Safety Data Sheet according to Regulation (EC) No. 453/2010 Revision date: 21/11/2013

Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product Identifier

Product form Product Name MixtureNegative Expander All Series

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

1.2.1. Relevant identified uses Use of the substance/mixture

: Lead/acid battery negative plates. For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Company Atomized Products Group, Inc 3838 Miller Park Dr Garland, TX 75042 T 972-272-9596 atomizedproductsgroup.com

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

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Carc. 1B H350 STOT SE 3 H335

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.2; R45 Xi; R37 Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label Elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP] Hazard pictograms (CLP) :



| Signal word (CLP) : | Danger |
|----------------------------------|--|
| Hazardous ingredients : | Carbon black |
| Hazard statements (CLP) : | H335 - May cause respiratory irritation H350 - May cause cancer |
| Precautionary statements (CLP) : | P201 - Obtain special instructions before use. |
| | P202 - Do not handle until all safety precautions have been read and understood. |
| | P271 - Use only outdoors or in a well-ventilated area. |
| | P281 - Use personal protective equipment as required. |
| | P304+P340 - IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| | P308+P313 - If exposed or concerned: Get medical advice/attention. |
| | P312 - Call a POISON CENTER/doctor/physician if you feel unwell. |
| | P403+P233 - Store in a well-ventilated place. Keep container tightly closed. |
| | P405 - Store locked up. |
| | P501 - Dispose of contents/container according to Dispose in a safe manner in |

Safety Data Sheet according to Regulation (EC) No. 453/2010

2.3. Other Hazards

Other hazards not contributing to the classification

accordance with local/national regulations.

: 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. May form combustible dust concentrations in air.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

| Name | Product Identifier | % | Classification according to Directive 67/548/EEC |
|------------------------|---|---------|--|
| Barium sulfate | (CAS No) 7727-43-7 (EC no) 231-784- 4;444-260-7 | 24 – 88 | Not classified |
| Carbon black | (CAS No) 1333-86-4 (EC no) 215-609- 9;435-640-3 | 3 – 28 | Carc.Cat.2; R45 Xi; R37 |
| Sodium ligno sulfonate | (CAS No) 8061-51-6 (EC no) 617-124-1 | 4 - 88 | Not classified |
| Name | Product Identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
| Barium sulfate | (CAS No) 7727-43-7 (EC no) 231-784- 4;444-260-7 | 24 - 88 | Not classified |
| Carbon black | (CAS No) 1333-86-4 (EC no) 215-609- 9;435-640-3 | 3 – 28 | Carc. 1B, H350 STOT SE 3, H335 |
| Sodium ligno sulfonate | (CAS No) 8061-51-6 (EC no) 617-124-1 | 4 - 88 | Not classified |

Full text of R- and H-phrases: see section 16

SECTION 4: First aid measures

| 4.1. Description of First Aid Measure | ures |
|---------------------------------------|---|
| First-aid measures general | : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). |
| 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 an | nd 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. |

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

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

Safety Data Sheet according to Regulation (EC) No. 453/2010

| SECTION 5: Firefighting mea | asures |
|--|---|
| 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. |
| | m the Substance or Mixture |
| Fire hazard | : Not considered flammable but may burn at high temperatures. |
| Explosion hazard | : Avoid dust clouds in combination with static electricity. Dust explosion hazard in air. |
| Reactivity | : Hazardous reactions will not occur under normal conditions. Dust clouds can be explosive. |
| 5.3. Advice for firefighters | |
| Precautionary measures fire | : Exercise caution when fighting any chemical fire. |
| Firefighting instructions | : 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. |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory |
| | protection. |
| Other information | : Risk of dust explosion. |
| SECTION 6: Accidental relea | ase measures |
| 6.1. Personal precautions, prote | ective equipment and emergency procedures |
| General measures | : Use special care to avoid static electric charges. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Handle in accordance with good industrial hygiene and safety practice. Avoid prolonged contact with eyes, skin and clothing. Avoid generating dust. |
| 6.1.1. For non-emergency personne | |
| Protective equipment | : Use appropriate personal protection equipment (PPE). |
| Emergency procedures | : Evacuate unnecessary personnel. |
| 6.1.2. For emergency responders | |
| Protective equipment | Equip cleanup crew with proper protection. Use appropriate personal protection equipment (PPE). |
| Emergency procedures | : Ventilate area. |
| 6.2. Environmental precautions | |
| Prevent entry to sewers and public wat | ers. |
| 6.3. Methods and material for o | containment and cleaning up |
| For containment | : Avoid generation of dust during clean-up of spills. Use only non-sparking tools. |
| Methods for cleaning up | : Clear up spills immediately and dispose of waste safely. Avoid generation of dust during clean-up of spills. Use only non-sparking tools. Use explosion proof vacuum during cleanup, with appropriate filter, do not mix with other materials. Contact competent authorities after a spill. |
| 6.4. Reference to other sections | 5 |
| | |

See heading 8, Exposure Controls and Personal Protection.

| SECTION 7: Handling and sto | orage |
|-----------------------------------|--|
| 7.1. Precautions for safe handlin | ng |
| Additional hazards when processed | : Avoid dust production. 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. Do not pressurize, cut, or weld containers. |
| 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. |
| 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. |
| 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. |

Safety Data Sheet

according to Regulation (EC) No. 453/2010

Storage conditions

Incompatible products

7.3. Specific end use(s)

Lead/acid battery negative plates. For professional use only.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| Carbon black (1333-86-4) | | |
|------------------------------|---|--|
| Belgium | Limit value (mg/m ³) | 3.5 mg/m ³ |
| France | VME (mg/m³) | 3.5 mg/m ³ |
| Italy - Portugal - USA ACGIH | ACGIH TWA (mg/m ³) | 3 mg/m ³ |
| Spain | VLA-ED (mg/m³) | 3.5 mg/m ³ |
| United Kingdom | WEL TWA (mg/m³) | 3.5 mg/m ³ |
| United Kingdom | WEL STEL (mg/m ³) | 7 mg/m³ |
| Czech Republic | Expoziční limity (PEL) (mg/m ³) | 2.0 mg/m ³ |
| Denmark | Grænseværdie (langvarig) (mg/m ³) | 3.5 mg/m ³ |
| Finland | HTP-arvo (8h) (mg/m³) | 3.5 mg/m ³ |
| Finland | HTP-arvo (15 min) | 7 mg/m ³ |
| Ireland | OEL (8 hours ref) (mg/m ³) | 3.5 mg/m ³ |
| Ireland | OEL (15 min ref) (mg/m3) | 7 mg/m³ |
| Poland | NDS (mg/m³) | 4.0 mg/m ³ (< 0,0035% Benzo(a)pyrene) |
| Slovakia | NPHV (priemerná) (mg/m³) | 10 mg/m³ |
| Sweden | nivågränsvärde (NVG) (mg/m ³) | 3 mg/m ³ |
| Portugal | OEL TWA (mg/m³) | 3.5 mg/m³ |
| Portugal | OEL chemical category (PT) | A4 - Not Classifiable as a Human Carcinogen |
| Barium sulfate (7727-43-7) | | |
| Belgium | Limit value (mg/m ³) | 10 mg/m ³ |
| Bulgaria | OEL TWA (mg/m³) | 10.0 mg/m ³ |
| Italy - Portugal - USA ACGIH | ACGIH TWA (mg/m ³) | 10 mg/m³ |
| Spain | VLA-ED (mg/m³) | 10 mg/m ³ (this value is for the particulate matter that is free from Asbestos and contains less than 1% of Crystalline silica) |
| United Kingdom | WEL TWA (mg/m³) | 4 mg/m³ |
| United Kingdom | WEL STEL (mg/m ³) | 12 mg/m ³ (calculated) |
| Ireland | OEL (8 hours ref) (mg/m ³) | 2 mg/m ³ |
| Slovakia | NPHV (priemerná) (mg/m³) | 1.5 mg/m ³ |
| Portugal | OEL TWA (mg/m³) | 10 mg/m³ |

incompatible materials.

: Strong acids. Strong bases. Strong oxidizers.

8.2. Exposure controls

Appropriate engineering controls

Personal protective equipment

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.

: Ensure all national/local regulations are observed. Proper grounding procedures to

: 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,

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



Materials for protective clothing

: Chemically resistant materials and fabrics. EN (English)

Safety Data Sheet

according to Regulation (EC) No. 453/2010

| according to Regulation (EC) No. 453/2010 | | |
|--|---|--|
| Hand protection | : Wear chemically resistant protective gloves. | |
| Eye protection | : Chemical goggles or safety glasses. | |
| Skin and body protection | : Wear suitable protective clothing. | |
| Respiratory protection | : In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure | |
| | levels are not known wear approved respiratory protection. | |
| Thermal hazard protection | : Wear suitable protective clothing. | |
| SECTION 9: Physical and chem | ical properties | |
| 9.1. Information on basic physical | and chemical properties | |
| Physical state | : Solid | |
| Appearance | : Black. Powder. | |
| Colour | : No data available | |
| Odour | : Perfume (Vanilla). | |
| Odour threshold | : No data available | |
| рН | : Neutral | |
| Relative evaporation rate (butylacetate=1) | : No data available | |
| Melting point | : No data available | |
| Freezing point | : No data available | |
| Boiling point | : No data available | |
| Flash point | : No data available | |
| Self ignition temperature | : No data available | |
| Decomposition temperature | : No data available | |
| Flammability (solid, gas) | : No data available | |
| Vapour pressure | : No data available | |
| Relative vapour density at 20 °C | : No data available | |
| Relative density | : No data available | |
| Solubility | : Insoluble in water. | |
| Log Pow | : No data available | |
| Log Kow | : No data available | |
| Viscosity, kinematic | : No data available | |
| Viscosity, dynamic | : No data available | |
| Explosive properties | : No data available | |
| · · · | | |

: No data available

: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Oxidising properties

Explosive limits

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.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

: Not classified

Skin corrosion/irritation

| Serious eye damage/irritation | : Not classified pH: neutral |
|---|---|
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : May cause cancer. |
| Reproductive toxicity | : Not classified |
| Specific target organ toxicity (single exposure | |
| Specific target organ toxicity (repeated expos | |
| Aspiration hazard | : Not classified |
| SECTION 12: Ecological informat | ion |
| 12.1. Toxicity | |
| Carbon black (1333-86-4) | |
| LC50 fishes 1 | 5601 mg/l |
| EC50 Daphnia 1 | 5600 mg/l (Exposure time: 24 h - Species: Daphnia magna) |
| 12.2. Persistence and degradability | |
| No additional information available | |
| 12.3. Bioaccumulative potential | |
| No additional information available | |
| 12.4. Mobility in soil | |
| No additional information available | |
| 12.5. Results of PBT and vPvB assessm | ent |
| No additional information available | |
| 12.6. Other adverse effects | |
| No additional information available | |
| SECTION 13: Disposal consideration | tions |
| 13.1. Waste treatment methods | |
| | Dispose in a safe manner in accordance with local/national regulations. |

SECTION 14: Transport information In accordance with ADR / RID / IMDG / IATA

In accordance with ADR / RID /

14.1. UN number

No dangerous good in sense of transport regulations

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Other information

: No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

No additional information available

14.6.2. Transport by Sea

No additional information available

14.6.3. Air Transport

No additional information available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Contains no REACH candidate substance

Safety Data Sheet according to Regulation (EC) No. 453/2010

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Revision date:

Data sources

21/11/2013 REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

Full text of R-, H- and EUH-phrases::

| Carc. 1B | Carcinogenicity, Category 1B |
|-----------|--|
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| H335 | May cause respiratory irritation |
| H350 | May cause cancer |
| R37 | Irritating to respiratory system |
| R45 | May cause cancer |
| Xi | Irritant |

SDS EU (REACH Annex II)

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