



# Safety Data Sheet

Cat. # 786-165NC

Enhancer™ Membrane (Nitrocellulose, 12 x 9cm)

Size: 10





# nitrocellulose, dry

## Safety Data Sheet

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

Date of issue: 06/27/2012

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Version: 7.1

### SECTION 1: Identification

#### 1.1. Identification

Product form : Substance  
Substance name : nitrocellulose, dry  
CAS-No. : 9004-70-0  
Product code : 066N\_068N  
Formula : (C6H7N3O11)n  
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  
BIG No : 29529

#### 1.2. Recommended use and restrictions on use

No additional information available

#### 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](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)

### SECTION 2: Hazard(s) identification

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

##### GHS US classification

Explosive Category 1.1 H201 Explosive; mass explosion hazard

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger  
Hazard statements (GHS US) : H201 - Explosive; mass explosion hazard  
Precautionary statements (GHS US) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P230 - Keep wetted with appropriate material  
P240 - Ground/Bond container and receiving equipment  
P250 - Do not subject to grinding/shock/friction.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P370+P380 - In case of fire: Evacuate area  
P372 - Explosion risk in case of fire.  
P373 - 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

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### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Substance type : Polymer

Name	Common Name (Synonyms)	Product identifier	%	GHS US classification
nitrocellulose, dry (Main constituent) (Note T)	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	(CAS-No.) 9004-70-0	100	Expl. 1.1, H201

Note T : This substance may be marketed in a form which does not have the physical hazards as indicated by the classification in the entry in Part 3. If the results of the relevant method or methods in accordance with Part 2 of Annex I of this Regulation show that the specific form of substance marketed does not exhibit this physical property or these physical hazards, the substance shall be classified in accordance with the result or results of this test or these tests. Relevant information, including reference to the relevant test method(s) shall be included in the safety data sheet.

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	: 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/doctor/physician 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).

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

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### 5.2. Specific hazards arising from the chemical

- 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".

### 5.3. Special protective equipment and precautions for fire-fighters

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

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

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No additional information available

#### 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

##### Hand protection:

Gloves

##### Eye protection:

Safety glasses

##### Skin and body protection:

Protective clothing

##### Respiratory protection:

Dust formation: dust mask

### SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Appearance	: Amorphous solid. Amorphous powder. Fibres.
Color	: White-grey
Odor	: Odourless
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
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	: No data available
Relative vapor density at 20 °C	: Not applicable
Relative density	: Not applicable
Specific gravity / 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
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: Explosive; mass explosion hazard.
Oxidizing properties	: No data available

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### 9.2. Other information

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

## 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 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).

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or 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.

### 12.2. Persistence and degradability

#### nitrocellulose, dry (9004-70-0)

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

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

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods	: Waste treatment methods.
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.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Transport document description	: UN3270 Nitrocellulose membrane filters (with not more than 12.6% nitrogen, by dry mass), 4.1, II
UN-No.(DOT)	: UN3270
Proper Shipping Name (DOT)	: Nitrocellulose membrane filters with not more than 12.6% nitrogen, by dry mass
Class (DOT)	: 4.1 - Class 4.1 - Flammable Solid 49 CFR 173.124
Packing group (DOT)	: II - Medium Danger
Hazard labels (DOT)	: 4.1 - Flammable solid



DOT Packaging Non Bulk (49 CFR 173.xxx)	: 212
DOT Packaging Bulk (49 CFR 173.xxx)	: 240
DOT Special Provisions (49 CFR 172.102)	: 43 - The membrane filters, including paper separators and coating or backing materials, that are present in transport, must not be able to propagate a detonation as tested by one of the tests described in the UN Manual of Tests and Criteria, Part I, Test series 1(a) (IBR, see 171.7 of this subchapter). On the basis of the results of suitable burning rate tests, and taking into account the standard tests in the UN Manual of Tests and Criteria, Part III, subsection 33.2.1 (IBR, see 171.7 of this subchapter), nitrocellulose membrane filters in the form in which they are to be transported that do not meet the criteria for a Division 4.1 material are not subject to the requirements of this subchapter. Packaging must be so constructed that explosion is not possible by reason of increased internal pressure. Nitrocellulose membrane filters covered by this entry, each with a mass not exceeding 0.5 g, are not subject to the requirements of this subchapter when contained individually in an article or a sealed packet. A1 - Single packaging are not permitted on passenger aircraft.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 151
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 1 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 15 kg

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DOT Vessel Stowage Location	: D - The material must be stowed "on deck only" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers or one passenger per each 3 m of overall vessel length, but the material is prohibited on passenger vessels in which the limiting number of passengers is exceeded.
Emergency Response Guide (ERG) Number	: 133
Other information	: No supplementary information available.

### Transportation of Dangerous Goods

#### Transport by sea

Transport document description (IMDG)	: UN 3270 NITROCELLULOSE MEMBRANE FILTERS, 4.1, II
UN-No. (IMDG)	: 3270
Proper Shipping Name (IMDG)	: NITROCELLULOSE MEMBRANE FILTERS
Class (IMDG)	: 4.1 - Flammable solids, self-reactive substances and solid desensitized explosives
Packing group (IMDG)	: II - substances presenting medium danger
Limited quantities (IMDG)	: 1 kg
EmS-No. (1)	: F-B
EmS-No. (2)	: S-Y

#### Air transport

Transport document description (IATA)	: UN 3270 Nitrocellulose membrane filters, 4.1, II
UN-No. (IATA)	: 3270
Proper Shipping Name (IATA)	: Nitrocellulose membrane filters
Class (IATA)	: 4.1 - Flammable solids
Packing group (IATA)	: II - Medium Danger

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### nitrocellulose, dry (9004-70-0)

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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Revision date : 05/11/2017

Full text of H-phrases:

H201

Explosive; mass explosion hazard

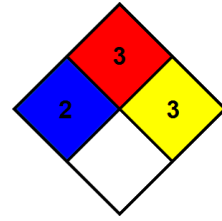


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- NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
- NFPA fire hazard : 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.
- NFPA reactivity : 3 - Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction but that require a strong initiating source or must be heated under confinement before initiation.



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.*