

AEROGREEN 4035 RUBBER REMOVAL SOLUTION

Before



After



PRODUCT DESCRIPTION:

AEROGREEN 4035 Rubber Removal Solution is a eco-friendly cleaning solution that emulsifies rubber from the runway surface dissolving the rubber residue into the solution. When combined with heavy duty sweeper/broom scrubbing action or hydro agitation, Aerogreen 4035 thoroughly removes runway rubber residue, making the touch down zone safe for landing aircrafts. It is safe for metals, runway lights, runway pavement seals, and caulking compounds.

FEATURES:

- Restores friction to the runway
- Improves overall aircraft traction
- No caustic ingredients
- Protects runway from deterioration
- Compatible with oil/water separators
- Certified by Boeing, McDonnell Douglas, EPA, & AST specifications

BENEFITS:

- Residue free
- Non-flammable and non-combustible
- Biodegradable and non-hazardous
- Safe on vegetation and stormwater systems
- Extends useful life of runway surface
- Environmentally friendly

WHAT IS IT:

AEROGREEN 4035 RUBBER REMOVAL SOLUTION is a water-soluble cleaner that works to soften the rubber, dirt and grime on the airport pavement runway and then by mechanical removal, enables the owner to maintain the runway to safe standards.

WHAT IS IT USED FOR:

It is used to remove the rubber deposits that accumulate on the runway surface over time. These rubber deposits, caused by aircraft landings and takeoffs, can reduce friction, traction, and skid resistance, posing safety hazards. By using rubber removers, airports can effectively restore their runways to optimal conditions for enhanced aircraft control, improved braking performance, and increased safety. 4035 helps prolong the lifespan of the runway surface and reduce maintenance needs and costs.

How It Works:

It works by utilizing specific chemical formulations to break down the rubber deposits that accumulate on the runway surface. The composition of 4035 is designed to target the molecular bonds within the rubber particles, weakening them and causing them to break apart. The active ingredients interact with the rubber, causing it to lose its adhesive properties and become more soluble or dispersible in the remover solution.

APPLICATION GUIDELINES:

Before applying the rubber remover, follow these steps:

1. Gather equipment on the runway and run sweepers back and forth at high RPM in the opposite direction of airplane landings to remove debris and score the runway surface.
2. Adjust the broom pressure to cut into the rubber, not skim the surface.
3. On sunny, hot days, use water trucks to pre-wet and cool down the runway surface.
4. Apply Aerogreen 4035 using applicator vehicles, saturating the runway surface with alternate passes from side to side of the centerline at 7 MPH. Adjust spray jets to ensure complete saturation.
5. Allow Aerogreen 4035 to sit for 15-30 minutes, as it penetrates the rubber buildup and darkens in color.
6. Do not allow the solution to dry on the surface before cleaning.

During the rubber removal process, follow these steps for effective cleaning:

1. Perform agitation with the broom angled towards the centerline. Start with the brush angled towards the centerline and make circular passes, gradually widening the circle with each pass until the entire area is agitated.
2. If using multiple brooms, have them follow the lead vehicle in tandem, all facing the centerline for cleaning. Keep the Aerogreen 4035 wet by adding water to facilitate foaming and prevent drying on the runway surface. Avoid over-wetting; that may force the cleaner off the runway.
3. Run the applicator truck with diluted Aerogreen 4035 in front of the scrubbing brooms to keep the surface wet during cleaning.
4. Continue making passes over the runway until the surface is clean. Start rinsing at the center using a water truck followed by a sweeper. Apply water at full pressure. The sweeper should run the brushes at high speed with an angled position to direct water to the side. Increase the radius of the laps and continue rinsing for 30 to 40 minutes.
5. If the runway runoff goes into open water sources, a vacuum may be required after rinsing. Run the runway vacuum sweeper directly behind the rinse trucks to collect the rinsed solution for proper disposal according to regulations.
6. Sweep the cleaning area with a regenerative air sweeper, including the traffic path of equipment. Use non-metallic bristles and a pick-up magnet to remove any metal debris left behind from the brushes.
7. After completing the operation, perform a post-shift washdown of all equipment to remove the accumulated dirt and mist generated during the process. Use a standard pressure washer or water hose with a pressure nozzle to clean the equipment promptly.



By utilizing airport resources, such as sweepers, bobcats, airport brooms, and manpower, the sweeper-brooming method is the most economical method of rubber removal. One drum of Aerogreen can efficiently clean 10,000 sqft of runway surface.

SPECIFICATIONS:

• Readily Biodegradable	Yes
• Flammable	No
• Combustible	No
• Water Solubility	100%
• Caustics	No
• Oil/Water Separator Compatible	Yes

ORDERING INFORMATION

Aerogreen Product Number

4035P	5 Gallon Pail
4035D	55 Gallon Drum
4035T275	275 Gallon Tote
4035T330	330 Gallon Tote

SAFETY/CAUTION:

Rubber gloves are recommended to prevent drying of the skin. Goggles are recommended to protect eyes if splashing is expected. When heated above 125 F, mechanical or local ventilation is required. When using product in steam cleaning and/or pressure washing application wear a rain suit and boots to keep clothes dry. Harmful if swallowed. Avoid getting into eyes. If contact occurs, flush with running water. If irritation persists, get medical attention. May cause dryness of skin with prolonged use, wash hands with cold water and apply hand lotion.



Safety Data Sheet

Issue Date: 15-Nov-2024

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Version 1

1. IDENTIFICATION

Product identifier

Product Name Runaway Rubber Remover

Other means of identification

SDS # AERO-002

Product Code 4035

Recommended use of the chemical and restrictions on use

Recommended Use Cleaner/Degreaser.

Details of the supplier of the safety data sheet

Supplier Address

Aerogreen Solutions LLC
1285 Brucetown Rd.
Clear Brook, VA 22624
Phone (540) 450-8375

Emergency telephone number

Emergency Telephone INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Blue liquid

Physical state Liquid

Odor Slight

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A

Signal Word

Warning

Hazard statements

Causes skin irritation
Causes serious eye irritation



Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/eye protection/face protection

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of water and soap
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash it before reuse

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
Glycol Ether EB	111-76-2	7-13
Silicic acid, disodium salt	6834-92-0	1-5
Tetrasodium EDTA	64-02-8	0.5-1.5

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES**Description of first aid measures**

Eye Contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin Contact	IF ON SKIN: Wash with plenty of water and soap. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
Inhalation	Remove to fresh air.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms	Causes skin irritation. Causes eye irritation.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Not determined.

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	Use personal protective equipment as required.
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Environmental precautions

Environmental precautions	See Section 12 for additional Ecological Information.
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Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Glycol Ether EB 111-76-2	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m ³ (vacated) TWA: 25 ppm (vacated) TWA: 120 mg/m ³ (vacated) S* S*	IDLH: 700 ppm TWA: 5 ppm TWA: 24 mg/m ³
2,2',2''-Nitrioltriethanol 102-71-6	TWA: 5 mg/m ³	-	-

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Refer to 29 CFR 1910.133 for eye and face protection regulations.

Skin and Body Protection Refer to 29 CFR 1910.138 for appropriate skin and body protection.

Respiratory Protection Refer to 29 CFR 1910.134 for respiratory protection requirements.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid	Odor	Slight
Appearance	Blue liquid	Odor Threshold	Not determined
Color	Blue		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	10.0-10.4 (6:1 dilution)	
Melting point / freezing point	0°C / 32°F	
Initial boiling point and boiling range	100°C / 212°F	
Flash point	No data available	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Not determined	
Flammability Limit in Air		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor Pressure	14.2 mmHg	
Vapor Density	0.62	
Relative Density	1.01	
Water Solubility	Not determined	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Autoignition temperature	No data available	
Decomposition temperature	Not determined	
Kinematic viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to Avoid

Keep out of reach of children.

Incompatible materials

None known based on information supplied.

Hazardous decomposition products

Normal products of combustion.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Avoid contact with eyes.
Skin Contact	Avoid contact with skin.
Inhalation	Do not inhale.
Ingestion	Do not ingest.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Glycol Ether EB 111-76-2	= 470 mg/kg (Rat)	= 435 mg/kg (Rabbit)	= 450 ppm (Rat) 4 h = 486 ppm (Rat) 4 h
Octylphenol ethoxylate 9002-93-1	= 1800 mg/kg (Rat)	-	-
Silicic acid, disodium salt 6834-92-0	= 1153 mg/kg (Rat)	-	-
Sodium Phosphate Tribasic 7601-54-9	4150 mg/kg (Rat)	> 300 mg/kg (Rabbit)	> 2.16 mg/L (Rat) 1 h
Tetrasodium EDTA 64-02-8	= 1658 mg/kg (Rat)	-	-
2,2',2''-Nitrilotriethanol 102-71-6	= 4190 mg/kg (Rat)	> 20000 mg/kg (Rabbit)	-

Symptoms related to the physical, chemical and toxicological characteristics**Symptoms**

Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Carcinogenicity

Group 3 IARC components are "not classifiable as human carcinogens".

Chemical name	ACGIH	IARC	NTP	OSHA
Glycol Ether EB 111-76-2	A3	Group 3		
2,2',2''-Nitrilotriethanol 102-71-6		Group 3		

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

Oral LD50 7,587.20 mg/kg

Dermal LD50 6,644.50 mg/kg

ATEmix (inhalation-dust/mist) 9.89 mg/l

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.

Component Information

Chemical name	Algae/aquatic plants	Fish	Crustacea
Glycol Ether EB 111-76-2		LC50: =1490mg/L (96h, Lepomis macrochirus) LC50: =2950mg/L (96h, Lepomis macrochirus)	EC50: >1000mg/L (48h, Daphnia magna)
Silicic acid, disodium salt 6834-92-0		LC50: =210mg/L (96h, Brachydanio rerio)	
Tetrasodium EDTA 64-02-8		LC50: =41mg/L (96h, Lepomis macrochirus) LC50: =59.8mg/L (96h, Pimephales promelas)	
2,2',2''-Nitrilotriethanol 102-71-6	EC50: =216mg/L (72h, Desmodesmus subspicatus) EC50: =169mg/L (96h,	LC50: 10600 - 13000mg/L (96h, Pimephales promelas) LC50: >1000mg/L (96h, Pimephales	

	Desmodemus subspicatus)	promelas) LC50: 450 - 1000mg/L (96h, Lepomis macrochirus)	
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Persistence/Degradability

Not determined.

Bioaccumulation

There is no data for this product.

Mobility

Chemical name	Partition coefficient
Glycol Ether EB 111-76-2	0.81

Other adverse effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods**Disposal of Wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

Not regulated

IATA

Not regulated

IMDG

Not regulated

15. REGULATORY INFORMATION

International Inventories

Chemical name	TSCA	TSCA Inventory Status	DSL/NDSL	EINECS/ELI NCS	ENCS	IECSC	KECI	PICCS	AIIC
Glycol Ether EB	X	ACTIVE	X	X	X	X	X	X	X
Octylphenol ethoxylate	X	ACTIVE	X		X	X	X	X	X
Silicic acid, disodium salt	X	ACTIVE	X	X	X	X	X	X	X
Sodium Phosphate Tribasic	X	ACTIVE	X	X	X	X	X	X	X
Tetrasodium EDTA	X	ACTIVE	X	X	X	X	X	X	X
2,2',2''-Nitrilotriethanol	X	ACTIVE	X	X	X	X	X	X	X

Legend:*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS - Japan Existing and New Chemical Substances**IECSC - China Inventory of Existing Chemical Substances**KECI - Korean Existing Chemicals Inventory**PICCS - Philippines Inventory of Chemicals and Chemical Substances**AIIC - Australian Inventory of Chemical Substances*

US Federal Regulations**CERCLA**

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium Phosphate Tribasic 7601-54-9	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

SARA 313

Chemical name	CAS No	Weight-%	SARA 313 - Threshold Values %
Glycol Ether EB - 111-76-2	111-76-2	7-13	1.0

US 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
Glycol Ether EB 111-76-2	X	X	X
Sodium Phosphate Tribasic 7601-54-9	X	X	X
2,2',2''-Nitrilotriethanol 102-71-6	X	X	X

16. OTHER INFORMATION**NFPA****Health hazards****Flammability****Instability****Special hazards**

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HMIS**Health hazards****Flammability****Physical hazards****Personal Protection**

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Not determined

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Revision Note:

New format

Disclaimer

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet