

1. Identification

Product identifier	Nexar™ Anti-Fog Film	
Other means of identification		
SDS number	16158	
Product Code	NA421T GF, NB421T GF, NC021T GF	
Recommended use	Industrial use Coating.	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
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2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Serious eye damage/eye irritation	Category 1
OSHA defined hazards	Not classified.	

Label elements



Signal word	Danger	
Hazard statement	Causes serious eye damage.	
Precautionary statement		
Prevention	Wear eye protection/face protection.	

Response	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.
Storage	Store in a dry area.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Benzene, 1-(1,1-dimethylethyl)-4-ethenyl-, polymer with ethenylbenzene and 2-methyl-1,3-butadiene, sulfonated		1637665-77-0	<100

4. First-aid measures

Inhalation	Get medical attention if symptoms occur. Not likely, due to the form of the product.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed. Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Wear suitable protective equipment. Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Following product recovery, flush area with water. Small Spills: Clean surface thoroughly to remove residual contamination.
Environmental precautions	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Static electricity and formation of sparks must be prevented. Do not get this material in contact with eyes. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices. Follow all SDS/label precautions even after container is emptied because they may retain product residues.

Conditions for safe storage, including any incompatibilities

Store indoor. Keep away from heat, sparks and open flame. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. To maintain product quality, do not store in heat or direct sunlight. Keep in a cool, well-ventilated place. Store in original tightly closed container. Keep containers closed when not in use. Store at ambient temperature and atmospheric pressure. Use care in handling/storage. Do not store outside. Care should be taken when storing and handling this product. Apart from the specific nature of the polymer product, conditions such as humidity, sunlight, and temperature have an influence on the way the product behaves during storage and handling. Special attention should be paid to avoid inappropriate stacking of palletized bags or other package units. Indeed, polymer products may be dimensionally unstable under certain conditions. Do not stack Flexible Intermediate Bulk Containers (FIBCs) or palletized bags. Avoid storage under pressure or at elevated temperatures to minimize particulate clustering.

8. Exposure controls/personal protection

Occupational exposure limits

This mixture has no ingredients that have PEL, TLV, or other recommended exposure limit.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Hand protection

The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Wear suitable gloves tested to EN374. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Recommended gloves include rubber, neoprene, nitrile or viton. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes. For short-term/splash protection we recommend the same, but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness should be typically greater than 0.35 mm. This recommendation is advisory only. It may not be appropriate for all workplaces. It should not be construed as offering an approval for any specific use scenario. A hazard assessment should be conducted prior to use to ensure suitability of gloves for specific work environments and processes.

Other

Wear suitable protective clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Eye wash fountain and emergency showers are recommended. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state

Solid.

Form

Granular. Solid.

Color

Brown ~ Dark brown.

Odor

Mild.

Odor threshold

Not available.

pH

Not available.

Melting point/freezing point

Not available.

Initial boiling point and boiling range

Not available.

Flash point

Not available.

Evaporation rate

Not available.

Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	> 1.03 - < 1.13 g/ml
Solubility(ies)	
Solubility (water)	Practically insoluble in water.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Strong oxidizing agents. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Upon decomposition this product emits acrid dense smoke with carbon dioxide, carbon monoxide, water and other products of combustion.

11. Toxicological information

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	Prolonged skin contact may cause temporary irritation.
Eye contact	Causes serious eye damage.
Ingestion	Health injuries are not known or expected under normal use.

Symptoms related to the physical, chemical and toxicological characteristics Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

Components	Species	Test Results
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Benzene, 1-(1,1-dimethylethyl)-4-ethenyl-, polymer with ethenylbenzene and 2-methyl-1,3-butadiene, sulfonated (CAS 1637665-77-0)

Acute

Oral

Albino rat	> 5000 mg/kg, 14 days
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Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Irritation Corrosion - Skin

Benzene, 1-(1,1-dimethylethyl)-4-ethenyl-, polymer with ethenylbenzene and 2-methyl-1,3-butadiene, sulfonated	OECD 404, Non-irritating to mildly irritating to the skin of rabbits. Result: Negative. Species: Albino rabbit Organ: Skin Test Duration: 72 hours Notes: US EPA OCSP 870.2500
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Serious eye damage/eye irritation Causes serious eye damage.

Maximum group mean score

Benzene, 1-(1,1-dimethylethyl)-4-ethenyl-, polymer with ethenylbenzene and 2-methyl-1,3-butadiene, sulfonated

OECD 405
 Result: Positive.
 Species: Albino rabbit
 Organ: Eye
 Test Duration: 17 days
 Severity: Extremely irritating
 Notes: US EPA OCSPP 870.2400

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization Not classified.

Sensitization

Benzene, 1-(1,1-dimethylethyl)-4-ethenyl-, polymer with ethenylbenzene and 2-methyl-1,3-butadiene, sulfonated

OECD 406
 Result: Negative.
 Species: Guinea pig
 Organ: Skin
 Test Duration: 3 weeks
 Severity: 0% positives
 Notes: OCSPP 840.2600

Skin sensitization

Benzene, 1-(1,1-dimethylethyl)-4-ethenyl-, polymer with ethenylbenzene and 2-methyl-1,3-butadiene, sulfonated

Tests for irritation and skin sensitization
 Result: Negative.
 Notes: ISO 10993-10

Germ cell mutagenicity Not classified.

Mutagenicity

Benzene, 1-(1,1-dimethylethyl)-4-ethenyl-, polymer with ethenylbenzene and 2-methyl-1,3-butadiene, sulfonated

Ames Assay
 Result: Not mutagenic in Ames Test.
 Species: Bacteria (*Pseudomonas putida*)
 Notes: OECD 471
 In vivo Cytogenetics (Mouse Micronucleus)
 Result: Not clastogenic
 Species: Mouse, house (*Mus musculus*)
 Notes: OECD 474
 In-Vitro Mammalian Mouse Lymphoma
 Result: Not mutagenic.
 Species: Mouse
 Notes: OECD 490

Carcinogenicity Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Benzene, 1-(1,1-dimethylethyl)-4-ethenyl-, polymer with ethenylbenzene and 2-methyl-1,3-butadiene, sulfonated (CAS 1637665-77-0)		
Aquatic		
<i>Acute</i>		
Fish	LC50 Rainbow Trout	> 1000 mg/l, 96 hr

Persistence and degradability Not inherently biodegradable.

Biodegradability

Percent degradation (Aerobic biodegradation)

Benzene, 1-(1,1-dimethylethyl)-4-ethenyl-, polymer with ethenylbenzene and 2-methyl-1,3-butadiene, sulfonated

0 % OECD ENV/MC/CHEM (9

Result: Not readily biodegradable.

Species: Activated sludge of a predominantly domestic sewage

Test Duration: 28 days

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)

All components are either listed on the US EPA TSCA Inventory list and designated as "active" or are exempt from listing. This product contains a component that is exempt from the TSCA Inventory under the Polymer Exemption Rule at 40 CFR 723.250.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard categories Serious eye damage or eye irritation

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

16. Other information, including date of preparation or last revision

Issue date 09-07-2023

Revision date 09-07-2023

Version # 1.0

Further information This product is exempt from TSCA inventory listing requirements as it is intended solely for a Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) regulated use and is subject to certain labelling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information on the pesticide label:

NFPA ratings Health: 3
Flammability: 1
Instability: 0

NFPA ratings



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