

Safety Data Sheet

Australia

Section 1. Identification

Product name **AE98 Membrane, Cellulose nitrate, 5 µm 47 mm, 100 pack**

Catalogue Number 10400212



Chemical product name Cellulose nitrate

Synonyms Nitrocellulose; Cellulose, nitrate; Celloidin; pyroxylin; cellulose nitrate, non-plasticised, other than collodions and celloidin; collodion cotton; fulmicotton; gum cotton; nitrocellulose; nitrocellulose, non-plasticised, other than collodions and celloidin; COLLODION; PYROXYLIN SOLUTION; Cellulose tetranitrate

Product type Solid.

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

Identified uses

Use in laboratories
Scientific research and development
Analytical chemistry.

Company details

Manufacturer

GE Healthcare Bio-Sciences AB
Bjorkgatan 30
SE-75184 Uppsala
Sweden
+46 18 61 20000

Supplier

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New South Wales
Australia
tfn: 18 0015 0522

Emergency telephone number 000 and +61 2 9846 4000

Section 2. Hazard(s) identification

Classification of the substance or mixture FLAMMABLE SOLIDS - Category 2

GHS label elements

Hazard pictograms



Signal word

WARNING

Hazard statements

Flammable solid.

Precautionary statements

Prevention

Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response

Not applicable.

Storage

Not applicable.

Disposal

Not applicable.



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Supplemental label elements Not applicable.

Other hazards which do not result in classification None known.

Section 3. Composition and ingredient information

Substance/mixture Substance
Chemical identity Cellulose nitrate
Other means of identification Nitrocellulose; Cellulose, nitrate; Celloidin; pyroxylin; cellulose nitrate, non-plasticised, other than collodions and celloidin; collodion cotton; fulmicotton; gum cotton; nitrocellulose; nitrocellulose, non-plasticised, other than collodions and celloidin; COLLODION; PYROXYLIN SOLUTION; Cellulose tetranitrate

CAS number/other identifiers

CAS number 9004-70-0
EC number Not available.

Ingredient name	% (w/w)	CAS number
Cellulose nitrate	100	9004-70-0

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

Description of necessary first aid measures

Eye contact In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if irritation occurs.
Inhalation No special recommendations.
Skin contact Wash with soap and water. Get medical attention if irritation develops.
Ingestion No special recommendations.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact No known significant effects or critical hazards.
Inhalation No known significant effects or critical hazards.
Skin contact No known significant effects or critical hazards.
Ingestion No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact No specific data.
Inhalation No specific data.
Skin contact No specific data.
Ingestion No specific data.

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. Firefighting measures

Extinguishing media

Suitable extinguishing media	Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	Do not use water jet.
Specific hazards arising from the chemical	Flammable solid.
Hazardous thermal decomposition products	Decomposition products may include the following materials: nitrogen oxides
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.

Section 6. Accidental release measures

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. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	If specialised 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 non-emergency personnel".
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).

Methods and material for containment and cleaning up

Small spill	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.
Large spill	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use only non-sparking tools. 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.
Conditions for safe storage, including any incompatibilities	Store between the following temperatures: 18 to 25°C (64.4 to 77°F). 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. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.



Section 8. Exposure controls and personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour 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, vapour 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 side-shields.

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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

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

Appearance

Physical state	Solid.
Colour	White.
Odour	Odourless.
Flash point	Closed cup: 4.44°C (40°F)
Flammability (solid, gas)	Product becomes a 'Flammable Solid category 2' after removing the membrane from the package. If the product is still in its original packaging it is not a 'Flammable Solid category 2'.
Vapour pressure	0 kPa (0 mm Hg) [room temperature]
Relative density	1.66
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	>160°C (>320°F)
Decomposition temperature	Not available.
Viscosity	Dynamic (room temperature): Not applicable. Kinematic (room temperature): Not applicable.
Flow time (ISO 2431)	Not available.
<u>Aerosol product</u>	
Flame duration	Not applicable.



Section 10. Stability and reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Avoid all possible sources of ignition (spark or flame).
Incompatible materials	Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Cellulose nitrate	LD50 Oral	Rat	>5 g/kg	-
Conclusion/Summary	Not toxic.			

Irritation/Corrosion

Not available.

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure Routes of entry not anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.
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	No specific data.
Inhalation	No specific data.
Skin contact	No specific data.
Ingestion	No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure



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Short term exposure

Potential immediate effects Not available.

Potential delayed effects Not available.

Long term exposure

Potential immediate effects Not available.

Potential delayed effects Not available.

Potential chronic health effects

Not available.

Conclusion/Summary Not toxic.

General No known significant effects or critical hazards.

Carcinogenicity No known significant effects or critical hazards.

Mutagenicity No known significant effects or critical hazards.

Teratogenicity No known significant effects or critical hazards.

Developmental effects No known significant effects or critical hazards.

Fertility effects No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Cellulose nitrate	Acute EC50 579000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
Conclusion/Summary	No known significant effects or critical hazards.		

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{oc}) Not available.

Other adverse effects No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods The generation of waste should be avoided or minimised 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 spilt material and runoff and contact with soil, waterways, drains and sewers.



Section 14. Transport information

	ADG	ADR/RID	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
Proper shipping name	-	-	-	-
Class	-	-	-	-
Label				
PG	-	-	-	-
Environmental hazards	No.	No.	No.	No.
Additional information	<p>Remarks The product is not regulated as Dangerous Goods for transport according to a expert opinion by BAM (Bundesanstalt für Materialforschung and -prüfung) with number 2.2-91/15-E on 12 May 2015. <i>"The above named nitrocellulose membrane filters (in form of round filters, pre-cut parts and curved parts) do not fulfill the criteria of Class 1 'Explosives' and the division 4.1 'Flammable Solids' of RID/ADR (GGVSE), IMDG-Code (GGVSee) and the ICAO-Technical Instructions."</i></p>	<p>Remarks The product is not regulated as Dangerous Goods for transport according to a expert opinion by BAM (Bundesanstalt für Materialforschung and -prüfung) with number 2.2-91/15-E on 12 May 2015. <i>"The above named nitrocellulose membrane filters (in form of round filters, pre-cut parts and curved parts) do not fulfill the criteria of Class 1 'Explosives' and the division 4.1 'Flammable Solids' of RID/ADR (GGVSE), IMDG-Code (GGVSee) and the ICAO-Technical Instructions."</i></p>	<p>Remarks The product is not regulated as Dangerous Goods for transport according to a expert opinion by BAM (Bundesanstalt für Materialforschung and -prüfung) with number 2.2-91/15-E on 12 May 2015. <i>"The above named nitrocellulose membrane filters (in form of round filters, pre-cut parts and curved parts) do not fulfill the criteria of Class 1 'Explosives' and the division 4.1 'Flammable Solids' of RID/ADR (GGVSE), IMDG-Code (GGVSee) and the ICAO-Technical Instructions."</i></p>	<p>Remarks The product is not regulated as Dangerous Goods for transport according to a expert opinion by BAM (Bundesanstalt für Materialforschung and -prüfung) with number 2.2-91/15-E on 12 May 2015. <i>"The above named nitrocellulose membrane filters (in form of round filters, pre-cut parts and curved parts) do not fulfill the criteria of Class 1 'Explosives' and the division 4.1 'Flammable Solids' of RID/ADR (GGVSE), IMDG-Code (GGVSee) and the ICAO-Technical Instructions."</i></p>

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 to Annex II of Marpol and the IBC Code Not available.

Section 15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons

Not regulated.

Model Work Health and Safety Regulations - Scheduled Substances

Ingredient name

Cellulose nitrate

Schedule

Restricted hazardous chemical [For wet abrasive blasting]

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

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



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Australia	This material is listed or exempted.
Europe	Not determined.
United States	This material is listed or exempted.
Canada inventory	This material is listed or exempted.
China	This material is listed or exempted.
Japan	Japan inventory (ENCS): This material is listed or exempted. Japan inventory (ISHL): This material is listed or exempted.
Malaysia	<input checked="" type="checkbox"/> Not determined
New Zealand	This material is listed or exempted.

Section 16. Any other relevant information

History

Date of printing	04 November 2019	Date of previous issue	12 April 2018
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ADG = Australian Dangerous Goods

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

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

SUSMP = Standard Uniform Schedule of Medicine and Poisons

UN = United Nations

Procedure used to derive the classification

Classification	Justification
FLAMMABLE SOLIDS - Category 2	On basis of test data



Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

