SAFETY DATA SHEET

Issuing Date 09-Oct-2017 Revision Date 04-Dec-2018 Revision Number 3

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name **Nitrocellulose Membrane**

Other means of identification

UN-Number UN3270

Synonyms Mixed Cellulose Ester (MCE) , Cellulose Nitrate.

Recommended use of the chemical and restrictions on use

Recommended Use Filter applications.

Uses advised against Consumer use

Supplier's details

Supplier Address
GVS North America Inc.
63 Community Drive
Sanford, Maine
04073
Telephone: 1-866-736-1250

Lieferant / Supplier:
Carl Roth GmbH + Co KG
Schoemperlenstr. 3-5
76185 Karlsruhe, Germany
+49 721 5606 0
sicherheit@carlroth.de

Emergency telephone number

Emergency Telephone Number CHEMTREC: 1-800-424-9300 for US/ 703-527-3887 outside US

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200).

Flammable solids	Category 2

GHS Label elements, including precautionary statements

Emergency Overview

Signal Word **Danger**

• Flammable solid

Appearance White, Black. **Physical State** Solid/compressed. **Odor** Odorless.

Precautionary Statements

Prevention

- Keep away from heat/sparks/open flames/hot surfaces - No smoking.
- Wear protective gloves/protective clothing/eye protection/face protection.

General Advice

- None

Fire

- In case of fire: Use CO2, dry chemical, or foam for extinction.

Storage

- None

Disposal

- None

Hazard Not Otherwise Classified (HNOC)

Not applicable.

Other information

No information available.

100% of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms Mixed Cellulose Ester (MCE) , Cellulose Nitrate.

Chemical Name	CAS-No	Weight %	Trade secret
Nitrocellulose	9004-70-0	76-80	*
Glycerin	56-81-5	6-10	*

**The exact percentage (concentration) of composition has been withheld as a trade secret.*

4. FIRST AID MEASURES

Description of necessary first-aid measures

General Advice Under normal conditions of use first aid is not required.

Eye Contact Rinse thoroughly with water as necessary.

Skin Contact None under normal use.

Inhalation None under normal use.

Ingestion IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects None known

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

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use: Carbon dioxide (CO_2). Dry powder. Water spray.

Unsuitable Extinguishing Media No information available

Specific Hazards Arising from the Chemical
Flammable solid. Product may ignite and burn at temperatures exceeding the flash point.

Explosion Data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge Yes.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Remove all sources of ignition. Wear protective gloves/clothing and eye/face protection.

Environmental Precautions

Environmental Precautions See Section 12 for additional Ecological Information.

Methods and materials for containment and cleaning up

Methods for Containment None required.

Methods for Cleaning Up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Keep away from heat, sparks and open flame. No smoking. Wear protective gloves/ eye protection/ face protection

Conditions for safe storage, including any incompatibilities

Storage Keep away from heat and sources of ignition. Ideal storage 40 to 60% humidity.

Incompatible Products None known based on information supplied.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Guidelines The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Glycerin 56-81-5	TWA: 10 mg/m³ mist	-	-

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Appropriate engineering controls

Engineering Measures None under normal use conditions.

Individual protection measures, such as personal protective equipment

Eye/Face Protection No special protective equipment required.
Skin and Body Protection No special protective equipment required.
Respiratory Protection No protective equipment is needed under normal use conditions.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Solid/compressed.
Appearance White, Black.
Odor Odorless.
Odor Threshold No information available.

Property	Values	Remarks/ - Method
pH	No data available	None known
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	No data available	None known
Flash Point	180 °C / 356 °F	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor Pressure	No data available	None known
Vapor Density	No data available	None known
Specific Gravity	No data available	None known
Water Solubility	No data available	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	No data available	None known

Flammable Properties Flammable solid.

Explosive Properties No data available
Oxidizing Properties No data available

Other information

VOC Content (%) No data available

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

None known based on information supplied.

Hazardous decomposition products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information There is no data available for this product
Inhalation None under normal use condtions
Eye Contact None under normal use conditions.
Skin Contact None under normal use conditions.
Ingestion None under normal use.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Nitrocellulose	> 5 g/kg (Rat)	-	-
Glycerin	= 12600 mg/kg (Rat)	21900 mg/kg (Rat)	> 570 mg/m³ (Rat) 1 h

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms None known

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

Sensitization No information available
Mutagenic Effects No information available
Carcinogenicity Contains no ingredients above reportable quantities listed as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Nitrocellulose		Group 2A		X

Reproductive Toxicity No information available
STOT - single exposure No information available
STOT - repeated exposure No information available
Aspiration Hazard No information available.

Numerical measures of toxicity - Product
Unknown acute toxicity 100% of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Not Classified

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Glycerin 56-81-5	-	LC50 96 h: 51 - 57 mL/L static (Oncorhynchus mykiss)	-	EC50 24 h: > 500 mg/L (Daphnia magna)

Persistence and Degradability No information available

Bioaccumulation No information available

Chemical Name	Log Pow
Glycerin	-1.76

Other Adverse Effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods 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. 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. See Sections 7 and 8 for additional handling information.

Contaminated Packaging Follow guidelines listed in above.

14. TRANSPORT INFORMATION

DOT

UN-Number UN3270
Proper shipping name NITROCELLULOSE MEMBRANE FILTERS
Hazard Class 4.1
Packing Group II
Description UN3270, NITROCELLULOSE MEMBRANE FILTERS, 4.1, II
Emergency Response Guide Number 133

UN-Number UN3270
Proper Shipping Name NITROCELLULOSE MEMBRANE FILTERS
Hazard Class 4.1
Packing Group II
Description UN3270, NITROCELLULOSE MEMBRANE FILTERS, 4.1, II

UN-Number UN3270
Proper Shipping Name NITROCELLULOSE MEMBRANE FILTERS
Hazard Class 4.1
Packing Group II
Description UN3270, NITROCELLULOSE MEMBRANE FILTERS, 4.1, II

15. REGULATORY INFORMATION

International Inventories

Contact supplier for inventory compliance status
TSCA Complies
DSL All components are listed either on the DSL or NDSL.

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Nitrocellulose	X	X	X	X	
Glycerin	X	X	X		X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPA	**Health Hazard** 0	**Flammability** 4	**Instability** 0	**Physical and Chemical Hazards** -
HMIS	**Health Hazard** 0	**Flammability** 4	**Physical Hazard** 0	**Personal Protection** X

Prepared By

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Latham, NY 12110
1-800-572-6501

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Revision Note (M)SDS sections updated. 2. 7. Updated Logo to GVS Filter Technology.

General Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet