

Negative Expander All Series

Safety Data Sheet

In accordance with the SDS requirements of the Ministry of Employment and Labor (MOEL) of South Korea public notice No. 2012-14: the Standard for Classification, Labeling of Chemical Substance and Material Safety Data Sheets
Revision date: 2013/11/21

Version: 1.0

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1. Product Identifier

Product Form: Mixture

Product Name: Negative Expander All Series

1.2. Intended Use of the Product

Recommended uses and restrictions: Lead/acid battery negative plates, For professional use only.

1.3. Name, Address, and Telephone of the Responsible Party

Company

Atomized Products Group, Inc

3838 Miller Park Dr

Garland, TX 75042

T 972-272-9596

atomizedproductsgroup.com

Department name

1.4. Emergency Telephone Number

Emergency Number: 800-255-3924 (CHEMTEL)

813-248-0585 (CHEMTEL)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS classification (KR)

Physical hazards

Self-heating substances and mixtures Category 1

Health hazards

Specific target organ toxicity (repeated exposure) Category 1

Hazard pictograms (GHS-KR)



Signal word (GHS-KR)

: Danger

Hazard statements (GHS-KR)

: H251 - Self-heating: may catch fire

H372 - Causes damage to organs through prolonged or repeated exposure

Precautionary statements

: P235+P410 - Keep cool. Protect from sunlight

P260 - Do not breathe dust

P264 - Wash hands, forearms, and other exposed areas thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

P280 - Wear protective gloves/protective clothing/eye protection/face protection/respiratory protection.s

P314 - Get medical advice and attention if you feel unwell

P407 - Maintain air gap between stacks and pallets

P413 - Store bulk masses at appropriate temperatures to prohibit self-heating.

P420 - Store away from other materials

P501 - Dispose of contents/container to local, regional, national, and international regulations.

2.2. Other Hazards

Other hazards which do not result in classification

: COMBUSTIBLE DUST. Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. Prolonged inhalation of this material may cause benign pneumoniosis called baritosis from barium sulfate contained in this product.

Overview expected state of emergency: No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Mixture/Substance

Distinction of Substance or Mixture

: Mixture

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| Substance name | CAS No | Formula | Concentration |
|------------------------|-----------|-------------------|---------------|
| Carbon black | 1333-86-4 | C | 3 - 28% |
| Barium sulfate | 7727-43-7 | BaSO ₄ | 24 - 88% |
| Sodium ligno sulfonate | 8061-51-6 | Unspecified | 4 - 88% |

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid measures after inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-aid measures after skin contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation persists.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation persists.

First-aid measures after ingestion: Rinse mouth. Do not induce vomiting. Seek medical attention if a large amount is swallowed.

4.2. Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms/Injuries: Suspected of causing cancer.

Symptoms/Injuries After Inhalation: Prolonged contact with large amounts of dust may cause mechanical irritation.

Symptoms/Injuries After Skin Contact: Prolonged contact with large amounts of dust may cause mechanical irritation.

Symptoms/Injuries After Eye Contact: Repeated or prolonged contact will cause mechanical irritation.

Symptoms/Injuries After Ingestion: If a large quantity has been ingested : Gastrointestinal irritation. May cause nausea, vomiting, and diarrhea.

Personal Protection in First Aid and Measures: Use appropriate personal protection equipment (PPE).

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

Treatment: If you feel unwell, seek medical advice (show the label where possible)

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing Media

Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Personal protection (Emergency response): Do not enter fire area without proper protective equipment, including respiratory protection

5.2. Special Hazards Arising From the Substance or Mixture

Fire hazard: Not considered flammable but may burn at high temperatures. Dust explosion hazard in air.

5.3. Advice for Firefighters

Specific fire fighting: Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions, Protective Equipment and Emergency Procedures

Do not breathe dust. Avoid contact with eyes, skin and clothing

6.2. Environmental Precautions

Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and Material for Containment and Cleaning Up

Methods and Equipment for Containment and Cleaning up

Use explosion proof vacuum during cleanup, with appropriate filter, do not mix with other materials. Avoid generation of dust during clean-up of spills. Contact competent authorities after a spill.

Prevention Measures for Secondary Accidents

Ventilate area.

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SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Technical measures: Handle in accordance with good industrial hygiene and safety practice. Prolonged inhalation of this material may cause benign pneumoniosis called baritosis from barium sulfate contained in this product. Accumulation and dispersion of dust with an ignition source can cause a combustible dust explosion, keep dust levels to a minimum and follow applicable regulations.

Local and general ventilation: Ensure adequate air ventilation.

Precautions for safe handling: Use only non-sparking tools. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Handle in accordance with good industrial hygiene and safety procedures.

Prevents handling of incompatible substances or mixtures: Store away from. Strong acids, strong bases, strong oxidizers.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical measures: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment. Comply with applicable regulations.

Incompatible substances or mixtures: Refer to chapter 10.

Storage conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from extremely high or low temperatures, ignition sources, incompatible materials.

Material used in packaging/containers: No data available

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

| Carbon black (1333-86-4) | | |
|--------------------------|-------------------------------|-----------------------|
| Korea | ISHA TWA (mg/m ³) | 3.5 mg/m ³ |

8.2. Exposure Controls

Appropriate engineering controls: Ensure all national/local regulations are observed. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment:

Gloves. Protective goggles. Insufficient ventilation: wear respiratory protection. Protective clothing.



Respiratory protection: In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Hand protection: Wear chemically resistant protective gloves.

Eye protection: Chemical goggles or safety glasses.

Skin and body protection: Wear suitable protective clothing.

Hygiene measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

| | | |
|----------------|---|-------------------|
| Appearance | : | Black. Powder |
| Physical state | : | Solid |
| Odour | : | Perfume (Vanilla) |
| pH | : | Neutral |
| Melting point | : | No data available |
| Boiling point | : | No data available |

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| | |
|--------------------------------------|----------------------|
| Flash point | : No data available |
| Autoignition temperature | : No data available |
| Flammability (solid, gas) | : No data available |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Evaporation rate | : No data available |
| Specific Gravity | : No data available |
| Solubility | : Insoluble in water |
| Log Pow | : No data available |
| Decomposition temperature | : No data available |
| Viscosity | : No data available |
| Explosive limits (g/m ³) | : No data available |
| Explosive limits (vol %) | : No data available |
| Other properties | : No data available |
| Density | : No data available |
| Upper flammable limit | : No data available |
| Lower flammable limit | : No data available |

SECTION 10: STABILITY AND REACTIVITY

- 10.1 Reactivity:** Hazardous reactions will not occur under normal conditions. Dust clouds can be explosive.
- 10.2 Chemical stability:** Dust clouds can be explosive.
- 10.3 Possibility of hazardous reactions:** Hazardous polymerization will not occur.
- 10.4 Conditions to avoid:** Direct sunlight. Extremely high or low temperatures. Open flame. Ignition sources. Incompatible materials.
- 10.5 Incompatible materials:** Strong acids. Strong bases. Strong oxidizers.
- 10.6 Hazardous decomposition products:** Carbon oxides (CO, CO₂). sulfur oxides. Sodium oxides. Barium oxides.
- 10.7 Other properties:** No data available

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects - Product

| | |
|------------------------------------------------------------------|--------------------------|
| General toxicity | Not classified |
| Toxicity hazard | Not classified |
| Acute toxicity (oral) - Description | Not classified |
| Acute toxicity (dermal) - Description | Not classified |
| Acute toxicity (powder) - Description | Not classified |
| Acute toxicity (mist) - Description | Not classified |
| Serious eye damage/eye irritation - Description | Not classified |
| Skin corrosion/irritation - Description | Not classified |
| Skin or Respiratory sensitization - Description | Not classified |
| Germ cell mutagenicity - Description | Not classified |
| Carcinogenicity | Not classified |
| Reproductive toxicity - Description | Not classified |
| Specific target organ toxicity (single exposure) - Description | Causes damage to organs. |
| Specific target organ toxicity (repeated exposure) - Description | Not classified |
| Aspiration hazard - Description | Not classified |
| Other health hazard | No data available |

11.2 Information on Toxicological Effects Ingredient(s) No data available

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

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| | |
|---------------------------------|-------------------------------------|
| Ecotoxicity | : No data available |
| Fish Toxicity / Other Toxicity | : No data available |
| Persistence and degradability | : No data available |
| Biochemical oxygen demand (BOD) | : No data available |
| Chemical oxygen demand (COD) | : No data available |
| ThOD | : No data available |
| BOD (% of ThOD) | : No data available |
| Bioaccumulative potential | : No data available |
| Other information | : Avoid release to the environment. |

| | |
|---------------------------------|----------------------------------------------------------|
| Carbon black (1333-86-4) | |
| LC50 Fish 1 | 5601 mg/l |
| EC50 Daphnia 1 | 5600 mg/l (Exposure time: 24 h - Species: Daphnia magna) |

12.2. Persistence and Degradability No data available

12.3. Bioaccumulative Potential —

12.4. Mobility in Soil No data available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Description of waste materials: Dispose of waste material in accordance with all local, regional, national, and international regulations.

Waste treatment methods: No data available

SECTION 14: TRANSPORT INFORMATION

Sea Transport (IMDG)

| | |
|-------------------------------|---------------------|
| Class (UN) | : No data available |
| Danger Labels (IMDG) | : No data available |
| Packing group (UN) | : No data available |
| UN-No | : No data available |
| Proper Shipping Name | : No data available |
| Marine pollutant | : No data available |
| Special transport precautions | : No data available |

Air transport (ICAO/IATA)

| | |
|----------------------|---------------------|
| UN-No | : No data available |
| Proper Shipping Name | : No data available |
| Class (UN) | : No data available |
| Hazard Labels (IATA) | No data available |
| Packing group (UN) | : No data available |

Ground Transport

| | |
|----------------------|---------------------|
| UN-No | : No data available |
| Proper Shipping Name | : No data available |
| Class (UN) | : No data available |
| Hazard Labels (UN) | : No data available |
| Packing group (UN) | : No data available |

SECTION 15: REGULATORY INFORMATION

Asia/Pacific Regulations

Pollutant Release and Transfer Registers : Group II

| |
|----------------------------------------------------------------------|
| Carbon black (1333-86-4) |
| Regional legislation |
| Listed on the AICS (the Australian Inventory of Chemical Substances) |
| Listed on the Canadian DSL (Domestic Substances List) inventory. |

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Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.
Listed on European List of Notified Chemical Substances (ELINCS)
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
Listed on the Korean ECL (Existing Chemical List) inventory.
Listed on New Zealand - Inventory of Chemicals (NZIoC)
Listed on Inventory of Chemicals and Chemical Substances (PICCS)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on the Canadian Ingredient Disclosure List

Barium sulfate (7727-43-7)

Regional legislation

Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List) inventory.
Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.
Listed on European List of Notified Chemical Substances (ELINCS)
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Listed on New Zealand - Inventory of Chemicals (NZIoC)
Listed on Inventory of Chemicals and Chemical Substances (PICCS)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Sodium ligno sulfonate (8061-51-6)

Regional legislation

Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List) inventory.
Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
Listed on the Korean ECL (Existing Chemical List) inventory.
Listed on New Zealand - Inventory of Chemicals (NZIoC)
Listed on Inventory of Chemicals and Chemical Substances (PICCS)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

GHS classification (CN)

Health hazards : Carcinogenicity, Category 1B

SECTION 16: OTHER INFORMATION

Revision date : 2013/11/21
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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product