

5-68542

Material Safety Data Sheet
For
Forensic Blood Spatter Kit
#10-550

Please note that an MSDS is included only for those products that are chemicals. Some materials, household products, e.g. soap, are not considered chemicals.

In the interest of safety, Kemtec™ has provided dilute chemicals, where possible, and recommends using them in small amounts. By using Kemtec™ kits, classroom safety is enhanced, chemical disposal is significantly reduced and purchase and storage of concentrated, hazardous chemicals is virtually eliminated.

Thank you for your interest in Kemtec™ products.

KEMTEC™/T&S Educational, Inc.
8944 BECKETT ROAD
WEST CHESTER, OHIO 45069
(513) 860-4949

T&S Educational, Inc.
 Gateway to Knowledge
 8944 Beckett Rd.
 West Chester, OH 45069
 (513) 860-4949
 Fax (513) 682-8181

MATERIAL SAFETY DATA SHEET
 MSDS No. LL 550
 Check Date: December 24, 1998

SECTION I - IDENTIFICATION
 Product: LUNWOL
 Chemical Synonyms: 5-Amino-2,3-dihydro-1,4-dioxalacetone
 Formula: C₄H₆N₂O₃
 UN# Blat: up to 500 grams
 C.A.B. No.: 821-614

24 HOUR EMERGENCY ASSISTANCE
 CHEMTREC: 800-421-8826
 Day: 714-951-7177
 Health: 1
 Fire: 0
 Reactivity: 1
 Environmental: 1

SECTION II - INGREDIENTS OF MIXTURES
 Principal Component(s): Lunzol
 %: 97%
 TLV Units: None established.

SECTION III - PHYSICAL DATA
 Melting Point (°F): 819-820 (decolor)
 Boiling Point (°F): Decomposes
 Vapor Pressure (mm Hg): Data not listed
 Vapor Density (Air=1): 8.1
 Solubility in Water: Insoluble
 Appearance & Odor: Crystalline solid, pale yellow powder; no odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA
 Flash Point: Data not listed
 Combustible: No
 Self-heating: No
 Polymerizable: No
 Incompatible: Water spray; carbon dioxide; dry chemical powder; alcohol; polymer foam.

SECTION V - SPECIAL PRECAUTIONS PROCEDURES
 In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

SECTION VI - UNUSUAL FIRE AND EXPLOSION HAZARDS
 Fire or excessive heat may produce hazardous decomposition products of oxides of nitrogen (NO_x). Can react with strong oxidizing materials.

SECTION VII - NON-REGULATED
 Approved by U.S. Department of Labor "voluntarily accepted" or form OSHA-20

SECTION VIII - HEALTH HAZARD DATA
 Threshold Limited Value: None established by ACGIH (1982-83).
 Effects of Overexposure: May be harmful by inhalation, ingestion, or skin absorption. May cause irritation. Material is irritating to mucous membranes and respiratory tract. To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. Exercise appropriate precautions to minimize potential hazards.

Emergency and First Aid Procedures
 Inhalation: If inhaled, if conscious, give one or two glasses of water to drink. Induce vomiting and call physician. Never give anything by mouth to an unconscious person. EYE: Flush thoroughly with water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention. SKIN: Flush with water; remove contaminated clothing. Wash with soap and water. INGESTION: Remove to fresh air. Do not vomit. If drowsy or unconscious, get medical attention.

SECTION IX - REACTIVITY DATA
 Stability: Unstable
 Conditions to Avoid: Excessive temperatures and heat.
 Incompatibility (Materials to Avoid): Strong oxidizing agents, strong acids, strong bases, strong reducing agents.

Hazardous Decomposition Products
 Fire or excessive heat may produce hazardous decomposition products of oxides of nitrogen, carbon monoxide and carbon dioxide.

SECTION X - SPILL OR LEAK PROCEDURES
 Steps to be taken in case material is released or spilled: Wearing suitable protective clothing, sweep material onto paper. Avoid raising dust. Place in a suitable container for disposal by incineration. Wash spill area well with soap and water. Reclaim where possible.

Waste Disposal Method
 Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These chemicals are hazardous and should be disposed of in accordance with applicable laws. Dispose or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an alkali scrubber and scrubber.

SECTION XI - SPECIAL PRECAUTIONS INFORMATION
 Precautions to be Taken in Handling & Storage: Store in a cool, dry place away from strong oxidizing materials. Wash thoroughly after handling. Do not breathe dust. Use with adequate ventilation.
 Other Precautions: Avoid dust or aerosol before using. Do not breathe fumes from mixing with alcohol. Remove and wash contaminated clothing before reuse. Keep container tightly closed. Avoid contact with eyes, skin and clothing.

Revision No. 6 (Date issued) Approved: Michael Plazek, Director

Review on 04/15/1999

1 Identification of substance:

Product name: Sodium perborate
Stock number: 33383
Manufacturer/Supplier: Alfa Aesar, A Johnson Matthey Company

2 Composition/Data on components:

Chemical characterization:
Description: (CAS#) Sodium perborate, tetrahydrate (CAS# 10486-00-7), 100%

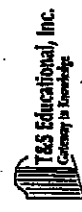
3 Hazards identification:

Hazard description:
Xn Harmful
O Oxidizing
Information pertaining to particular dangers for man and environment

4 First aid measures:

After inhalation: Supply fresh air. If required, provide artificial respiration. Keep patient warm.
After skin contact: Wash with water and soap and rinse thoroughly.

(Contd. on page 2)



HEALTH HAZARD DATA
Threshold Limited Value
None indicated, L5002.9mg (USCF 10000)

MATERIAL SAFETY DATA SHEET
SECTION I: PRODUCT AND COMPANY IDENTIFICATION
SECTION II: INGREDIENTS OF MIXTURES
SECTION III: PHYSICAL DATA
SECTION IV: FIRE AND EXPLOSION HAZARD DATA



Material Safety Data Sheet

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acc. to OSHA and ANSI

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Reviewed on 04/18/1999

Reviewed on 04/15/1994

Printing date 03/31/2003

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Product name: Sodium perborate

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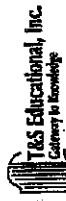
5 Fire fighting measures
 Suitable extinguishing agents
 Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
 Special hazards caused by the material, its products of combustion or remaining gases:
 This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.
 Protective equipment, respirator.
 Wear self-contained respirator.
 Wear fully protective impervious suit.

8 Exposure controls and personal protection
 Additional information about design of technical systems:
 Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
 Components with limit values that require monitoring at the workplace:
 Not required.
 Additional information: No data
 Personal protective equipment
 General protective and hygienic measures
 The usual precautionary measures for handling chemicals should be followed.
 Keep away from foodstuffs, beverages and feed.
 Remove all soiled and contaminated clothing immediately.
 Wash hands before breaks and at the end of work.
 Avoid contact with the eyes and skin.
 Breathing equipment:
 Use suitable respirator when high concentrations are present.
 Protection of hands: Impervious gloves
 Eye protection: Safety glasses
 Body protection: Protective work clothing.

6 Accidental release measures
 Person-related safety precautions:
 Wear protective equipment. Keep unprotected persons away.
 Ensure adequate ventilation
 Measures for environmental protection:
 Do not allow material to be released to the environment without proper governmental permits.
 Measures for cleaning/collection:
 Dispose contaminated material as waste according to item 13.
 Additional information:
 See Section 7 for information on safe handling
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.

7 Handling and storage
Handling
 Information for safe handling:
 Keep container tightly sealed.
 Store in cool, dry place in tightly closed containers.
 Ensure good ventilation at the workplace.
 Information about protection against explosions and fires:
 Substance/product can reduce the ignition temperature of flammable substances.
 This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.
Storage
 Requirements to be met by storerooms and receptacles:
 No special requirements.
 Information about storage:
 Store away from flammable substances.
 Store away from reducing agents.
 Store away from water/moisture.
 Further information about storage conditions:
 Protect from humidity and water.
 Keep container tightly sealed.
 Store in cool, dry conditions in well sealed containers.

(Contd. on page 3)



Material Safety Data Sheet

Product name: Sodium perborate

Solubility in / Miscibility with Water: Soluble

10 Stability and reactivity
Thermal decomposition / conditions to be avoided
Decomposition will not occur if used and stored according to specifications.

11 Toxicological information

Table with 2 columns: LD50 values and classification. Rows include Oral LD50 (1060 mg/kg), LD50 (250 mg/kg), and LD50 (214 mg/kg).

Primary irritant effect on the skin; Irritant to skin and mucous membranes.
on the eyes; Irritating effect.
Sensitization: No sensitizing effects known.

12 Ecological information:

General notes: Do not allow material to be released to the environment without proper governmental permits.

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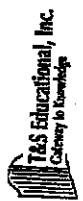
13 Disposal considerations
Product:
Recommendation: Consult state, local or national regulations to ensure proper disposal.

14 Transport information
DOT regulations:
Hazard class: 5.1
Identification number: 270

ADR/RID class: 5.1
ADR/RID code (Kemtec): 270
UN-Number: 1479

ADR/RID description of goods: Oxidizing solid, n.o.s., sodium perborate

IMDG Class: 5.1
IMDG Number: 1479
Packaging group: III



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acc. to OSHA and ANSI

Printing date: 11/2003

Reviewed on 04/15/1999

Product name: Sodium perborate

(Contd. of page 5)



Air transport ICAO-TI and IATA-DGR:
 ICAO/ATA Class: 5.1
 UN/ID Number: 1479
 Packaging group: III
 Proper shipping name: Oxidizing solid, n.o.s., sodium perborate

15 Regulations

Product related hazard information:

Hazard symbols:
 Xn Harmful
 O Oxidizing
Risk phrases:
 R 22 Contact with combustible material may cause fire.
 R 23 Harmful if swallowed.
 R 36/38 Irritating to eyes and skin.
Safety phrases:
 S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 S 36 Wear suitable protective clothing.
National regulations
 All components of this product are listed in the U.S. Environmental Agency Toxic Substances Control Act Chemical Substance Inventory.
 Information about limitation of use:
 For use only by technically qualified individuals.

16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.
 Department issuing MSDS: Health, Safety and Environmental Department.
 Contact: Darrell R. Saunders

