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A Geno Technology, Inc. (USA) brand name

Safety Data Sheet

Cat. # BTNM-0023

Cellulose, Laboratory Grade, 25 g

Size: 25 g



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Cellulose, Laboratory Grade

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 03/09/2016

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Version: 7.1

SECTION 1: Identification

1.1. Identification

Product form	: Substance
Substance name	: Cellulose, Laboratory Grade
CAS-No.	: 9004-34-6
Product code	: C027
Formula	: (C ₆ H ₁₀ O ₅) _n
Synonyms	: 402-2B / ABICEL / alpha cel PB 25 / alpha-cellulose / ALPHAPHLOC / ALPHONIER F / ARBOCEL / ARBOCEL B 400 / ARBOCEL B 600/30 / ARBOCEL B 820C / ARBOCEL BC 1000 / ARBOCEL BC 1000 R / ARBOCEL BC 200 / ARBOCEL BC 200 R / ARBOCEL BC 300 / ARBOCEL BE 600/10 / ARBOCEL BE 600/20 / ARBOCEL BE 600/30 / ARBOCEL BEM 400-15 / ARBOCEL BER 400 S / ARBOCEL BERC 300 P / ARBOCEL BVEC 200 / ARBOCEL BVS 400 / ARBOCEL BZNC 200 / ARBOCEL BZNC 200 Fine / ARBOCEL DC 1000 / ARBOCEL FD 00 / ARBOCEL FIC 200 / ARBOCEL NV 600-30 / ARBOCEL TP 40 / ARBOCEL B 600/30 / AVICEL / AVICEL 101 / AVICEL 102 / AVICEL 2330 / AVICEL 2331 / AVICEL 955 / AVICEL CL 611 / AVICEL E 200 / AVICEL FD 100 / AVICEL FD 101 / AVICEL PH 101 / AVICEL PH 101/102 / AVICEL PH 102 / AVICEL PH 103 / AVICEL PH 105 / AVICEL PH 112 / AVICEL PH 113 / AVICEL PH 200 / AVICEL PH 301 / AVICEL PH 302 / AVICEL PH microcrystalline cellulose / AVICEL PH-F 10 / AVICEL PH-M 06 / AVICEL PH-M 15 / AVICEL RC 591 / AVICEL SF / AVICEL SP / AVICEL TG 101 / AVICEL TG-D / baker-flex cellulose / BELLFINE D 10 / beta-amylase / CELISH / CELISH 100F / CELISH 100L / CELISH KY 100L / CELISH KY 100S / CELLEX MX / cellulose / cellulose 248 / cellulose crystalline avicel / cellulose flock / cellulose, crystalline / cellulose, microcrystalline / cellulose, powder / CELUFI / CEMIROM / CEPO / CEPO CFM / CEPO S 20 / CEPO S 40 / CF 11 / CHROMEDIA CC 31 / CHROMEDIA CF 11 / cotton linter pulp / crystalline cellulose / cupricellulose / DIACEL-4 / E 460 / ELCEMA F 150 / ELCEMA G 250 / ELCEMA P 050 / ELCEMA P 100 / flock-cellulose / FRESENIUS D 6 / HEWETEN 10 / HEWETEN 40 / hydroxycellulose / KINGCOT / LA 01 / MCC / microcrystalline cellulose / microcrystalline cellulose, MCC / MN-cellulose / ONOZUKA P 500 / polycellobiose / pyrocellulose / RAYOPHANE / RAYWEB Q / REXCEL / SIGMACELL / SOLKA-FIL / SOLKA-FLOC / SOLKA-FLOC BW / SOLKA-FLOC BW 100 / SOLKA-FLOC BW 20 / SOLKA-FLOC BW 200 / SOLKA-FLOC BW 2030 / SPARTOSE OM-22 / sulfite cellulose / TOMOFAN / TUNICIN / WHATMAN 41 / WHATMAN CC-31 / wood pulp / XUS 40511.00 experimental cellulose
BIG No	: 22347

1.2. Recommended use and restrictions on use

Use of the substance/mixture	: Chemical raw material Food industry: additive Cosmetic product: component
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1.3. Supplier

Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
Saint Louis, 63132-1429 - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number

Emergency number	: Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)
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SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling

No labeling applicable

2.3. Other hazards which do not result in classification

No additional information available

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2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type	: Polymer
Name	: Cellulose, Laboratory Grade
CAS-No.	: 9004-34-6

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Name	Common Name (Synonyms)	Product identifier	%	GHS US classification
cellulose	402-2B / ABICEL / alpha cel PB 25 / alpha-cellulose / ALPHAPHLOC / ALPHONIER F / ARBOCEL / ARBOCEL B 400 / ARBOCEL B 600/30 / ARBOCEL B 820C / ARBOCEL BC 1000 / ARBOCEL BC 1000 R / ARBOCEL BC 200 / ARBOCEL BC 200 R / ARBOCEL BC 300 / ARBOCEL BE 600/10 / ARBOCEL BE 600/20 / ARBOCEL BE 600/30 / ARBOCEL BEM 400-15 / ARBOCEL BER 400 S / ARBOCEL BERC 300 P / ARBOCEL BVEC 200 / ARBOCEL BVS 400 / ARBOCEL BZNC 200 / ARBOCEL BZNC 200 Fine / ARBOCEL DC 1000 / ARBOCEL FD OO / ARBOCEL FIC 200 / ARBOCEL NV 600-30 / ARBOCEL TP 40 / ARBOCELL B 600/30 / AVICEL / AVICEL 101 / AVICEL 102 / AVICEL 2330 / AVICEL 2331 / AVICEL 955 / AVICEL CL 611 / AVICEL E 200 / AVICEL FD 100 / AVICEL FD 101 / AVICEL PH 101 / AVICEL PH 101/102 / AVICEL PH 102 / AVICEL PH 103 / AVICEL PH 105 / AVICEL PH 112 / AVICEL PH 113 / AVICEL PH 200 / AVICEL PH 301 / AVICEL PH 302 / AVICEL PH microcrystalline cellulose / AVICEL PH-F 10 / AVICEL PH-M 06 / AVICEL PH-M 15 / AVICEL RC 591 / AVICEL SF / AVICEL SP / AVICEL TG 101 / AVICEL TG-D / baker-flex cellulose / BELLFINE D 10 / beta-amylose / CELISH / CELISH 100F / CELISH 100L / CELISH KY 100L / CELISH KY 100S / CELLEX MX / cellulose / cellulose 248 / cellulose crystalline avicel / cellulose flock / cellulose, crystalline / cellulose, microcrystalline / cellulose, powder / CELUFI / CEMIROM / CEPO / CEPO CFM / CEPO S 20 / CEPO S 40 / CF 11 / CHROMEDIA CC 31 / CHROMEDIA CF 11 / cotton linter pulp / crystalline cellulose / cupricellulose / DIACEL-4 / E 460 / ELCEMA F 150 / ELCEMA G 250 / ELCEMA P 050 / ELCEMA P 100 / flock-cellulose / FRESENIUS D 6 / HEWETEN 10 / HEWETEN 40 / hydroxycellulose / KINGCOT / LA 01 / MCC / microcrystalline cellulose / microcrystalline cellulose, MCC / MN-cellulose / ONOZUKA P 500 / polycellobiose / pyrocellulose / RAYOPHANE / RAYWEB Q / REXCEL / SIGMACELL / SOLKA-FIL / SOLKA-FLOC / SOLKA-FLOC BW / SOLKA-FLOC BW 100 / SOLKA-FLOC BW 20 / SOLKA-FLOC BW 200 / SOLKA-FLOC BW 2030 / SPARTOSE OM-22 / sulfite cellulose / TOMOFAN / TUNICIN / WHATMAN 41 / WHATMAN CC-31 / wood pulp / XUS 40511.00 experimental cellulose	(CAS-No.) 9004-34-6	100	Not classified

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.

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First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.
First-aid measures after eye contact	: Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Take victim to an ophthalmologist if irritation persists.
First-aid measures after ingestion	: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms	: Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Practically non-toxic in contact with skin (LD50 skin > 2000 mg/kg). Not irritant to skin. Practically non-toxic by inhalation (LC50 inh, rat > 5 mg/l/4h). Slightly irritant to eyes.
Symptoms/effects after eye contact	: Slight irritation.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Quick-acting ABC powder extinguisher. Class A foam extinguisher. Water (quick-acting extinguisher, reel). Water. Class A foam.
Unsuitable extinguishing media	: Quick-acting BC powder extinguisher. Quick-acting CO2 extinguisher.

5.2. Specific hazards arising from the chemical

Fire hazard	: DIRECT FIRE HAZARD: Non-flammable. In finely divided state: increased fire hazard. INDIRECT FIRE HAZARD: Heating increases the fire hazard. Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	: DIRECT EXPLOSION HAZARD: Fine dust is explosive with air. INDIRECT EXPLOSION HAZARD: Dust cloud can be ignited by a spark.

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Cool tanks/drums with water spray/remove them into safety.
Protection during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.
Emergency procedures	: Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes.
Measures in case of dust release	: In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows. In case of dust production: stop engines and no smoking. In case of dust production: no naked flames or sparks. Dust: spark-/explosionproof appliances/lighting equipment.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	: Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. Provide equipment/receptacles with earthing. Powdered form: no compressed air for pumping over spills.
Methods for cleaning up	: Stop dust cloud by humidifying. Scoop solid spill into closing containers. Powdered: do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid raising dust. Take precautions against electrostatic charges. Keep away from naked flames/heat. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Powdered form: no compressed air for pumping over.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool.
- Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
- Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. halogens. (strong) bases. water/moisture.
- Storage area : Store in a dry area. Keep container in a well-ventilated place. Provide the tank with earthing. Store at room temperature. Meet the legal requirements.
- Special rules on packaging : SPECIAL REQUIREMENTS: closing. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : SUITABLE MATERIAL: wood. synthetic material.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Cellulose, Laboratory Grade (9004-34-6)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m ³)	10 mg/m ³
cellulose (9004-34-6)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m ³)	10 mg/m ³

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Materials for protective clothing:

GIVE GOOD RESISTANCE: rubber

Hand protection:

Gloves

Eye protection:

Safety glasses. In case of dust production: protective goggles

Skin and body protection:

Protective clothing

Respiratory protection:

Dust production: dust mask with filter type P1

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Appearance : Fibres. Powder.
- Color : White to off-white
- Odor : Odourless

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Odor threshold	: No data available
pH	: 5 - 7 (11 %)
Melting point	: 260 - 270 °C
Freezing point	: Not applicable
Boiling point	: Not applicable
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: < 0.1 hPa (20 °C)
Relative vapor density at 20 °C	: Not applicable
Relative density	: 1.3 - 1.6
Specific gravity / density	: 1270 - 1610 kg/m ³
Solubility	: Insoluble in water. Substance sinks in water. Soluble in hydrogenchloride. Soluble in sulfuric acid. Insoluble in organic solvents. Water: < 0.1 g/100ml
Log Pow	: No data available
Auto-ignition temperature	: > 300 °C
Decomposition temperature	: 260 - 270 °C
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable ≥ 15 g/m ³ Lower explosive limit (LEL): 15 g/m ³
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

VOC content	: 0 %
Other properties	: Opaque. Hygroscopic.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts exothermically with (some) bases. Reacts with (strong) oxidizers. Under confinement: reacts exothermically on exposure to water (moisture): risk of spontaneous ignition.

10.2. Chemical stability

Unstable on exposure to moisture.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Cellulose, Laboratory Grade (9004-34-6)

LD50 oral rat	> 5000 mg/kg (Rat, Oral)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit, Dermal)
LC50 inhalation rat (mg/l)	> 6 mg/l (4 h, Rat, Inhalation)

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cellulose (9004-34-6)	
LD50 oral rat	> 5000 mg/kg (Rat, Oral)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit, Dermal)
LC50 inhalation rat (mg/l)	> 6 mg/l (4 h, Rat, Inhalation)

Skin corrosion/irritation	: Not classified pH: 5 - 7 (11 %)
Serious eye damage/irritation	: Not classified pH: 5 - 7 (11 %)
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Potential Adverse human health effects and symptoms	: Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Practically non-toxic in contact with skin (LD50 skin > 2000 mg/kg). Not irritant to skin. Practically non-toxic by inhalation (LC50 inh, rat > 5 mg/l/4h). Slightly irritant to eyes.
Symptoms/effects after eye contact	: Slight irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology - air	: Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Slightly harmful to fishes. No water pollutant (surface water). Slightly harmful to algae. Slightly harmful to bacteria. Slightly harmful to crustacea.

Cellulose, Laboratory Grade (9004-34-6)	
LC50 fish 1	> 100 mg/l (Pisces)
EC50 Daphnia 1	> 100 mg/l (Invertebrata)
cellulose (9004-34-6)	
LC50 fish 1	> 100 mg/l (Pisces)
EC50 Daphnia 1	> 100 mg/l (Invertebrata)

12.2. Persistence and degradability

Cellulose, Laboratory Grade (9004-34-6)	
Persistence and degradability	Biodegradable in water.
cellulose (9004-34-6)	
Persistence and degradability	Biodegradable in water.

12.3. Bioaccumulative potential

Cellulose, Laboratory Grade (9004-34-6)	
Bioaccumulative potential	Bioaccumulation: not applicable.
cellulose (9004-34-6)	
Bioaccumulative potential	Bioaccumulation: not applicable.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

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SECTION 13: Disposal considerations

13.1. Disposal methods

- | | |
|--|---|
| Waste treatment methods | : Waste treatment methods. |
| Product/Packaging disposal recommendations | : Do not discharge into surface water. Remove to an authorized dump. Remove to an authorized incinerator with energy recovery. |
| Additional information | : Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997. |

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Other information : No supplementary information available.

Transportation of Dangerous Goods

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

Cellulose, Laboratory Grade (9004-34-6)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

cellulose (9004-34-6)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

EU-Regulations

National regulations

No additional information available

15.3. US State regulations

SECTION 16: Other information

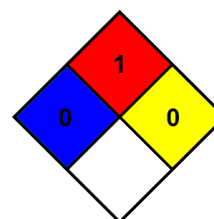
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NFPA health hazard : 0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



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SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.