

MATERIAL SAFETY DATA SHEET

SECTION 1 IDENTIFICATION

Manufacturers Name & Address: New Decade Investments (Pty) Ltd trading as DUROTEC, 16c
Lower Valley Road, Port Elizabeth, South Africa

Phone: +27 (0) 41 585 5578

Product Name: PENTANEX 2.7 (Solution 1 – Solution 2 – Product 3)

Product Code: 10700 (5 Liter solution 1 - 200 ml Solution 2 – 200g Product 3)

Product Type/General Information: Sterilant - Disinfectant

Chemical Name: (active ingredient) glutaraldehyde – stabilized with the addition of Solution 2

Hazardous Chemicals: *Glutaraldehyde*

Routes of Entry: *Inhalation X Skin/Eye X Ingestion X*

SECTION 2 Hazardous Ingredients/Identity Information

Pentanex 2.7 solution 1 contains the following hazardous ingredients at concentrations greater than 1.0%

CHEMICAL COMPONENTS: Glutaraldehyde (active ingredient) **CAS#:** 111-30-8 **%w/v:** <5%

Solution 2 contains proprietary buffer, corrosion inhibitor, defoaming agent and surfactant.

Product 3 contains Sodium Metabisulfite

Pentanex 2.7 (solution 1) does not contain any of the following hazardous ingredients listed as carcinogens or potential carcinogens by the National Toxicology Program (NTP), International Agency on Cancer (IARC) or OSHA, and present at a concentration greater than 0.1%:

CHEMICAL COMPONENTS: None

CAS#: n/a

%w/v: n/a

SECTION 3: Hazards Identification:

Eye effects:

Solution contact may cause damage, including severe corneal injury, which could permanently impair vision if prompt first-aid and medical treatment are not obtained. Vapours may cause stinging sensation in the eye with excess tear production, blinking, and redness of the conjunctiva.

Health effects – skin:

Not skin irritant. Avoid contact on existing dermatitis. May also cause skin to turn a harmless yellow or brown colour.

Health effects – ingestion: Ingestion for solution containing 2% glutaraldehyde or higher:

May cause irritation and possibly chemical burns of the mouth, throat, stomach and oesophagus. May produce discomfort in the mouth, throat, chest and abdomen, nausea, vomiting, diarrhoea, dizziness, faintness drowsiness, thirst and weakness.

Health effects – inhalation:

Vapour is irritating to the respiratory tract. May also aggravate pre-existing asthma and pulmonary disease.

SECTION 4 First Aid Measures

Ingestion:

DO NOT INDUCE VOMITING. Drink large quantities of water and call a physician immediately.

NOTE TO PHYSICIAN: Probable mucosal damage from oral exposure may contraindicate the use of gastric pump.

Eyes:

Immediately flush eyes with water and continue washing for at least 15 minutes. Obtain medical attention immediately, and follow up with an ophthalmologist.

Skin:

Remove contaminated clothing and flush skin with soap and water for a minimum of 15 minutes. If irritation persists, seek medical attention. Wash or discard contaminated clothing.

Inhalation:

Remove to fresh air. Give artificial respiration if not breathing. If breathing is difficult, qualified personnel may give oxygen. If irritation persists, seek medical help.

Medical Conditions Generally Aggravated by Overexposure: See above

SECTION 5 Fire Fighting Measures

Flash Point (Test Method):

None (Tag Closed Cup ASTM D 56)

Special Fire Fighting Procedures:

Self-Contained Breathing Apparatus (SCBA) and protective clothing should be worn when fighting chemical fires.

Unusual Fire and Explosion Hazards:

None known

Extinguishing Media:

Carbon dioxide, foam, dry chemical.

SECTION 6 Accidental Release Measures

Steps to be Taken if Material is Released or Spilled:

Wear suitable protective equipment, including nitrile (not PVC) gloves. For small spills of 5litres or less, gather up a bucket, household ammonia, and a sponge or mop. Wipe or mop up resulting spill area a final wipe or mop with fresh water. Re-rinse all equipment, and allow spill area to dry.

For large spills of more than 51 litres, remove people from immediate spill area, and isolate until cleaned up. Add approximately 46 grams of sodium bisulfite powder per liter of PENTANEX 2.7 spilled (aqueous sodium hydroxide and ammonium will also neutralize glutaraldehyde). With a sponge, mix neutralizing chemical into spill, and allow 5 minutes for deactivation to occur. Discard resulting mixture according to your facility's waste disposal guidelines. Mop spill area with fresh water. Rinse out all equipment (bucket, mop, and towel) with large amount of water. If paper towels were used, dispose of in a tightly closed trash bag. Let spill area dry, and if possible increase ventilation. Once glutaraldehyde order is below allowable levels (TLV), the area may be release from isolation.

SECTION 7 Precautions For Safe Handling and Use

Precautions to be taken in Handling and Storing:

Pentanex 2,7 should be stored in its original sealed container at room temperature (15°C to 25°C). Keep all containers not in use closed.

Precautionary labelling:

Avoid contact with eyes, prolonged and repeated contact with skin, and contamination with food.

SECTION 8 Exposure control

Occupational exposure limits:

OSHA PEL:0.2 ppm¹

Engineering control measures: Ventilation:

Pentanex 2,7 should be used in closed containers with tight fitting lids. The working area should be large enough with ventilation necessary to keep the level of atmospheric glutaraldehyde below the Threshold Limit Value (TLV). If the solution vapours are irritating to eyes and nose, the TLV is probably being exceeded, and additional ventilation may be necessary.

Personal protection – respiratory:

None required if glutaraldehyde vapour levels are below the TLV. Otherwise use respirator with organic cartridge filters.

Personal protection – eye:

Safety glasses, goggles or face shield recommended when working with Pentanex 2,7. An eyewash should be available for emergency situations. **Medical attention should be sought after any contact between Pentanex 2,7 and eyes.**

Personal protection – skin:

Nitrile gloves should be worn when working with Pentanex 2,7. Rubber boots may be needed to contain large spills.

¹The OSHA Permissible Exposure Level (PEL) for glutaraldehyde was invalidated in 1992 by court order. However, the PEL may remain valid in some OSHA approved state plans, and also can be enforced by federal OSHA under the General Duty Clause.

SECTION 9 Physical and Chemical Properties of the solution

Appearance:	A clear liquid with typical aldehyde odour
Odour:	Aldehyde odour
Odour threshold:	0.04ppm detectable (ACGIH)
pH:	Between 3.4 and 5 before addition of stabilizing solution(Pentanex 2.7-solution 2) Between 7.5 and 8.5 after addition of stabilizing solution (Pentanex 2.7-solution 2)
Boiling point:	100°C
Melting point:	N/a
Flash point:	N/a
Vapour pressure:	0.20 mmHg AT 20°C
Vapour Density:	1.1 (air =1)
Specific Gravity:	1.030
Solubility:	Complete in water
Freezing point:	0°C/32°F (Same as Water)

SECTION 10. Stability and Reactivity

Incompatible materials:

Strong acids. Strong bases. Strong oxidizing agents.

Conditions and materials to avoid:

Enzyme cleaners, Ammonia, Amine containing products.

Stability:

Unstable ___ Stable **X**. May discolour on exposure to air

Hazardous Polymerisation:

May Occur ___ Will Not Occur **X** at temperature between -4°C and +40°C
(Avoid temperatures higher than 25°C)

Hazardous Decomposition Products:

Thermal decomposition may produce toxic oxides of carbon.

SECTION 11. Toxicological Information

Toxicity Data: ihl-rat LC50: 480mg/m³/4H; orl-rat LD50: 134mg/kg

Effects of Overexposure:

Acute oral toxicity; - Toxic at 10% active gluteraldehyde, non toxic at less than 0.5% active gluteraldehyde.

Acute toxicity dermal; - none

Acute toxicity inhalation- none

Primary Route(s) of Entry: Inhalation, ingestion or skin contact.

SECTION 12 Ecological Considerations

Biodegradability:

All the ingredients of this product are biodegradable.

Resulting broken down elements of the product is Carbon dioxide and water.

SECTION 13 Disposal considerations

Disposal methods:

Once the treatment solution must be discarded, precautions must be taken to avoid the release of glutaraldehyde in the sewerage system. Pentanex 2.7 – Product 3 – must be dispersed into the treatment solution. The level of glutaraldehyde will drop to less than 2ppm within 5 minutes at room temperature. The treated solution can then be discharged to a sewerage system.

Disposal of packaging:

Empty Containers can be rinsed with a solution containing Pentanex 2.7 – Product 3 and stored until sent for recycling or disposal.

SECTION 14 Transportation

Proper Shipping Name:	<5% Glutaraldehyde Aqueous Solution
DOT (ground):	Not regulated
IATA (air):	Not restricted
IMO (ocean):	Not regulated
Hazard Class:	None
Labels:	None needed
ID#:	None
Special Instructions:	None
Reportable Quantity:	None

SECTION 15 Regulatory Information

South Africa compulsory Act 29 for disinfectants / detergents registered. Compulsory Disinfectants Registration #: Act29GNR/244678/110/442

SECTION 16 Other Information

Contains: water, surfactants, biocide, fragrance, degreaser and pH buffering agents.

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