

Material Safety Data Sheet

Australia
English

1. Identification of the material and supplier

Product name NC45 Membrane, Cellulose nitrate, 0.45 µm 25 mm, 100 pack

Catalogue Number 10401106



Company details

Manufacturer

GE Healthcare UK Ltd
Amersham Place
Little Chalfont
Buckinghamshire HP7 9NA
England
+44 0870 606 1921

Supplier

GE Healthcare Bio-Sciences
Building 4B, Parklands Estate
21 South Street
Rydalmere NSW 2116
Australia
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Emergency telephone number 000 and +61 2 9846 4000

Chemical product name Nitrocellulose

Synonyms

ADG

Molecular formula $\text{C}_6\text{H}_7\text{NO}_3 \cdot x\text{H}_2\text{O}$ Unspecified

Uses

Area of application Industrial applications.
Material uses Analytical chemistry. Research.
Product type Solid.

2. Hazards identification

Classification F+, R11

Risk phrases R11- Highly flammable.

Safety phrases S16- Keep away from sources of ignition - No smoking.
S33- Take precautionary measures against static discharges.
S37/39- Wear suitable gloves and eye/face protection.

Statement of hazardous/dangerous nature

NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

3. Composition/information on ingredients

Mixture No.

Chemical name Nitrocellulose

Synonyms

CAS number 9004-70-0

Chemical formula $\text{C}_6\text{H}_7\text{NO}_3 \cdot x\text{H}_2\text{O}$ Unspecified

Additional information

Other ingredients, determined not to be hazardous according to Safe Work Australia criteria, and not dangerous according to the ADG Code, make up the product concentration to 100%.

There are no 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.



4. First-aid measures

First-aid measures

Eye contact	In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if irritation occurs.
Skin contact	Wash with soap and water. Get medical attention if irritation develops.
Inhalation	<input checked="" type="checkbox"/> No special recommendations.
Ingestion	<input checked="" type="checkbox"/> No special recommendations.
Protection of first-aiders	<input checked="" type="checkbox"/> 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.

5. Fire-fighting measures

Extinguishing media

Suitable	<input checked="" type="checkbox"/> Use dry chemical, CO ₂ , water spray (fog) or foam.
Not suitable	<input checked="" type="checkbox"/> Do not use water jet.
Special exposure hazards	<input checked="" type="checkbox"/> 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. <input checked="" type="checkbox"/> Highly flammable solid. Runoff to sewer may create fire or explosion hazard.
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.
Hazardous combustion products	<input checked="" type="checkbox"/> Decomposition products may include the following materials: nitrogen oxides
Special remarks on fire hazards	<input checked="" type="checkbox"/> 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'.

6. Accidental release measures

Personal precautions	<input checked="" type="checkbox"/> Eliminate all ignition sources. Vacuum or sweep up material and place in a designated, labelled waste container.
Environmental precautions	No special recommendations.
Methods for cleaning up	<input checked="" type="checkbox"/> Eliminate all ignition sources. Vacuum or sweep up material and place in a designated, labelled waste container.
Small spill	<input checked="" type="checkbox"/> Eliminate all ignition sources. Vacuum or sweep up material and place in a designated, labelled waste container.

7. Handling and storage

Handling	<input checked="" type="checkbox"/> Put on appropriate personal protective equipment (see Section 8). 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. 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 explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.
Storage	<input checked="" type="checkbox"/> 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.

8. Exposure controls/personal protection

Occupational exposure limits	No exposure standard allocated.
Recommended monitoring procedures	<input checked="" type="checkbox"/> No special recommendations.
Engineering measures	<input checked="" type="checkbox"/> 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.
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.
Personal protection	
Eyes	<input checked="" type="checkbox"/> 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 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.



Hands	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.
Respiratory	A respirator is not needed under normal and intended conditions of product use.
Skin	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.
Environmental exposure controls	No specific hazard.

9. Physical and chemical properties

Physical state	Solid.
Colour	White.
Odour	Odourless.
Vapour pressure	0 kPa (0 mm Hg) [room temperature]
Density	1.66 g/cm ³
Flash point	Closed cup: 12.85°C (55.1°F)
Viscosity	Dynamic (room temperature): Not applicable. Kinematic (room temperature): Not applicable.
Auto-ignition temperature	>160°C (>320°F)
Flame duration	Not applicable.

10. Stability and reactivity

Chemical stability

Possibility of hazardous reactions Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological information

Potential acute health effects

Inhalation	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Eye contact	No known significant effects or critical hazards.

Acute toxicity

Nitrocellulose	LD50 Oral	Rat	>5 g/kg	-
Conclusion/Summary	Not toxic.			

Potential chronic health effects

Chronic toxicity

Conclusion/Summary Not toxic.

Irritation/Corrosion

Conclusion/Summary Not available.

Sensitiser

Conclusion/Summary Not available.

Carcinogenicity

Conclusion/Summary Not available.

Mutagenicity

Conclusion/Summary Not available.

Teratogenicity

Conclusion/Summary Not available.

Reproductive toxicity

Conclusion/Summary Not available.

Chronic effects 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.

Over-exposure signs/symptoms



Inhalation	No specific data.
Ingestion	No specific data.
Skin	No specific data.
Eyes	No specific data.
Target organs	☑ May cause damage to the following organs: central nervous system (CNS).

12. Ecological information

Ecotoxicity	No known significant effects or critical hazards.		
Aquatic ecotoxicity			
☑ Nitrocellulose	Acute EC50 579000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
Conclusion/Summary Persistence/degradability	No known significant effects or critical hazards.		
Conclusion/Summary	Not available.		
Other adverse effects	No known significant effects or critical hazards.		

13. Disposal considerations

Methods of disposal	☑ 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.
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14. Transport information

Regulation	UN number	Proper shipping name	Class	PG	Label	Additional information
ADG	☑ Not regulated.	☑	☑	☑		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>
ADR	☑ Not regulated.	☑	☑	☑		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>
IMDG	☑ Not regulated.	☑	☑	☑		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>



IATA	Not regulated.	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. "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."

PG* : Packing group

15. Regulatory information

Standard Uniform Schedule of Medicine and Poisons

Not regulated.

Control of Scheduled Carcinogenic Substances**Ingredient name**

Not available.

Schedule**Australia inventory (AICS)**

This material is listed or exempted.

EU Classification


F, R11

HCS ClassificationFlammable solid
Target organ effects

16. Other information

History

Date of printing	12 January 2016	Date of previous issue	29 July 2009
Date of issue	12 January 2016	Version	3

 Indicates information that has changed from previously issued version.

Enquiries regarding MSDS content should be directed to: our local sales office.

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.

