

3G Acid Neutralizer

MSDS Number: 101

Revision Date: 03/13/2014

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1 PRODUCT AND COMPANY IDENTIFICATION

Product Name: 3G Acid Neutralizer
Revision Date: 03/13/2014
MSDS Number: 101
Product Use: Dental Restorations

Ardent, Inc.

175 Pineview Drive
Amherst, NY 14228, USA

Technical Services: (866) 751-8548 (9 AM - 5 PM EST)

For MSDS assistance:

Emergency Call USA-Infotrac: (800) 535-5053 (24 hours/7 days)
Emergency Call Canada-Canutec: - 1-(613)-996-6666 (24 hours/7 days)

General MSDS Assistance:

US: 1-800-922-5520
Canada: 1-800-263-8182

2 HAZARDS IDENTIFICATION

Route of Entry: Inhalation, Eye contact, Skin contact, Ingestion
Target Organs: Not available
Inhalation: May cause irritation
Skin Contact: May cause irritation
Eye Contact: May cause irritation
Ingestion: Large doses may cause gastrointestinal disturbances and alkalosis, a condition where alkalinity is increased in the blood and tissues.

CORROSIVE - causes severe burns.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

CAS #	Component	Perc
144-55-8	Sodium Hydrogen Carbonate	100%

OSHA Regulatory Status: This MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and made available for employees and other users of this product.

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4	FIRST AID MEASURES
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Inhalation: Remove to fresh air. Seek medical attention if necessary.
Skin Contact: Remove any contaminated clothing immediately. Flush with water. Seek medical attention if necessary.
Eye Contact: Flush with copious amounts of water for at least 15 minutes, making sure to lift eyelids. Seek medical attention if necessary.
Ingestion: Seek medical attention immediately.

5	FIRE FIGHTING MEASURES
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Non-flammable.
 Use the correct fire fighting measures for the surrounding area.

6	ACCIDENTAL RELEASE MEASURES
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Use personal protection recommended in Section 8. Isolate area to prevent unnecessary and unprotected personnel from coming in contact with powder. Powder should be vacuumed carefully as to not generate airborne dust.

7	HANDLING AND STORAGE
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Handling Precautions: Keep out of eyes.
 Avoid excessive contact with skin.
 Do not ingest.

Storage Requirements: Keep in original container.
 Keep closed when not in use.
 Store in a cool, dry place.
 Keep away from oxidizers and acidic materials.

8	EXPOSURE CONTROLS/PERSONAL PROTECTION
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Engineering Controls: Use in a well ventilated area or an area with a proper exhaust fan.
Personal Protective Equip: Protective Gloves: Neoprene or Nitrile
 Eye Protection: OSHA-approved safety glasses
 Other: Lab coat/apron depending on operation

This product has not been evaluated as a whole.

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9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White and odorless powder	Odor:	Odorless
Physical State:	Powder	Solubility:	soluble
Spec Grav./Density:	2.193 g/cc at 20 deg C	Freezing/Melting Pt.:	338 deg F (170 deg C)
Boiling Point:	Not available	Vapor Density:	Not available
Vapor Pressure:	Not available		
pH:	Not available		

10 STABILITY AND REACTIVITY

Stability:	Stable
Conditions to Avoid:	None known
Materials to Avoid:	oxidizing agents and acids
Hazardous Decomposition:	Carbon Monoxide and Carbon Dioxide
Hazardous Polymerization:	None known

11 TOXICOLOGICAL INFORMATION

Not available

12 ECOLOGICAL INFORMATION

Not available

13 DISPOSAL CONSIDERATIONS

This information applies to the material as manufactured; processing, use, or contamination may make the information inappropriate, inaccurate, or incomplete. Waste must be handled in accordance with all applicable regulations. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state, and local requirements.

14 TRANSPORT INFORMATION

Not available

15 REGULATORY INFORMATION

Not available

16 OTHER INFORMATION

The information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed in

SDS

Safety Data Sheet
Ardent, Inc.

Pentron
CERAMICS

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good faith and believed to be correct as of the date hereof. Ardent, Inc. however, makes no representations as to the completeness or accuracy of this information and supplies it on the condition that the persons receiving same will make their own determinations as to its suitability for their purpose prior to use. In no event will Ardent, Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon this information.

Rev #3

3G Porcelain Liquid

MSDS Number: 104

Revision Date: 03/13/14

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1 PRODUCT AND COMPANY IDENTIFICATION

Product Name: 3G Porcelain Liquid
Revision Date: 03/13/14
MSDS Number: 104
Product Use: Dental Restorations

Ardent, Inc.
175 Pineview Drive
Amherst, NY 14228, USA

Technical Services: (866) 751-8548 (9 AM - 5 PM EST)

For MSDS assistance:

Emergency Call USA-Infotrac: (800) 535-5053 (24 hours/7 days)
Emergency Call Canada-Canutec: - 1-(613)-996-6666 (24 hours/7 days)

General MSDS Assistance:

US: 1-800-922-5520
Canada: 1-800-263-8182

2 HAZARDS IDENTIFICATION

Route of Entry: Inhalation, Eye contact, Skin contact
Target Organs: Not available
Inhalation: May irritate mucous membranes.
Skin Contact: May irritate skin.
Eye Contact: May irritate eyes.
Ingestion: May irritate digestive system.

This material has not been evaluated as a whole. Therefore, the information provided is based on the individual pure components, not necessarily their current forms. Threshold limit values have not yet been established for this product.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:
Solution of water and nitrates (<0.5%)

3G Porcelain Liquid

MSDS Number: 104

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4 FIRST AID MEASURES

Inhalation: Remove to fresh air. Seek medical attention if necessary.
 Skin Contact: Flush with water. Remove any contaminated clothing. Consult a physician if irritation occurs.
 Eye Contact: Flush with copious amounts of water for at least 15 minutes. Consult an ophthalmologist or medical attention if necessary.
 Ingestion: Rinse out mouth and then drink plenty of water. Seek medical attention immediately.

5 FIRE FIGHTING MEASURES

Non-flammable.
 Use the correct fire fighting measures for the surrounding area.

6 ACCIDENTAL RELEASE MEASURES

Soak up with absorbent material. Clean with water.

7 HANDLING AND STORAGE

Handling Precautions: Keep out of eyes.
 Avoid excessive contact with skin.
 Do not ingest.
 Shake bottle before use.
 Storage Requirements: Keep in original container.
 Keep closed when not in use.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use in a well ventilated area or an area with a proper exhaust fan.
 Personal Protective Equip: Protective Gloves: Neoprene or Nitrile
 Eye Protection: OSHA-approved safety goggles
 Other: Lab coat/apron depending on operation

This product has not been evaluated as a whole.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless and odorless liquid	Odor:	Odorless
Physical State:	Liquid	Solubility:	soluble
Spec Grav./Density:	1.00 g/cc	Freezing/Melting Pt.:	32 deg F (0 deg C)
Boiling Point:	248 deg F (120 deg C)	Vapor Density:	Not available
Vapor Pressure:	Not available		
pH:	7		

3G Porcelain Liquid

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10	STABILITY AND REACTIVITY
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Stability:	Stable
Conditions to Avoid:	None known
Materials to Avoid:	None known
Hazardous Decomposition:	None known
Hazardous Polymerization:	None known

11	TOXICOLOGICAL INFORMATION
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Not available

12	ECOLOGICAL INFORMATION
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Not available

13	DISPOSAL CONSIDERATIONS
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 Waste must be handled in accordance with all applicable regulations. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state, and local requirements.

14	TRANSPORT INFORMATION
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Not available

15	REGULATORY INFORMATION
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Not available

16	OTHER INFORMATION
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Rev# 3

3G HS Pellets

MSDS Number: 102

Revision Date: 04/25/14

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1 PRODUCT AND COMPANY IDENTIFICATION

Product Name: 3G HS Pellets
Revision Date: 04/25/14
MSDS Number: 102
Product Use: Dental Restorations

Ardent, Inc.
175 Pineview Drive
Amherst, NY 14228, USA

Technical Services: (866) 751-8548 (9 AM - 5 PM EST)

For MSDS assistance:

Emergency Call USA-Infotrac: (800) 535-5053 (24 hours/7 days)
Emergency Call Canada-Canutec: - 1-(613)-996-6666 (24 hours/7 days)

General MSDS Assistance:

US: 1-800-922-5520
Canada: 1-800-263-8182

2 HAZARDS IDENTIFICATION

Route of Entry: Inhalation, Eye contact, Respiratory
Target Organs: Lungs
Inhalation: Dust over a prolonged period of time may result in lung damage. Exposure to pure Silica may cause silicosis or progressive respiratory symptoms. May irritate respiratory system.
Skin Contact: May irritate skin.
Eye Contact: Airborne dust may irritate eyes.
Ingestion: Not available

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

3G[®] HS pressable ceramics is a variety of dental porcelain in the form of solid pellets/ingots. This material does not contain any forms of crystalline silica. In addition to silicon (Si) and oxygen (O), 3G[®] HS Pellets comprise the following chemical elements: Li, Al, P, K, Ca, B, Ce, Tb, and Ta. All these elements are not present in their pure or individual oxide forms but rather chemically bonded together within insoluble alumo-silicate glass matrix. By convention the composition of dental porcelain, same as composition of many other glass-ceramic materials, is still reported on individual oxide basis. In that representation composition of 3G[®] HS pellets may be given as about 60-80% of SiO₂, about 10-15% of Li₂O and about 4-6% of Al₂O₃ and the balance comprised of chemical constituents listed above. 3G HS Pellets do not contain any externally added inclusions such as pigments, opacifiers, opalescing, and fluorescing agents.

OSHA Regulatory Status: This MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and made available for employees and other users of this product.

4	FIRST AID MEASURES
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Inhalation: Remove to fresh air. Contact a physician if necessary.
 Skin Contact: Rinse with soap and water.
 Eye Contact: Flush with copious amounts of water for at least 15 minutes. Consult an ophthalmologist or medical attention if necessary.
 Ingestion: Rinse out mouth and then drink plenty of water. Seek medical attention.

5	FIRE FIGHTING MEASURES
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Non-flammable.
 Use the correct fire fighting measures for the surrounding area.

6	ACCIDENTAL RELEASE MEASURES
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Vacuum chips or shards of material resulting from dropping pellet.
 Avoid contact with potentially sharp edges or shards.
 Vacuum powder dust from grinder, being careful not to generate airborne dust.

7	HANDLING AND STORAGE
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Handling Precautions: Do not inhale or ingest.
 Storage Requirements: Store pellets in original container.

8	EXPOSURE CONTROLS/PERSONAL PROTECTION
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Engineering Controls: Grind in a well ventilated area or an area with a proper exhaust fan.
 Personal Protective Equip: Use NIOSH-approved safety glasses and dust mask during grinding.

This product has not been evaluated as a whole.

9	PHYSICAL AND CHEMICAL PROPERTIES
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Appearance:	Ivory colored solid ingot	Odor:	odorless
Physical State:	solid	Solubility:	not applicable
Spec Grav./Density:	not applicable	Freezing/Melting Pt.:	not applicable
Boiling Point:	not applicable	Vapor Density:	not applicable
Vapor Pressure:	not applicable	Bulk Density:	2.40-2.45 g/cm ³
pH:	not applicable		

Bulk Density: 2.40-2.45 g/cm³
 Fusion Point: 1686 deg F (920 deg C)
 Glass Transition Temperature: 932-1004 deg F (500-540 deg C)

10	STABILITY AND REACTIVITY
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Stability:	Stable
Conditions to Avoid:	None known
Materials to Avoid:	None known
Hazardous Decomposition:	None known
Hazardous Polymerization:	None known

11	TOXICOLOGICAL INFORMATION
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Not available

12	ECOLOGICAL INFORMATION
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Not available

13	DISPOSAL CONSIDERATIONS
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Dispose in accordance with applicable local, state, and federal regulations.
 This information applies to the material as manufactured; processing, use, or contamination may make the information inappropriate, inaccurate, or incomplete.

14	TRANSPORT INFORMATION
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Not available

15	REGULATORY INFORMATION
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Not available

16	OTHER INFORMATION
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Rev# 3

3G Porcelain

MSDS Number: 103

Revision Date: 03/13/14

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1	PRODUCT AND COMPANY IDENTIFICATION
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Product Name: 3G Porcelain
 Revision Date: 03/13/14
 MSDS Number: 103
 CAS Number: 12001-21-7
 Product Code: All: Body, Modifier, Opaceous, Opaque, Incisal, Add-on
 Product Use: Dental restorations

Ardent, Inc.
 175 Pineview Drive
 Amherst, NY 14228, USA

Technical Services: (866) 751-8548 (9 AM - 5 PM EST)

For MSDS assistance:
 Emergency Call USA-Infotrac: (800) 535-5053 (24 hours/7 days)
 Emergency Call Canada-Canutec: - 1-(613)-996-6666 (24 hours/7 days)

General MSDS Assistance:
 US: 1-800-922-5520
 Canada: 1-800-263-8182

2	HAZARDS IDENTIFICATION
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Route of Entry: Inhalation, Eye contact, Skin contact, Ingestion
 Target Organs: Lungs
 Inhalation: May irritate respiratory system.
 Skin Contact: May irritate skin.
 Eye Contact: Airborne dust may irritate eyes.
 Ingestion: May irritate digestive system.

3G Porcelain

MSDS Number: 103

Revision Date: 03/13/14

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3	COMPOSITION/INFORMATION ON INGREDIENTS
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Ingredients:

CAS #	Component
12001-21-7	Dental Porcelain

This material does not contain any forms of crystalline silica. In addition to silicon (Si) and oxygen (O), dental porcelains comprise the following chemical elements: Al, K, Na, Ca, and may also comprise Li, Mg, Ba, Ce, Ti, Zr, Sn, Y, B, F and Fe. All these elements are not present in their pure or individual oxide forms but rather chemically bonded together within insoluble alumo-silicate glass matrix. By convention the composition of dental porcelain, same as composition of many other glass-ceramic materials, is still reported on individual oxide basis. In that representation composition of dental porcelain may be given as about 50-80% of SiO₂, about 5-15% of Al₂O₃ and the balance comprised of chemical constituents listed above and below. Dental porcelain also contains small amounts of non-silica inclusions: pigments, opacifiers, opalescing and fluorescing agents, which are based on crystalline forms of TiO₂, ZrO₂, Al₂O₃, zirconium silicate (ZrSiO₄) and yttrium silicate (Y₂SiO₅). In the fired state of dental porcelain these components are fused and completely encapsulated in chemically durable, insoluble glass matrix specifically designed and tested to resist wear and corrosion in oral environment.

OSHA Regulatory Status: This MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and made available for employees and other users of this product.

4	FIRST AID MEASURES
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Inhalation:	Remove to fresh air.
Skin Contact:	Rinse with soap and water.
	Consult a physician if irritation occurs.
Eye Contact:	Flush with copious amounts of water for at least 15 minutes.
	Consult an ophthalmologist or medical attention if necessary.
Ingestion:	Rinse out mouth and drink plenty of water. Seek medical attention if necessary.

5	FIRE FIGHTING MEASURES
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Non-flammable.
Use the correct fire fighting measures for the surrounding area.

6	ACCIDENTAL RELEASE MEASURES
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Use personal protection recommended in Section 8. Isolate area to prevent unnecessary and unprotected personnel from coming in contact with powder. Powder should be vacuumed carefully as to not generate airborne dust.

7	HANDLING AND STORAGE
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Handling Precautions:	Do not inhale or ingest.
Storage Requirements:	Keep container tightly closed when not in use.
	Store in original container.

8	EXPOSURE CONTROLS/PERSONAL PROTECTION
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Engineering Controls: Mix, grind, and/or polish in a well ventilated area or an area with a proper exhaust fan.
 Personal Protective Equip: Use NIOSH-approved safety glasses and dust mask.

This product has not been evaluated as a whole.

9	PHYSICAL AND CHEMICAL PROPERTIES
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Appearance:	Fine powder in various colors		
Physical State:	Powder		
Spec Grav./Density:	Not available	Odor:	odorless
Boiling Point:	Not available	Solubility:	Not available
Vapor Pressure:	Not available	Freezing/Melting Pt.:	Not available
pH:	Not available	Vapor Density:	Not available

Bulk Density: 2.35-2.4 g/cm³
 Fusion Point: 1400-1425 deg F (760-774 deg C)
 Glass Transition Temperature: 896-986 deg F (480-530 deg C)

10	STABILITY AND REACTIVITY
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Stability:	Stable
Conditions to Avoid:	None known
Materials to Avoid:	None known
Hazardous Decomposition:	None known
Hazardous Polymerization:	None known

11	TOXICOLOGICAL INFORMATION
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Not available

12	ECOLOGICAL INFORMATION
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Not available

13	DISPOSAL CONSIDERATIONS
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This information applies to the material as manufactured; processing, use, or contamination may make the information inappropriate, inaccurate, or incomplete.
 Waste must be handled in accordance with all applicable regulations. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state, and local requirements.

14	TRANSPORT INFORMATION
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Not available

15	REGULATORY INFORMATION
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Not available

16	OTHER INFORMATION
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Rev# 3

3G Refractory Remover

MSDS Number: 105

Revision Date: 03/13/14

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1	PRODUCT AND COMPANY IDENTIFICATION
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Product Name: 3G Refractory Remover
 Revision Date: 03/13/14
 MSDS Number: 105
 Product Use: Dental Restorations

Ardent, Inc.
 175 Pineview Drive
 Amherst, NY 14228, USA

Technical Services: (866) 751-8548 (9 AM - 5 PM EST)

For MSDS assistance:
 Emergency Call USA-Infotrac: (800) 535-5053 (24 hours/7 days)
 Emergency Call Canada-Canutec: - 1-(613)-996-6666 (24 hours/7 days)

General MSDS Assistance:
 US: 1-800-922-5520
 Canada: 1-800-263-8182

2	HAZARDS IDENTIFICATION
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Route of Entry: Inhalation, Eye contact, Skin contact, Ingestion
 Target Organs: Not available
 Inhalation: Hydrofluoric acid may cause severe irritation of the upper respiratory tract with pain, burns, and inflammation. may cause pulmonary edema and severe respiratory disturbances. It may deplete calcium levels in the body which can lead to hypocalcemia and death. Seek immediate medical attention.
 Skin Contact: Hydrofluoric acid may be fatal if absorbed through the skin. Causes severe burns with delayed tissue destruction. Substance is rapidly absorbed through the skin. Penetration may continue for several days. Causes severe tissue necrosis and bone destruction.
 Eye Contact: Hydrofluoric acid causes severe burns and possible irreversible eye damage.
 Ingestion: Hydrofluoric acid can cause severe digestive tract burns with abdominal pain, burns, and inflammation. May cause systemic toxic effects on the heart, liver, and kidneys. It may deplete calcium levels in the body which if left untreated can lead to hypocalcemia.

CORROSIVE - causes severe burns.

3G Refractory Remover

MSDS Number: 105

Revision Date: 03/13/14

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3	COMPOSITION/INFORMATION ON INGREDIENTS
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Ingredients:

Cas #	Chemical Name	Perc.
7664939	Sulfuric acid	<5%
7664393	Hydrofluoric acid	<1%
7732185	water	balance

OSHA Regulatory Status: This MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and made available for employees and other users of this product.

4	FIRST AID MEASURES
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Inhalation: Remove to fresh air. Seek medical attention promptly.
 Skin Contact: Remove any contaminated clothing immediately. Flush with water. Seek medical attention immediately.
 Eye Contact: Flush with copious amounts of water for at least 15 minutes, making sure to lift eyelids. Seek medical attention immediately.
 Ingestion: Rinse out mouth and then drink plenty of water. Seek medical attention immediately.

5	FIRE FIGHTING MEASURES
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Non-flammable.
 Use the correct fire fighting measures for the surrounding area.

6	ACCIDENTAL RELEASE MEASURES
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Use personal protection recommended in Section 8. Isolate area to prevent unnecessary and unprotected personnel from coming in contact with liquid. Soak up with absorbent material.

7	HANDLING AND STORAGE
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Handling Precautions: Keep out of eyes.
 Avoid excessive contact with skin.
 Do not ingest.
 Storage Requirements: Keep in original container.
 Keep closed when not in use.

3G Refractory Remover

MSDS Number: 105

Revision Date: 03/13/14

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8	EXPOSURE CONTROLS/PERSONAL PROTECTION
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Engineering Controls: Use in a well ventilated area or an area with a proper exhaust fan.
 Personal Protective Equip: Protective Gloves: Neoprene or Nitrile
 Eye Protection: OSHA-approved safety goggles
 Other: Lab coat/apron depending on operation

This product has not been evaluated as a whole.

9	PHYSICAL AND CHEMICAL PROPERTIES
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Appearance:	Colorless and odorless	Odor:	Odorless
Physical State:	Liquid	Solubility:	soluble
Spec Grav./Density:	1.00 g/cc	Freezing/Melting Pt.:	32 deg F (0 deg C)
Boiling Point:	248 deg F (120 deg C)	Vapor Density:	Not available
Vapor Pressure:	Not available		
pH:	7		

10	STABILITY AND REACTIVITY
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Stability: Stable
 Conditions to Avoid: None known
 Materials to Avoid: None known
 Hazardous Decomposition: None known
 Hazardous Polymerization: None known

11	TOXICOLOGICAL INFORMATION
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Not available

12	ECOLOGICAL INFORMATION
----	-------------------------------

Not available

13	DISPOSAL CONSIDERATIONS
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This information applies to the material as manufactured; processing, use, or contamination may make the information inappropriate, inaccurate, or incomplete.
 Waste must be handled in accordance with all applicable regulations. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state, and local requirements.

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14	TRANSPORT INFORMATION
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Not available

15	REGULATORY INFORMATION
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COMPONENT / (CAS/PERC) / CODES

*Sulfuric acid (7664939 <5%) CERCLA, CSWHS, EHS302, EPCRAWPC, MASS, NJHS, OSHAWAC, PA, SARA313, TXAIR

*Hydrofluoric acid (7664393 <1%) CERCLA, CSWHS, EHS302, EPCRAWPC, HAP, MASS, NJEHS, NJHS, OSHAPSM, OSHAWAC, PA, SARA313, TOXICRCRA, TXAIR, TXHWL

REGULATORY KEY DESCRIPTIONS

CERCLA = Superfund clean up substance
 CSWHS = Clean Water Act Hazardous substances
 EHS302 = Extremely Hazardous Substance
 EPCRAWPC = EPCRA Water Priority Chemicals
 MASS = MA Massachusetts Hazardous Substances List
 NJHS = NJ Right-to-Know Hazardous Substances
 OSHAWAC = OSHA workplace Air Contaminants
 PA = PA Right-To-Know List of Hazardous Substances
 SARA313 = SARA 313 Title III Toxic Chemicals
 TXAIR = TX Air Contaminants with Health Effects Screening Level

HAP = Hazardous Air Pollutants
 NJEHS = NJ Extraordinarily Hazardous Substances
 OSHAPSM = OSHA Chemicals Requiring process safety management
 TOXICRCRA = RCRA Toxic Hazardous Wastes (U-List)
 TXHWL = TX Hazardous Waste List

16	OTHER INFORMATION
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The information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed in good faith and believed to be correct as of the date hereof. Ardent, Inc. however, makes no representations as to the completeness or accuracy of this information and supplies it on the condition that the persons receiving same will make their own determinations as to its suitability for their purpose prior to use. In no event will Ardent, Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon this information.

Rev# 4