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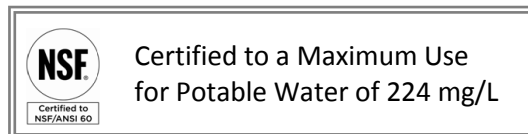
1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: AS-5420

Synonyms: Sodium Permanganate Solution

Manufacturer/Supplier:

Applied Specialties, Inc.
33555 Pin Oak Parkway
Avon Lake, OH 44012



Customer Information Number: 440-933-9442

Emergency 24-Hour Health/Environmental Phone: 216-973-6118

2. CHEMICAL COMPOSITION

Component	CAS Number	Wt%	Exposure Guidelines (TWA Ceiling)
Sodium Permanganate	10101-50-5	20	5.0 mg/m ³ Mn OSHA 0.2 mg/m ³ Mn ACGIH

Chemical identity of some ingredients may be withheld as confidential as permitted by 29 CFR 1910.1200 and various State right to know laws.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Dark purple liquid, odorless

DANGER! Very powerful oxidizer, explosive in contact with sulfuric acid or peroxides. May react violently with readily oxidizable materials. May ignite wood and cloth. Corrosive to eyes on contact. May cause severe burns. Do not ingest, avoid inhalation of vapors. May be harmful if swallowed or absorbed through skin

HMIS Rating: Health – 2 Fire – 1 Reactivity - 2

0- Minimal; 1- Slight Hazard; 2- Moderate Hazard;
3- Serious Hazard; 4-Severe Hazard

TARGET ORGANS - Eyes, skin, mucous membranes of the nose, throat, and lungs

ROUTES OF ENTRY INTO BODY - Inhalation, ingestion, skin absorption, skin or eye Contact

SIGNS AND SYMPTOMS OF EXPOSURE –Damaging to eye tissue, may cause irreversible permanent injury to eyes, may cause irritation or on prolonged contact damage skin. Harmful if swallowed or inhaled. May burn mucous membranes. Aspiration may cause irritation or lung damage.

OSHA Hazard Communication This material is hazardous as defined by 29 CFR 1910.1200



4. FIRST AID MEASURES

EYE CONTACT: If material gets into the eyes, flush the eyes with large amounts of water for at least 30 minutes, lifting the lower and upper lids occasionally. Get medical attention immediately, preferably from an ophthalmologist. **DO NOT** attempt to neutralize chemically. Decomposition products are alkaline. Contact lenses should not be worn when working with this substance or any other chemical. If contact lenses were worn, remove from the eye after the first 5 minutes of flushing.

SKIN CONTACT: Skin that becomes contaminated should be washed or showered for 30 minutes with soap and water to remove any chemical from skin. Get medical attention if irritation is severe and persistent. **CAUTION:** solution may ignite certain textiles. Contaminated clothing should be removed and laundered. Clothing that cannot be decontaminated, like leather boots, should be disposed of properly.

INHALATION: If a person breathes in large amounts of product mist, move the person to fresh air. If breathing has stopped, perform artificial respiration. Keep the affected person warm and at rest. Get medical attention as soon as is possible.

INGESTION: If a person swallows this product, give large quantities of water. Get medical attention immediately. Do not induce vomiting. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flash Point and Method: Not Determined

EXTINGUISHING MEDIA

Use water to flood fire exposed containers. Cool affected containers with large quantities of water from as far away as possible

FIRE FIGHTING EQUIPMENT

Wear NIOSH/MSHA approved, pressure-demand self-contained breathing apparatus and full protective gear including boots, protective gloves, and gas-tight goggles. Regular Fire Fighter's gear is inadequate

GENERAL HAZARD

Keep upwind. Avoid breathing dust, vapors, and fumes from this material. Avoid bodily contact with the material. Containers can build pressure if exposed to heat. Keep material out of water sources and sewers. Once AS-5420 becomes a waste, it is considered a D001 hazardous (ignitable) waste, See Section 6.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Do not allow material to come into contact with acids, peroxides, formaldehyde, antifreeze, hydraulic fluids, combustible materials, organic materials, or easily oxidizable metal powders

HAZARDOUS COMBUSTION PRODUCTS

Contact with hydrochloric acid may cause toxic chlorine gas to be liberated

6. ACCIDENTAL RELEASE MEASURES

Persons not wearing protective equipment and clothing should be restricted from spill areas until clean up has been completed. Spilled material may be a slipping hazard. If AS-5420 is spilled, take the following steps:



1. Ventilate the spill area. Dike the area around the spill to prevent spreading.
2. Dilute to approximately 6% with water then reduce with sodium thiosulfate, a bisulfite, or a ferrous salt solution. Bisulfite or Ferrous salt may require dilute Sulfuric acid (10%) to promote reduction.
3. Adjust the pH to neutral with Sodium Carbonate if required
4. Decant or filter solution and deposit the sludge in an approved landfill.
5. To clean contaminated floors, flush with an abundant quantity of water and treat collected water as described above.
6. Discard any vacuumed material and the absorbent material in accordance to all FEDERAL, STATE AND LOCAL REGULATIONS.
7. Once this product becomes a waste, it is considered a D001 hazardous (ignitable) waste.
8. Containers are hazardous when empty.

NOTE: DO NOT wash or pour AS-5420 into any surface waters or streams or directly into sewers.

7. HANDLING AND STORAGE

HANDLING

Use with adequate ventilation. Wear appropriate protective equipment (See Section 8). Practice good industrial hygiene. Wash after handling and before eating, drinking, or smoking. Containers are hazardous when empty, follow all MSDS and label warnings even when empty.

STORAGE

Keep container tightly closed with the labels visible. Keep away from heat, and sunlight. Storage temperature range: 0-100°C (32-212°F). This material may decompose spontaneously if exposed to heat (135°C / 275°F). Store in well ventilated area. Segregate from acids, peroxides, combustibles, organic or easily oxidizable materials including antifreeze and hydraulic fluids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Use in areas with adequate ventilation. In applications where the product will be exposed to elevated temperatures, use local ventilation to remove potential decomposition products when needed.

PERSONAL PROTECTION

- Respirator: Only necessary in fire fighting situations or if sensitivity has developed
Eye Protection: Wear chemical goggles and a face shield
Gloves: Wear synthetic rubber gloves and check with the glove manufacturers
Clothing: Normal working clothing is usually adequate, but wear a rubber apron in areas where splashing may occur
Other: Eye wash and safety showers should be in immediate work area, practice good industrial hygiene

Recommendations: ESCAPE & FIRE FIGHTING-Self-contained breathing apparatus with a face-piece operated in pressure demand or other positive-pressure mode.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Dark purple liquid



ODOR	Odorless
BOILING POINT	101°C (213.8°F)
FREEZING POINT	-0.5°C (31°F)
FLASH POINT	Not applicable
VAPOR PRESSURE	760 mm Hg @ 105°C
SPECIFIC GRAVITY	1.160 ± 0.020
PRODUCT pH (5%)	7.5 ± 1.5
SOLUBILITY IN WATER	100%

10. STABILITY AND REACTIVITY

Stability	Stable under conditions specified in this data sheet. Thermal decomposition is dependent on time and temperature
Hazardous Polymerization	Will not occur
Incompatibilities	Acids, peroxides, formaldehyde, antifreeze, hydraulic fluids, and all combustible, organic, or easily oxidizable materials including metal powders.
Hazardous Decomposition Products	Contact with Hydrochloric acid may cause toxic chlorine gas to evolve.

11. TOXICOLOGICAL INFORMATION

No Data

12. ECOLOGICAL INFORMATION

No Data

13. DISPOSAL CONSIDERATIONS

PRODUCT RESIDUES

Prohibition – Do not discharge to sewer

Destruction – Dispose in accordance with federal, state, and local regulations. Various options may be available. RCRA Hazardous D001 (ignitability)

USED PACKAGING

Decontamination – Empty packaging thoroughly rinse with water twice before disposal

Dispose in accordance with federal, state, and local regulations. Various options may be available

14. TRANSPORT INFORMATION

PROPER SHIPPING NAME	Permanganates, Inorganic, Aqueous Solution, N.O.S. (Sodium Permanganate)
HAZARD CLASS	5.1
IDENTIFICATION NUMBER	UN3214

AS-5420

Applied Specialties, Inc.

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PACKAGING GROUP
LABEL REQUIRED

II
OXIDIZER

15. REGULATORY INFORMATION

Federal Regulations

OSHA HAZARD COMMUNICATION STANDARD (26 CFR 1910.1200)

Hazardous Non-Hazardous

None of the chemicals in this product are considered highly hazardous by OSHA.

CERCLA/SUPERFUND (40 CFR 117, Section 302)

This product does not contain any chemicals subject to the reporting requirements

SARA EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355)

This product does not contain any chemicals subject to the reporting requirements

SARA HAZARD CATEGORIES (40 CFR 370, Sections 311, 312)

Acute Chronic Fire Pressure Reactive None

SARA TOXIC SUBSTANCES (40 CFR 372, Section 313)

Sodium Permanganate 20% (For manganese compounds)

US TOXIC SUBSTANCES CONTROL ACT/INVENTORY STATUS (TSCA)

All components are listed

RCRA STATUS

If this product becomes a waste it is classified as D001 (Ignitable Waste)

NTP, IARC, OSHA, & ACGIH STATUS

None of the components are listed

REPORTABLE QUANTITY (RQ)

This product does not have a DOT reportable quantity

State Regulations

PENNSYLVANIA, NEW JERSEY, and MASSACHUSETTS RIGHT-TO-KNOW INFORMATION:

Component	CAS Number
Sodium Permanganate	10101-50-5

CALIFORNIA PROPOSITION 65:

This product does not contain toxic chemical(s) currently on the California list of known carcinogens and reproductive toxins

Pursuant to the California Safe Drinking Water and Toxic Enforcement Act of 1986 (proposition 65), this information is provided. This law requires that "clear and reasonable warning" be provided to any individual, knowingly or intentionally exposed to any substances identified by the state as being cancer or



reproductive hazards unless, it can be shown that the exposure poses "no significant risk". Based on available data, the following chemicals listed by Proposition 65 may be present in this product:

16. OTHER INFORMATION

This information is given without any warranty or representation. We do not assume any legal responsibility for same, nor do we give permission, inducement, or recommendation to practice any patented invention without a license. It is offered solely for your consideration, investigation and verification. Before using any product, read its label carefully and completely.

Revision 2 / Supersedes 3/27/08 / JMJ

Revisions: ANSI format, Section 2 – Fire and Reactivity hazard ratings updated.