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A Geno Technology, Inc. (USA) brand name

# Safety Data Sheet

Cat. # 786-165NC

Enhancer™ Membrane (Nitrocellulose, 12 x 9cm)

Size: 10



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# Nitrocellulose Membranes (10x10cm), (7.5x8.5cm), (9x12cm), (9.5x15cm)

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830  
Revision date: 5/11/2017 Version: 1.1

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form	: Substance
Substance name	: Nitrocellulose Membranes (10x10cm), (7.5x8.5cm), (9x12cm), (9.5x15cm)
EC Index-No.	: 603-037-00-6
CAS-No.	: 9004-70-0
Product code	: 066N_068N
Type of product	: Polymer
Formula	: (C <sub>6</sub> H <sub>7</sub> N <sub>3</sub> O <sub>11</sub> ) <sub>n</sub>
Synonyms	: bk2-w / bk2-z / c 2018 / ca 80-15 / celex / celloidin / celluloid pyroxyline, dry / cellulose nitrate / cellulose tetranitrate / cellulose, nitrate / cellulosehexanitrate, dry / cn 85 / collodion cotton / collodion cotton, dry / collodion pyroxyline, dry / collodion wool / colloxylin / colloxylin vnv / colloxylin, dry / colloxylinum, dry / corial em finish f / cotton powder, dry / daicel rs 1 / e 1440 / flexible collodion / fm-nts / fulminating cotton, dry / gun cotton, dry / guncotton / H 1/2 / hexanitrate of cellulose, dry / hx 3/5 / kodak lr 115 / lr 115 / nitrocel s / nitrocellulose / nitrocellulose e950 / nitrocotton / nitrocotton, dry / nitron / nitron (nitrocellulose) / nixon n/c / np 11 / nts 218 / nts 222 / nts 539 / nts 542 / nts 62 / parlodion / pesticide code: 099601 / pyralin / pyrocotton, dry / pyroxilin, dry / pyroxylin / pyroxylin, dry / r.s.nitrocellulose / rf 10 / rs / rs 1/2 / rs nitrocellulose / shadolac mt / soluble gun cotton / synpor / tsapolak 964 / xyloidin
Product group	: Raw material
BIG No	: 29529
REACH authorisation exemptions	: Exempted from REACH registration

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

##### 1.2.1. Relevant identified uses

Main use category : Research purposes

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

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

#### 1.4. Emergency telephone number

Emergency number : Chemtrec **1-800-424-9300** (USA/Canada), **+1-703-527-3887** (Intl)

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA Belfast	0344 892 0111	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	
United Kingdom	National Poisons Information Service (Cardiff Centre) Gwenwyn Ward, Llandough Hospital	Penarth CF64 2XX Cardiff	0344 892 0111	
United Kingdom	National Poisons Information Service Edinburgh Royal Infirmary of Edinburgh	Little France Crescent EH16 4SA Edinburgh	0344 892 0111	
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	+44 20 7188 7188	
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0344 892 0111	

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### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Explosives, Division 1.1

H201

Full text of H statements : see section 16

#### Adverse physicochemical, human health and environmental effects

Explosive; mass explosion hazard.

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS01

CLP Signal word

: Danger

Hazard statements (CLP)

: H201 - Explosive; mass explosion hazard.

Precautionary statements (CLP)

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P230 - Keep wetted with appropriate material.  
P234 - Keep only in original packaging.  
P240 - Ground and bond container and receiving equipment.  
P250 - Do not subject to grinding/shock/friction.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P370+P372+P380+P373 - In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.  
P401 - Store in accordance with local regulations on explosives.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Substance type : Polymer

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Nitrocellulose Membranes (10x10cm), (7.5x8.5cm), (9x12cm), (9.5x15cm)	(CAS-No.) 9004-70-0 (EC Index-No.) 603-037-00-6	100	Expl. 1.1, H201

Full text of 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

: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

First-aid measures after inhalation

: Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact

: Wash skin with plenty of water.

First-aid measures after eye contact

: Rinse eyes with water as a precaution.

First-aid measures after ingestion

: Call a poison center or a doctor if you feel unwell.

#### 4.2. Most important symptoms and effects, both acute and delayed

No additional information available

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### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.  
Unsuitable extinguishing media : Quick-acting BC powder extinguisher. Quick-acting CO2 extinguisher.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : DIRECT FIRE HAZARD: May readily catch fire. INDIRECT FIRE HAZARD: Fire/heat: explosive hazard bigger than fire hazard.  
Explosion hazard : DIRECT EXPLOSION HAZARD: Explosive; mass explosion hazard. Substance belongs to the group of explosives. Fine dust is explosive with air. INDIRECT EXPLOSION HAZARD: may be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard".  
Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: keep upwind.  
Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Extinguish/cool from behind cover/unmanned monitors. Do not move the load if exposed to heat. Depending on nature/size of load: consider extinguishment. Re-ignition is possible after the extinguishment. After extinguishing: flood seat of fire with plenty of water.  
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## 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 : Ventilate spillage area. No open flames, no sparks, and no smoking.  
Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

#### 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".

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment : Contain released product. Plug the leak, cut off the supply. Dam up the solid spill. Cover with a water blanket. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills.  
Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters.  
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.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Do not subject to grinding, shock, friction. Wear personal protective equipment.  
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

Technical measures : Ground/bond container and receiving equipment.  
Storage conditions : Store in a well-ventilated place. Keep cool.  
Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.  
Information on mixed storage : KEEP SUBSTANCE AWAY FROM: many substances.  
Storage area : Store in a cool area. Keep out of direct sunlight. Store in a dark area. Fireproof storeroom. Provide the tank with earthing. Keep locked up. Unauthorized persons are not admitted. Detached building. Store only in a stabilized state. May be stored under water. May be stored under alcohol. Meet the legal requirements.

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Special rules on packaging

: SPECIAL REQUIREMENTS: closing. clean. shock-absorbing. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

#### Hand protection:

Gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

Protective clothing

#### Respiratory protection:

Dust formation: dust mask

#### Environmental exposure controls:

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Amorphous solid. Amorphous powder. Fibres.
Colour	: White-grey.
Odour	: Odourless.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: Not applicable
Relative density	: Not applicable
Density	: 1300 kg/m <sup>3</sup>
Solubility	: Insoluble in water. Substance sinks in water. Soluble in ether. Soluble in acetone. Soluble in methanol. Soluble in acetic acid. Water: insoluble, Literature
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Explosive; mass explosion hazard.
Oxidising properties	: No data available
Explosive limits	: Not applicable

### 9.2. Other information

VOC content	: 0 %
Other properties	: May generate electrostatic charges.

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Decomposes at room temperature: release of heat.

#### 10.2. Chemical stability

Unstable on exposure to heat.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

#### 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

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LD50 oral rat	> 5000 mg/kg (Rat, Oral)
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg).

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water : No water pollutant (surface water). No data available on ecotoxicity.

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

#### 12.2. Persistence and degradability

#### Nitrocellulose Membranes (10x10cm), (7.5x8.5cm), (9x12cm), (9.5x15cm) (9004-70-0)

Persistence and degradability	Biodegradability in water: no data available.
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#### 12.3. Bioaccumulative potential

#### Nitrocellulose Membranes (10x10cm), (7.5x8.5cm), (9x12cm), (9.5x15cm) (9004-70-0)

Bioaccumulative potential	No bioaccumulation data available.
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#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste treatment methods : Waste treatment methods.

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Product/Packaging disposal recommendations	: Remove waste in accordance with local and/or national regulations. Specific treatment. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals.
Additional information	: Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.
European List of Waste (LoW) code	: 15 01 10* - packaging containing residues of or contaminated by dangerous substances 16 04 03* - other waste explosives

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

UN-No. (ADR)	: UN 0340
UN-No. (IMDG)	: UN 3270
UN-No. (IATA)	: UN 3270
UN-No. (ADN)	: UN 3270
UN-No. (RID)	: UN 0340

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: nitrocellulose
Proper Shipping Name (IMDG)	: NITROCELLULOSE MEMBRANE FILTERS
Proper Shipping Name (IATA)	: Nitrocellulose membrane filters
Proper Shipping Name (ADN)	: nitrocellulose
Proper Shipping Name (RID)	: nitrocellulose
Transport document description (ADR)	: UN 0340 nitrocellulose, 1.1D, (B1000C)
Transport document description (IMDG)	: UN 3270 NITROCELLULOSE MEMBRANE FILTERS, 4.1, II
Transport document description (IATA)	: UN 3270 Nitrocellulose membrane filters, 4.1, II
Transport document description (ADN)	: UN 3270 nitrocellulose, 1
Transport document description (RID)	: UN 0340 nitrocellulose, 1.1D

#### 14.3. Transport hazard class(es)

##### ADR

Transport hazard class(es) (ADR)	: 1
Danger labels (ADR)	: 1



##### IMDG

Transport hazard class(es) (IMDG)	: 4.1
Danger labels (IMDG)	: 4.1



##### IATA

Transport hazard class(es) (IATA)	: 4.1
Hazard labels (IATA)	: 4.1



##### ADN

Transport hazard class(es) (ADN)	: 1
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Danger labels (ADN) : 1



### RID

Transport hazard class(es) (RID) : 1

Danger labels (RID) : 1



### 14.4. Packing group

Packing group (ADR) : Not applicable

Packing group (IMDG) : II

Packing group (IATA) : II

Packing group (ADN) : Not applicable

Packing group (RID) : Not applicable

### 14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

### 14.6. Special precautions for user

#### Overland transport

Transport regulations (ADR) : Subject

Classification code (ADR) : 1.1D

Special provisions (ADR) : 237, 286

Limited quantities (ADR) : 1kg

Excepted quantities (ADR) : E2

Transport category (ADR) : 2

Tunnel restriction code (ADR) : B1000C

EAC code : 1Z

#### Transport by sea

Transport regulations (IMDG) : Subject

Special provisions (IMDG) : 237, 286

Limited quantities (IMDG) : 1 kg

Excepted quantities (IMDG) : E2

Packing instructions (IMDG) : P411

EmS-No. (Fire) : F-A

EmS-No. (Spillage) : S-I

Stowage category (IMDG) : D

Properties and observations (IMDG) : Filters may be small round pieces or large sheets. When involved in a fire, evolves toxic fumes; in closed compartments, these fumes may form an explosive mixture with air. Burns rapidly with intense heat radiation.

#### Air transport

Transport regulations (IATA) : Forbidden

PCA Excepted quantities (IATA) : E2

PCA Limited quantities (IATA) : Y458

PCA limited quantity max net quantity (IATA) : 1kg

PCA packing instructions (IATA) : 458

PCA max net quantity (IATA) : 1kg

CAO packing instructions (IATA) : 458

CAO max net quantity (IATA) : 15kg

Special provisions (IATA) : A57, A73, A122



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ERG code (IATA) : 3L

### Inland waterway transport

Classification code (ADN) : 1.1D

### Rail transport

Transport regulations (RID) : Subject

Classification code (RID) : 1.1D

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Nitrocellulose Membranes (10x10cm), (7.5x8.5cm), (9x12cm), (9.5x15cm) is not on the REACH Candidate List

Nitrocellulose Membranes (10x10cm), (7.5x8.5cm), (9x12cm), (9.5x15cm) is not on the REACH Annex XIV List

Nitrocellulose Membranes (10x10cm), (7.5x8.5cm), (9x12cm), (9.5x15cm) is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Nitrocellulose Membranes (10x10cm), (7.5x8.5cm), (9x12cm), (9.5x15cm) is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

VOC content : 0 %

#### 15.1.2. National regulations

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

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

### Full text of H- and EUH-statements:

Expl. 1.1	Explosives, Division 1.1
H201	Explosive; mass explosion hazard.

Safety Data Sheet applicable for regions : GB - United Kingdom

SDS EU (REACH Annex II)

*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.*