

Date prepared: 2-28-13
Revision date: 2-28-13
Part number: P-310.01
Emergency number: 800-424-9300

APBREAK

Material safety data sheet

1. Chemical product and company information

Archer Pressure Pumping, LLC
10613 W. Sam Houston Pkwy N
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Tel: 580 670 4036
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Product name: APBREAK

NFPA 704M/HMIS Rating

Health: 2 / 2
Flammability: 0 / 0
Instability: 1 / 1
Other: OX

0 = Insignificant
1 = slight
2 = moderate
3 = high
4 = extreme
* = chronic health hazard

2. Composition/Information on ingredients

Our hazard evaluation has identified the following chemical substance(s) as hazardous. Consult Section 15 for the nature of the hazard(s).

Hazardous Substances	CAS#	% (w / w)
Ammonium Persulfate	7727-54-0	600 - 1000

3. Hazards identification

EMERGENCY OVERVIEW

WARNING

Oxidizer. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact. Harmful if swallowed. Contact with combustible material may cause fire.

Keep away from combustible material. Do not get in eyes, on skin, on clothing. Do not take internally. Do not breathe dust. Use with adequate ventilation. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water.

Wear suitable protective clothing.

Not flammable but can act as an oxidizing agent, enhancing the burning rate of other materials. Empty product containers may contain product residue. Do not pressurize, cut, heat, weld, or expose containers to flame or other sources of ignition. May form explosive dust-air mixtures. May evolve oxides of nitrogen (NOx) under fire conditions. May evolve oxides of sulfur (SOx) under fire conditions.

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Primary routes of exposure: Eye, skin

HUMAN HEALTH HAZARDS - ACUTE:

Eye contact: Irritating, and may injure eye tissue if not removed promptly.

Skin contact: Can cause moderate irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Ingestion: Not a likely route of exposure. There may be irritation to the gastro-intestinal tract. Harmful if swallowed.

Inhalation: Not a likely route of exposure. Irritating to the eyes, nose, throat and lungs. Inhalation of aerosol or dust may cause respiratory allergy.

SYMPTOMS OF EXPOSURE:

Acute: A review of available data does not identify any symptoms from exposure not previously mentioned.

Chronic: A review of available data does not identify any symptoms from exposure not previously mentioned.

Human health hazards - chronic: No adverse effects expected other than those mentioned above.

4. First aid measures

Eye contact: Immediately flush with plenty of water for at least 15 minutes. Get medical attention.

Skin contact: Immediately flush with large amounts of water. Use soap if available. Remove contaminated clothing, including shoes, after flushing has begun. For a large splash, flood body under a shower. Contaminated clothing, shoes, and leather goods must be discarded or cleaned before re-use. If symptoms develop, seek medical advice.

Ingestion: Get medical attention. Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. If reflexive vomiting occurs, rinse mouth and repeat administration of water.

Inhalation: Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

Note to physician: Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. Fire fighting measures

Flash point: Not applicable

Autoignition temperature: Not applicable

Extinguishing media: Not expected to burn. Use extinguishing media appropriate for surrounding fire.

Fire and explosion hazard: Not flammable but can act as an oxidizing agent, enhancing the burning rate of other materials. Empty product containers may contain product residue. Do not pressurize, cut, heat, weld, or expose containers to flame or other sources of ignition. May form explosive dust-air mixtures. May evolve oxides of nitrogen (NOx) under fire conditions. May evolve oxides of sulfur (SOx) under fire conditions.

Special protective equipment for fire fighting: In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

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6. Accidental release measures

- Personal precautions:** Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Stop or reduce any leaks if it is safe to do so. Ventilate spill area if possible. Ensure clean-up is conducted by trained personnel only. Do not touch spilled material. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Notify appropriate government, occupational health and safety and environmental authorities.
- Methods for cleaning up:** Do not clean up spills with sawdust, cotton waste or other combustible absorbent materials. Ensure that the container is free of readily combustible / oxidizable material. Sweep up and shovel. Reclaim into recovery or salvage drums. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations). Contact an approved waste hauler for disposal of contaminated recovered material.
- Environmental precautions:** Do not contaminate surface water.

7. Handling & storage

- Handling:** Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Avoid generating dusts. Keep the containers closed when not in use. Ensure all containers are labeled.
- Storage conditions:** This product is hygroscopic. Store away from heat and sources of ignition. Store in suitable labeled containers. Store the containers tightly closed. Keep in dry place. Store away from organic chemicals and other oxidizable materials, reducing agents, acids and alkalis. Keep at temperature not exceeding 30 °C Store separately from acids. Store separately from bases.
- Suitable construction material:** Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.

8. Exposure controls & personal protection

- Occupational exposure limits:** Exposure guidelines have not been established for this product. Available exposure limits for the substance(s) are shown below.

Substance(s)	Category	ppm	mg/m3	Non standard unit
Ammonium Persulphate as persulfate	ACGIH/TWA		0.1	

- Engineering measures:** General ventilation is recommended. Local exhaust ventilation may be necessary when dusts or mists are generated.
- Respiratory protection:** Respiratory protection is not normally needed. An approved respirator must be worn if the occupational exposure limit is likely to be exceeded. A dust respirator may be used.
- Hand protection:** When handling this product, the use of chemical gloves is recommended. The choice of work glove depends on work conditions and what chemicals are handled. Please contact the PPE manufacturer for advice on what type of glove material may be suitable. Gloves should be replaced immediately if signs of degradation are observed.
- Skin protection:** When handling this product, the use of a chemical resistant suit and rubber boots is recommended.
- Eye protection:** When handling this product, the use of splash chemical goggles is recommended.
- Hygiene recommendations:** Use good work and personal hygiene practices to avoid exposure. Keep an eye wash fountain available. Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse. Always wash thoroughly after handling chemicals. When handling this product never eat, drink or smoke.

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9. Physical and chemical properties

Physical state: Crystalline
Appearance: Straw coloured
Odor: None
Specific Gravity: 2
Density: 16.6 lb/gal
Solubility in water: Complete
Ph (1 %): 4 - 5
Decomposition temp: Decomposes 320 °F / 160 °C
VOC content: 0% calculated

Note: these physical properties are typical values for this product and are subject to change.

10. Stability & reactivity

Stability: Stable under normal conditions.
Hazardous polymerization: Hazardous polymerization will not occur.
Conditions to avoid: Avoid extremes of temperature. Moisture Heat and sources of ignition including static discharges.
Materials to avoid: Combustible materials Contact with organic materials (e.g. rags, sawdust, hydrocarbon oils or solvents) and avoid reducing agents (e.g. hydrazine, sulfites, sulfide, aluminum or magnesium dust) which can generate heat, fires, explosions and the release of toxic fumes.
Hazardous decomposition products: **Under fire conditions:** Oxides of nitrogen, Oxides of sulfur.

11. Toxicological information

The following results are for the product.

Acute oral toxicity

Species: Rat
LD50: 600 mg/kg
Test descriptor: Product

Acute dermal toxicity

Species: Rabbit
LD50: > 10 g/kg
Test descriptor: Product

Acute inhalation toxicity

Species: Rat
LD50: 520 mg/l (1 hrs)
Test descriptor: Product

Sensitization: Repeated or prolonged contact may cause sensitization in some individuals.

Carcinogenicity: None of the substances in this product are listed as carcinogens by the international agency for

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research on cancer (IARC), the national toxicology program (NTP) or the american conference of governmental industrial hygienists (ACGIH).

Human hazard characterization:

Based on our hazard characterization, the potential human hazard is: high.

12. Ecological information

Ecotoxicological effects:

No toxicity studies have been conducted on this product.

Mobility:

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	Water	Soil/Sediment
< 5 %	30 - 50 %	50 - 70 %

The portion in water is expected to float on the surface.

Bioaccumulation potential:

This preparation or material is not expected to bioaccumulate.

Environmental hazard and exposure characterization:

Based on our hazard characterization, the potential environmental hazard is: Low
If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. Disposal considerations

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Hazardous Waste: D001

Hazardous wastes must be transported by a licensed hazardous waste transporter and disposed of or treated in a properly licensed hazardous waste treatment, storage, disposal or recycling facility. Consult local, state, and federal regulations for specific requirements.

14. Transport information

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation.

Typical Proper Shipping Names for this product are as follows.

Land Transport

Proper Shipping Name: AMMONIUM PERSULPHATE
Technical Name(s):
UN/ID No: UN 1444
Hazard Class - Primary: 5.1
Packing Group: III
Flash Point: Not applicable

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Air Transport (ICAO/IATA)

Proper Shipping Name: AMMONIUM PERSULPHATE
Technical Name(s):
UN/ID No: UN 1444
Hazard Class - Primary: 5.1
Packing Group: III
Flash Point: Not applicable

Marine Transport (IMDG/IMO)

Proper Shipping Name: AMMONIUM PERSULPHATE
Technical Name(s):
UN/ID No: UN 1444
Hazard Class - Primary: 5.1
Packing Group: III
Flash Point: Not applicable

15. Regulatory information

This section contains additional information that may have relevance to regulatory compliance. The information in this section is for reference only. It is not exhaustive, and should not be relied upon to take the place of an individualized compliance or hazard assessment. Nalco accepts no liability for the use of this information.

NATIONAL REGULATIONS, USA

Osha Hazard Communication Rule, 29 CFR 1910.1200

Based on our hazard evaluation, the following substance(s) in this product is/are hazardous and the reason(s) is/are shown below.

Ammonium Persulphate : Irritant, Sensitizer, Oxidizer.

Cercla/Superfund, 40 CFR 302

Notification of spills of this product is not required.

Sara/Superfund Amendments And Reauthorization Act Of 1986 (Title III) - Sections 302, 311, 312, And 313

Section 302 - Extremely Hazardous Substances (40 CFR 355)

This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

Sections 311 And 312 - Material Safety Data Sheet Requirements (40 CFR 370)

Our hazard evaluation has found this product to be hazardous. The product should be reported under the following indicated EPA hazard categories:

- X Immediate (Acute) Health Hazard
- Delayed (Chronic) Health Hazard
- X Fire Hazard
- Sudden Release of Pressure Hazard
- Reactive Hazard

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

Section 313 - List Of Toxic Chemicals (40 CFR 372)

This product contains the following substance(s), (with CAS # and % range) which appear(s) on the List of Toxic Chemicals

Hazardous Substances	CAS#	% (w / w)
Ammonium Persulphate	7727-54-0	60.0 - 100.0

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Toxic Substances Control Act (TSCA)

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710).

Federal Water Pollution Control Act, Clean Water Act, 40 Cfr 401.15 / Formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311

Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.

Clean Air Act, Sec. 112 (Hazardous Air Pollutants, as amended by 40 CFR 63), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances)

Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.

California Proposition 65

Substances listed under California Proposition 65 are not intentionally added or expected to be present in this product.

Michigan Critical Materials

Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.

State Right To Know Laws

The following substances are disclosed for compliance with State Right to Know Laws:

Ammonium Persulphate 7727-54-0

INTERNATIONAL CHEMICAL CONTROL LAWS

Canadian Environmental Protection Act (CEPA)

The substances in this preparation are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

Australia

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

China

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on the Inventory of Existing Chemical Substances China (IECSC).

Europe

The substances in this preparation have been reviewed for compliance with the EINECS or ELINCS inventories.

Japan

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

Korea

All substances in this product comply with the Toxic Chemical Control Law (TCCL) and are listed on the Existing Chemicals List (ECL).

Philippines

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

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16. Other information

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations.

For additional information on the use of this product, contact your local Archer representative.

DISCLAIMER STATEMENT:

This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight™ (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight™ CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

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