LD50 Oral	Rat Rat - Male, Female	>58.8 mg/l >5000 mg/kg	4 hours -

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Silica gel Silica Gel	-	3	-

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Section 11. Toxicological information

Information on the likely routes of exposure

: Silica gel

Routes of entry anticipated: Oral, Dermal, Inhalation.

Organosilane bonded silica gel

Not available.

Organosilane bonded silica gel

Not available.

Organosilane bonded silica gel

Not available.

Organosilane bonded silica gel

Not available.

Organosilane bonded silica gel

Not available.

Potential acute health effects

Eye contact

: Silica gel

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Organosilane bonded silica gel

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Organosilane bonded silica gel

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Organosilane bonded silica gel

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Organosilane bonded silica gel

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Organosilane bonded silica gel

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Inhalation

: Silica gel

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Organosilane bonded silica gel

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Organosilane bonded silica gel

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Organosilane bonded silica gel

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Organosilane bonded silica gel

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Organosilane bonded silica gel

Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact

: Silica gel

No known significant effects or critical hazards.

Organosilane bonded silica gel

No known significant effects or critical hazards.

Organosilane bonded silica gel

No known significant effects or critical hazards.

Organosilane bonded silica gel

No known significant effects or critical hazards.

Organosilane bonded silica gel

No known significant effects or critical hazards.

Organosilane bonded silica gel

No known significant effects or critical hazards.

Ingestion

: Silica gel

No known significant effects or critical hazards.

Organosilane bonded silica gel

No known significant effects or critical hazards.

Organosilane bonded silica gel

No known significant effects or critical hazards.

Organosilane bonded silica gel

No known significant effects or critical hazards.

Organosilane bonded silica gel

No known significant effects or critical hazards.

Organosilane bonded silica gel

No known significant effects or critical hazards.

Section 11. Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	:	Silica gel	Adverse symptoms may include the following: irritation redness
		Organosilane bonded silica gel	Adverse symptoms may include the following: irritation redness
		Organosilane bonded silica gel	Adverse symptoms may include the following: irritation redness
		Organosilane bonded silica gel	Adverse symptoms may include the following: irritation redness
		Organosilane bonded silica gel	Adverse symptoms may include the following: irritation redness
		Organosilane bonded silica gel	Adverse symptoms may include the following: irritation redness
Inhalation	:	Silica gel	Adverse symptoms may include the following: respiratory tract irritation coughing
		Organosilane bonded silica gel	Adverse symptoms may include the following: respiratory tract irritation coughing
		Organosilane bonded silica gel	Adverse symptoms may include the following: respiratory tract irritation coughing
		Organosilane bonded silica gel	Adverse symptoms may include the following: respiratory tract irritation coughing
		Organosilane bonded silica gel	Adverse symptoms may include the following: respiratory tract irritation coughing
		Organosilane bonded silica gel	Adverse symptoms may include the following: respiratory tract irritation coughing
Skin contact	:	Silica gel	No specific data.
		Organosilane bonded silica gel	No specific data.
		Organosilane bonded silica gel	No specific data.
		Organosilane bonded silica gel	No specific data.
		Organosilane bonded silica gel	No specific data.
		Organosilane bonded silica gel	No specific data.
Ingestion	:	Silica gel	No specific data.
		Organosilane bonded silica gel	No specific data.
		Organosilane bonded silica gel	No specific data.
		Organosilane bonded silica gel	No specific data.
		Organosilane bonded silica gel	No specific data.
		Organosilane bonded silica gel	No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Section 11. Toxicological information

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: <input checked="" type="checkbox"/> Silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
Carcinogenicity	: <input checked="" type="checkbox"/> Silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: <input checked="" type="checkbox"/> Silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.
Reproductive toxicity	: <input checked="" type="checkbox"/> Silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel	No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

N/A

Section 12. Ecological information

12.1 Toxicity

Not available.

12.2 Persistence and degradability

Section 12. Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Silica gel Silica Gel	-	-	Not readily
Organosilane bonded silica gel Organosilane bonded silica gel	-	-	Not readily
Organosilane bonded silica gel Organosilane bonded silica gel	-	-	Not readily
Organosilane bonded silica gel Organosilane bonded silica gel	-	-	Not readily
Organosilane bonded silica gel Organosilane bonded silica gel	-	-	Not readily
Organosilane bonded silica gel Organosilane bonded silica gel	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Organosilane bonded silica gel Organosilane bonded silica gel	-	<500	low
Organosilane bonded silica gel Organosilane bonded silica gel	-	<500	low
Organosilane bonded silica gel Organosilane bonded silica gel	-	<500	low
Organosilane bonded silica gel Organosilane bonded silica gel	-	<500	low
Organosilane bonded silica gel Organosilane bonded silica gel	-	<500	low

Section 12. Ecological information

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

12.5 Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

This Safety Data Sheet is written based on the encapsulated substance or mixture in this article. Since the hazardous ingredient is encapsulated, the risk of exposure by inhalation, ingestion, skin contact and eyes contact is minimum.

DOT / TDG / Mexico / IMDG / IATA : Not regulated.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Section 15. Regulatory information

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification	: Silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel Organosilane bonded silica gel	Not applicable. COMBUSTIBLE DUSTS COMBUSTIBLE DUSTS COMBUSTIBLE DUSTS COMBUSTIBLE DUSTS COMBUSTIBLE DUSTS
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Composition/information on ingredients

Name	%	Classification
Organosilane bonded silica gel Organosilane bonded silica gel	100	COMBUSTIBLE DUSTS
Organosilane bonded silica gel Organosilane bonded silica gel	100	COMBUSTIBLE DUSTS
Organosilane bonded silica gel Organosilane bonded silica gel	100	COMBUSTIBLE DUSTS
Organosilane bonded silica gel Organosilane bonded silica gel	100	COMBUSTIBLE DUSTS
Organosilane bonded silica gel Organosilane bonded silica gel	100	COMBUSTIBLE DUSTS

State regulations

- Massachusetts** : The following components are listed: PRECIPITATED SILICA; Silica, precipitated
 - New York** : None of the components are listed.
 - New Jersey** : The following components are listed: SILICA, AMORPHOUS, PRECIPITATE & GEL
 - Pennsylvania** : The following components are listed: PRECIPITATED SILICA
- California Prop. 65**

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Section 15. Regulatory information

[Stockholm Convention on Persistent Organic Pollutants](#)

Not listed.

[Rotterdam Convention on Prior Informed Consent \(PIC\)](#)

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

[Inventory list](#)

Australia	: All components are listed or exempted.
Canada	: <input checked="" type="checkbox"/> All components are listed or exempted.
China	: All components are listed or exempted.
Europe	: All components are listed or exempted.
Japan	: Japan inventory (CSCL): All components are listed or exempted. Japan inventory (ISHL): All components are listed or exempted.
New Zealand	: All components are listed or exempted.
Philippines	: Not determined.
Republic of Korea	: <input checked="" type="checkbox"/> All components are listed or exempted.
Taiwan	: All components are listed or exempted.
Thailand	: Not determined.
Turkey	: All components are listed or exempted.
United States	: <input checked="" type="checkbox"/> All components are active or exempted.
Viet Nam	: Not determined.

Section 16. Other information

[Procedure used to derive the classification](#)

Classification	Justification
<input checked="" type="checkbox"/> Organosilane bonded silica gel COMBUSTIBLE DUSTS	On basis of test data
Organosilane bonded silica gel COMBUSTIBLE DUSTS	On basis of test data
Organosilane bonded silica gel COMBUSTIBLE DUSTS	On basis of test data
Organosilane bonded silica gel COMBUSTIBLE DUSTS	On basis of test data
Organosilane bonded silica gel COMBUSTIBLE DUSTS	On basis of test data

[History](#)

Date of issue	: 05/17/2022
Date of previous issue	: 04/25/2019
Version	: 5

Section 16. Other information

Key to abbreviations

- : ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- N/A = Not available
- UN = United Nations

✔ Indicates information that has changed from previously issued version.

Notice to reader

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