



**Hydrazine
Neutralizing
Solutions,
Inc.**

MATERIAL SAFETY DATA SHEET (MSDS)



SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ZeenKleen 3 Molar 1 Gallon Bottle
PRODUCT CODES: ZK3M-1G-4
MANUFACTURER: Hydrazine Neutralizing Solutions, Inc.
 PO Box 683156
 Marietta, GA 30068
 www.4zeenkleen.com

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HNSI PHONE: Toll Free (855) 767-6161 Metro Atlanta (770) 928-3800
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SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

FORMULA: C₅H₆O₅
EC NO. #: 206-330-3
CAS NO. #: 328-50-7 **% WT** 146.10 gm/molar **COMPONENT CONCENTRATION:** 43.83%

SYNONYMS: 2- Oxoglutaric acid 2- Oxopentanedioic acid alpha-ketoglutaric acid

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

OSHA HAZARDS: Irritant
GHS CLASSIFICATION: Skin irritation (Category 2). Serious eye damage (Category 1). Specific target organ toxicity – single exposure (Category 3).

GHS Label elements including precautionary statements (Pictogram)



SIGNAL WORD : Danger
HAZARD STATEMENT(S): H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H335 May cause respiratory irritation.

PRECAUTIONARY STATEMENT(S): P261 P280 P305 + P351 + P338

POTENTIAL HEALTH EFFECTS

EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
SKIN: Wear protective gloves/eye protection/face protection
INGESTION:
INHALATION: Avoid breathing dust/fume/gas/mist/vapours/spray.

HMIS CLASSIFICATION:

ACUTE HEALTH HAZARDS: 2
FLAMABILITY: 0
PHYSICAL HAZARDS: 0

NFPA RATING:

HEALTH HAZARD: 2
FIRE: 0
REACTIVITY HAZARD:



SECTION 4: FIRST AID MEASURES

GENERAL ADVICE: Consult a physician. Show this safety data sheet to doctor in attendance. Move out of dangerous area.

EYES: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

SKIN: Wash off with soap and plenty of water. Consult a physician.

INGESTION: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

INHALATION: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

SECTION 5: FIRE-FIGHTING MEASURES

CONDITIONS OF FLAMMABILITY: Not flammable or combustible.

SUITABLE EXTINGUISHING MEDIA: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS: Wear self contained breathing apparatus for fire fighting if necessary.

HAZARDOUS COMBUSTION PRODUCTS: Hazardous decomposition products formed under fire conditions. Carbon oxides

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

ENVIRONMENTAL PRECAUTIONS: Do not let product enter drains.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

CONDITIONS FOR SAFE STORAGE: Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature is 2 – 8° C

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate, use a full-face particle respirator type N100 (US) or type P3 (EN143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye Protection: Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin / Body Protection: Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.



SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Form: Liquid
Colour: Clear

SAFETY DATA

pH: 2.8

Melting point/freezing point range: 114 – 117° C (237 – 243° F)

Water solubility: 100 gm/liter at 20° C (68 F)

No Data Available on: Boiling point, Flash point, Ignition temperature, Autoignition temperature, Lower / Upper explosion limit, Vapour pressure, Density, Partition coefficient, n-octanol/water, Relative vapour density, Odour/Odour Threshold, Evaporation rate.

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability: Stable under recommended storage conditions.
Possibility of Hazardous Reactions: No data available
Conditions to Avoid: No data available
Materials to Avoid: Bases, Oxidizing agents, Reducing agents
Hazardous Decomposition Products: Hazardous decomposition products formed under fire conditions – Carbon oxides.
Other Decomposition Products: No data available

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

No Data Available on: Oral LD₅₀, Inhalation LC₅₀, Dermal LD₅₀, Skin corrosion/irritation, Respiratory or skin sensitization, Germ cell mutagenicity.

CARCINOGENICITY

IARC / ACGIH / NTP / OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, potential, known, anticipated, nor confirmed by as a carcinogen.

REPRODUCTIVE TOXICITY: No data available

TERATOGENICITY: No data available

SPECIFIC TARGET ORGAN TOXICITY - Single Exposure (Globally Harmonized System): No data available. Inhalation-may cause respiratory irritation. Specific target organ toxicity – repeated exposure (Globally Harmonized System): no data available

ASPIRATION HAZARD: No data available

POTENTIAL HEALTH EFFECTS

Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.

Ingestion: May be harmful if swallowed.

Skin: May be harmful if absorbed through skin. Causes skin irritation.

Eyes: Causes eye irritation.

SIGNS AND SYMPTOMS OF EXPOSURE: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SYNERGISTIC EFFECTS: No data available.

ADDITIONAL INFORMATION: RTECS: Not available

SECTION 12: ECOLOGICAL INFORMATION

NO DATA AVAILABLE ON: Toxicity, Persistence and degradability, bioaccumulative potential, mobility in soil, PBT and vPvB assessment, Other adverse effects.

SECTION 13: DISPOSAL CONSIDERATIONS

PRODUCT: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

CONTAMINATED PACKAGING: Dispose of as unused product.



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SECTION 14: TRANSPORT INFORMATION

NOT DANGEROUS GOODS FOR: DOT (US), IMDG, IATA

SECTION 15: REGULATORY INFORMATION

Osha Hazards: Irritant

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards: Acute Health Hazard

Massachusetts Right to Know Components: No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right to Know Components: 2- Oxoglutaric acid: CAS – No. 328-50-7 Revision Date

New Jersey Right to Know Components: 2- Oxoglutaric acid: CAS – No. 328-50-7 Revision Date

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: OTHER INFORMATION

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. HNSI and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.