SAFETY DATA SHEET



Bond Elut Carbon-NH2, Part Number 2264265032

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 : Bond Elut Carbon-NH2, Part Number 2264265032

Part no. : 2264265032 Validation date : 7/9/2021

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

Material uses : Analytical chemistry.

cartridge

BE Carbon 300/NH2 500mg, 6ml, 30/pk

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 : This material is considered hazardous by the OSHA Hazard Communication Standard

(29 CFR 1910.1200).

Classification of the substance or mixture

COMBUSTIBLE DUSTS

H351 CARCINOGENICITY - Category 2

H412 AQUATIC HAZARD (LONG-TERM) - Category 3

2.2 GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H351 - Suspected of causing cancer.

H412 - Harmful to aquatic life with long lasting effects. May form combustible dust concentrations in air.

Precautionary statements

Prevention: P201 - Obtain special instructions before use.

P280 - Wear protective gloves, protective clothing and eye or face protection.

P273 - Avoid release to the environment.

Response: P308 + P313 - IF exposed or concerned: Get medical advice or attention.

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Section 2. Hazards identification

Storage

: Not applicable.

Disposal

: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

: Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.

2.3 Other hazards

Hazards not otherwise

classified

: 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: Mixture (encapsulated in article)

Ingredient name	%	CAS number
Carbon black	≥25 - ≤50	1333-86-4

Contains: Organosilane bonded silica gel

Note: 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 as hazardous to health or the environment 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

: 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.

Inhalation

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 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact

: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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. 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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Section 4. First aid measures

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Exposure to airborne concentrations above statutory or recommended exposure limits

may cause irritation of the eyes.

Inhalation: Exposure to airborne concentrations above statutory or recommended exposure limits

may cause irritation of the nose, throat and lungs.

Skin contactIngestionNo known significant effects or critical hazards.No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:

irritation redness

Inhalation : Adverse symptoms may include the following:

respiratory tract irritation

coughing

Skin contact : No specific data.

Ingestion : No specific data.

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

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed.

The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments: No specific treatment.

Protection of first-aiders: 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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing

media

: Use dry chemical powder.

Unsuitable extinguishing

media

: 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

: May form explosible dust-air mixture if dispersed. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained

and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products

Decomposition products may include the following materials: carbon dioxide

carbon monoxide nitrogen oxides metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters

: 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.

Special protective equipment for fire-fighters

: 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

: 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.

For emergency responders: 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 nonemergency personnel".

6.2 Environmental precautions

: 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). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up

: Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8). Avoid exposure obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing dust. Avoid release to the environment. 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.

Advice on general occupational hygiene

: 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

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. Store locked up. 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)

Recommendations : Industrial applications, Professional applications.

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Section 7. Handling and storage

Industrial sector specific

: Not available.

solutions

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
€arbon black	ACGIH TLV (United States, 3/2020). TWA: 3 mg/m³ 8 hours. Form: Inhalable fraction OSHA PEL 1989 (United States, 3/1989). TWA: 3.5 mg/m³ 8 hours. NIOSH REL (United States, 10/2016). TWA: 3.5 mg/m³ 10 hours. TWA: 0.1 mg of PAHs/cm³ 10 hours. OSHA PEL (United States, 5/2018). TWA: 3.5 mg/m³ 8 hours.

8.2 Exposure controls

Appropriate engineering controls

: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with sideshields. If operating conditions cause high dust concentrations to be produced, use dust goggles.

Skin protection

Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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Section 8. Exposure controls/personal protection

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected

based on the task being performed and the risks involved and should be approved by a

specialist before handling this product.

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

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Solid. [Powder.] : White, / Black. Color Odor Odorless. **Odor threshold** : Not available. pН Not available. **Melting point** : Not available. **Boiling point** : Not available. Flash point : Not available. **Evaporation rate** : Not available.

Flammability (solid, gas)
Lower and upper explosive

(flammable) limits

Not available.Not available.

Vapor pressure: Not available.Vapor density: Not available.Relative density: Not available.

Solubility : Insoluble in the following materials: cold water and hot water.

Partition coefficient: n-

octanol/water

: Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Section 10. Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : 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.

10.5 Incompatible materials : Reactive or incompatible with the following materials:

oxidizing materials

Incompatible with hydrogen fluoride.

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Section 10. Stability and reactivity

10.6 Hazardous decomposition products : 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
Carbon black	LD50 Oral	Rat	>15400 mg/kg	-

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Conclusion/Summary

: Not available.

Carcinogenicity

Conclusion/Summary

: Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Carbon black	-	2B	-

Reproductive toxicity

Conclusion/Summary

: Not available.

Teratogenicity

Conclusion/Summary Specific target organ toxicity (single exposure)

: Not available.

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

: Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : Exposure to airborne concentrations above statutory or recommended exposure limits

may cause irritation of the eyes.

Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits

may cause irritation of the nose, throat and lungs.

Skin contact : No known significant effects or critical hazards. Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:

> irritation redness

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Section 11. Toxicological information

Inhalation : Adverse symptoms may include the following:

respiratory tract irritation

coughing

Skin contact : No specific data.

Ingestion : No specific data.

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

Short term exposure

Potential immediate : N

effects

: Not available.

Potential delayed effects : I

: Not available.

Long term exposure

Potential immediate

: Not available.

effects

Potential delayed effects : Not available.

Potential chronic health effects

General : Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of

exposure.

Mutagenicity : No known significant effects or critical hazards.Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

N/A

Section 12. Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Carbon black	Acute EC50 >10000 mg/l Fresh water Acute EC50 37.563 mg/l Fresh water	Algae Daphnia - Daphnia magna - Neonate	72 hours 48 hours
	Acute NOEC >10000 mg/l Fresh water	Algae	72 hours

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

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

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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. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. 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 / : Not regulated.

IATA

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 : Not available.

to IMO instruments

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

: Not listed

(b) Hazardous Air **Pollutants (HAPs)**

Clean Air Act Section 602

Class I Substances

: Not listed

Clean Air Act Section 602

: Not listed

Class II Substances

DEA List I Chemicals : Not listed

(Precursor Chemicals)

DEA List II Chemicals : Not listed

(Essential Chemicals)

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Section 15. Regulatory information

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : COMBUSTIBLE DUSTS

CARCINOGENICITY - Category 2

Composition/information on ingredients

Name	%	Classification
Organosilane bonded silica gel Carbon black	≥25 - ≤50	COMBUSTIBLE DUSTS COMBUSTIBLE DUSTS CARCINOGENICITY - Category 2

State regulations

Massachusetts : The following components are listed: CARBON BLACK

New York : None of the components are listed.

New Jersey : The following components are listed: CARBON BLACK **Pennsylvania** : The following components are listed: CARBON BLACK

California Prop. 65

⚠ WARNING: This product can expose you to Carbon black, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name		Maximum acceptable dosage level
Carbon black	-	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

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 : Not determined.

China : All components are listed or exempted. **Europe** : All components are listed or exempted.

Japan Japan inventory (ENCS): 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.

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Section 15. Regulatory information

Republic of Korea : Not determined.

Taiwan : All components are listed or exempted.

Thailand : Not determined.

Turkey : All components are listed or exempted.
United States : All components are active or exempted.

Viet Nam : Not determined.

Section 16. Other information

History

Date of issue : 07/09/2021

Date of previous issue : 12/23/2020

Version : 5

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

Procedure used to derive the classification

Classification	Justification
COMBUSTIBLE DUSTS CARCINOGENICITY - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 3	On basis of test data Calculation method Calculation method

Indicates information that has changed from previously issued version.

Notice to reader

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

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