



PRODUCT NAME: SANI-99™

(HAND AND SURFACE DISINFECTANT)

MATERIAL SAFETY DATA SHEET

Latest Revision: 29 July 2020

Note: This MSDS sheet refers to the mass format handling of the raw product, and does not reflect or refer to the specifications insofar as dosage is concerned, e.g. 6g Sani-99™ raw product diluted in 1lt water, which has no known safety threats in its diluted form.

Certified: EN 1276, EN 13697, BS.EN 1040-2005

Compliant: SANS 51276. SANS 513697.

Sani-99™ is:

Non-Combustible

Non-Flammable

Non-Corrosive

1. PRODUCT AND COMPANY IDENTIFICATION:

1.1 Trade / Commercial Names: Sani-99™
Chemical Name: Sani-99™ Anhydrous Powder
UN No: 1505
ERG No: 154
Hazchem Code: 1we
EAC: 1

1.2 Relevant uses of the substance or mixture and uses advised against.

Relevant uses: A surface and hand disinfectant for industrial and general household sectors.

Uses advised against: Not tested in its diluted form on fabrics, leather, cracked skin. Broad-based applications are acceptable, provided that the information on this MSDS is followed.

1.3 Material Safety Data Sheet supplier details:

- **Manufacturer:** Scientific Sanitation Solutions (Pty) Ltd
Unit 7, 67 Regency Drive, Route 21 Corporate Park, Irene, Pretoria, 0178, South Africa.
victor@scisan.co.za
- **Supplier:** Scientific Sanitation Solutions (Pty) Ltd
+2712 111 1313
www.scisan.co.za

1.4 Emergency Numbers:

021 931 6129 – Tygerberg
021 689 5227 – Red Cross
080 033 3444 - KZN
082 491 0160 - Bloemfontein

2. COMPOSITION:

- 2.1 DISINFECTANT:** Proprietary blend of various inorganic persulfate salts and oxidants.
- 2.2 COMPOSITION COMMENTS:** The proprietary blend of various inorganic persulfate salts and oxidants, in their pure bulk form, meet the OSHA definition of hazardous. Any hazards associated with this finished product are listed in Section 3 of this MSDS.

3. HAZARDS IDENTIFICATION:

3.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

May cause major eye irritation
May cause major respiratory irritation.
Acute toxicity if ingested.
Acute toxicity to aquatic life.

3.2 LABEL ELEMENTS

Hazard element(s)	
H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage
H335	May cause respiratory irritation.

H401	Toxic to aquatic life.
Precautionary statement(s)	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dusts or mists.
P273	Avoid release to the environment.
P280	Wear protective gloves.
P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P302 + P352	IF ON SKIN: Wash with plenty of water
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

3.3 OTHER HAZARDS

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. When applied in high concentrations on fabrics and other materials, bleaching may occur.

4. FIRST AID MEASURES

- 4.1 SKIN CONTACT:** Remove & isolate contaminated clothing and shoes. For minor skin contact, avoid spreading material on unaffected areas. Flush affected area with water for at least 5 minutes.
- 4.2 EYE CONTACT:** Flush eyes with water for 10 minutes. Hold eyelids open while washing. Remove contact lenses, if present and easy to do. Consult a physician if burning sensation persists.
- 4.3 INGESTION:** Do not induce vomiting. Rinse mouth with water. Seek medical attention. Never give anything by mouth to an unconscious person.
- 4.4 INHALATION:** Move person to fresh air. If not breathing give artificial respiration. Do not use mouth-to-mouth, if person has inhaled or ingested the substance. Induce artificial respiration with the aid of a pocket mask with a one-way valve. If breathing of victim is difficult, administer oxygen. Effects of exposure may be delayed.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

- Small Fires: Dry chemical, CO₂, water spray, dry sand.
 Large Fires: Dry chemical, CO₂, alcohol-resistant foam or water spray.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Sulfur oxides, Potassium oxides, Magnesium oxide, Sodium oxides.
Not combustible.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information**In case of large/bulk fires.**

- Move containers from fire area if you can do it without risk.
- Dike fire control water for later disposal: do not scatter the material.
- Fire involving Tanks or Bulk Containers: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Do not get water inside containers. ALWAYS stay away from the ends of tanks.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Isolate spill or leak areas immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate enclosed areas.
- Wear positive pressure self-contained breathing apparatus (SCBA)
- Wear chemical protective clothing.
- Structural firefighter's protective clothing is recommended for fire situations ONLY; it is not effective in spill situations.
- If ROAD OR RAIL TANKER is involved in a fire, ISOLATE for 800 meters (1/2 Mile) in all directions;
- Also, consider initial evacuation for 800 meters (1/2 Mile) in all directions.

6. ACCIDENTAL RELEASE MEASURES

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| 6.1 General Information: | Isolate defective containers immediately, if possible and safe to do.
Keep away from heat. Protect from moisture. |
| 6.2 Personal precautionary measures: | Wear personal protective equipment; see section 8
Keep unprotected persons at a distance.
Keep unauthorized persons away.
Avoid breathing vapors, mist or gas.
Ensure adequate ventilation. |
| 6.3 Environmental precautions | Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Discharge into the environment must be avoided. |
| 6.4 Procedure for cleaning/absorption: | Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
Keep containers open: do not seal hermetically
Avoid contact with incompatible substances. See section 10.
Rinse away any leftover residue with plenty of water. |
| 6.5 Additional information: | Never return spilled product into its original container for re-use. (Risk of decomposition). |

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Handling:

7.2 Directions for safe handling: Avoid contact with impurities, decomposition catalysts, Incompatible substances. See section 10
Wear personal protective equipment. See section 8
Avoid contact with the eyes, skin and clothing.
Remove contaminated or saturated clothing.
Avoid production of dust.
If dust occurs: wear dust mask and eye protection.

7.3 Additional guidelines: Provide for installation of emergency shower and eye bath.
Production of safety guides and operating instructions.
(Relating to the workplace)

7.4 Directions on fire and explosion safety: Avoid sun rays, heat and heat effect.
Keep away from combustible material.
Product itself is not combustible.

7.5 Storage: Store in cool and dry place. Protect from sources of heat. Ensure adequate ventilation.

7.6 Requirement for storage rooms: Cool, dry, clean, lockable.

7.7 Requirements for containers: Use only suitable materials for transportation, storage and handling.

7.8 Suitable materials are: Polyvinyl chloride (PVC)
Polyethylene
Polypropylene
Glass
Ceramics
Triple foil packaging

In bulk supply, always close container tightly after removal of product.
Do not keep the container sealed.
Store in a cool and dry place.

7.9 Directions on storing materials together: Do not store together with: metallic, salts, alkalis, reducing agents.
(Risk of decomposition)
Combustible substances (danger of fire)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Occupational Exposure Limits: No Exposure Limits Established.

- 8.2 Controls:** The control measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure.
The best protection is to enclose operations and / or provide local exhaust ventilation at the site of chemical release. Use a non-sparking, grounded ventilation system separate from other exhaust ventilation systems. Exhaust directly to the outside.
Supply sufficient replacement air to make up for air removed.
Have a safety shower/eye wash fountain readily available in the immediate work area.
- 8.3 Personal Protection:** Personal protective equipment.
- 8.4 Measures for general protection and hygiene:** Avoid raw product contact with skin and eyes.
If there is the possibility of skin/eye contact the indicated hand/eye/body protection should be used.
The workplace related airborne concentrations have to be below the indicated exposure limits.
If the limits at the workplace are exceeded and/or larger amounts are released (leakage, spillage, dust) the indicated respiratory protection should be used.
No eating, drinking, smoking or snuffing tobacco at work.
Wash face and/or hands before break and end of work.
Preventive skin protection recommended.
- 8.5 Respiratory protective equipment:** If dust occurs: wear dust mask.
If necessary, wear nose and mouth mask with P2 particle filter.
When blended with water, none needed.
- 8.6 Hand protection** Wear protective gloves made of the following materials: PVC, rubber.
When blended with water, none needed.
- 8.7 Eye Protection:** If dust occurs, wear basket shaped glasses.
When blended with water, none needed.
- 8.8 Body protection:** Wear suitable protective clothing
Avoid contaminating clothes with product.
Remove contaminated or saturated clothing Wash contaminated clothing immediately with water.

9. PHYSICAL & CHEMICAL PROPERTIES

- Physical appearance:** White crystalline solid, odorless.
- Alteration in conditions:** not applicable
- Melting point/range:** ca.180 °C at 1.013 hPa; Decomposes before melting.
- Boiling point/range:** not applicable

Flashpoint:	not applicable
Inflammability:	not applicable
Ignition temperature:	not applicable
Spontaneous ignition:	not applicable
<u>Explosion limits</u>	
Dust explosion:	not applicable
Vapor pressure:	no applicable
Bulk density:	1100 – 1680 kg/m ³
Active oxygen content:	approx. 2.0%
Solubility:	approx. 250g/l (20°C) approx. 330g/l (70°C)
Medium:	water
pH value:	approx. 5-7 (30g/l)
Additional information:	oxidizing (According to EC directive 67/548/EEC)

10. STABILITY AND REACTIVITY

- 10.1 Conditions to Avoid:** Product is an oxidizing agent.
Product is stable.
- Risk of decomposition when exposed to heat.
Exothermic decomposition at 70°C.
Risk of decomposition when exposed to water or water vapor.
- Product itself is not combustible.
- 10.2 Condition to avoid:** Avoid direct sunrays, excessive heat, heat effect and humidity.
- 10.3 Incompatible Materials:** Substances to be avoided.
Impurities, metal ions, metallic salts.
Alkalis, reducing agents – reducing agents (risk of decomposition).
Combustible substances (danger of fire).
- Dangerous products of decomposition.
Under conditions of thermal decomposition.
Sulphur dioxide (low) and oxygen.

11. TOXICOLOGICAL INFORMATION

- 11.1 Acute toxicity:** LD/LC 50 values relevant for classification
- 11.2 Acute oral toxicity:** LD 50 = 1204 mg/kg, rat, literature
- 11.3 Acute dermal toxicity:** LD 50 > 11000 mg/kg, rabbit, literature
- 11.4 Acute inhalation toxicity:** LC 50 > 5 mg/1/4h, rat, literature
- 11.5 Primary irritative effect:** Primary irritative effect to skin: corrosive, rabbit, OECD 404
Primary irritative effect to the eyes: highly irritative, rabbit, literature
- 11.6 Sensitization:** Maximization test, guinea pig, not sensitizing, OECD 406
- 11.7 Genotoxicity:** Ames test, salmonella typhimurium, negative, literature
- 11.8 Sub-acute toxicity:** Rat, inhalative (dust), duration: 2 weeks
No effect level (NOEL): 0.043mg/l, target organ
Eye (irritating effect)
Body weight development negative
- 11.9 Experiences with human beings:** Irritation and occasion caustic effects to the skin and mucous membranes (eyes, respiratory channels, in the stomach/intestinal tracts after swallowing) are to be expected from local raw material contact. Allergic reactions are possible.

12. ECOLOGICAL INFORMATION

- 12.1 Data on elimination
(Persistence and degradability):** Medium: water/soil
A biotic degradation on account of hydrolysis, reduction.
- 12.2 Behavior in environmental fields:** Under ambient condition quick hydrolysis, decomposition or reduction occurs.
Hydrolyzed following 5h to 50% (23°C,pH7)
The following substances are formed: oxygen and sulphate.
- Mobility and bioaccumulation potential
Bioaccumulation: none
Hydrolysis, decomposition, reduction
The following substances are formed: oxygen, and sulphate.
- 12.3 Eco-toxic effects:** Aquatic toxicity
Fish toxicity:
LC50 (96h) > 32 mg/l <56 mg/l, Brachydanio rerio, OECD 203
Toxicity to crustaceans:
Acute water flea toxicity:
EC 50 (24h) = 5.3 mg/l. Daphnia magna, OECD 202

Acute water flea toxicity:
NOEC (24h) = 1.8 mg/l, Daphnia magna OECD 202

Behavior in water treatment plants:
Hydrolysis, decomposition, reduction
The following substances are formed: oxygen and sulphate

12.4 Bacteria toxicity: Pseudomonas putida, EC 10 (18h) = 108 mg/l
DEV, DIN 38412, T, 8

12.5 Further ecological information: Chemical oxygen demand:
COD value: not applicable (inorganic product)

Biochemical oxygen demand:
BOD5 value: not applicable (inorganic product)

AOX information:
The product does not contain any organically bonded halogen

13. DISPOSAL CONSIDERATION

13.1 Disposal Method Product: This product must be disposed of as an inorganic salt.
Chemical in accordance with the regulations issued by the appropriate local authorities.

Recommendation

Add product to water to ensure decomposition.
Return residue and solutions that cannot be re-used to a recognized waste disposal company.

If necessary contact the relevant authorities.

13.2 Disposal Method Packaging: Recommendation
Do not re-use empty sachets and dispose of in accordance with the regulations issued by the appropriate local authorities.

Take decontaminated packaging to local recycling center.

Recommended cleaning agent: WATER.

14. TRANSPORT INFORMATION

Hazchem Code: 1we
EAC 1
IMDG-Shipping Name Oxidizing Substances/Agents
IMDG Code 1505

Marine Pollutant Class	Yes
Packaging Group:	5.1
Subsidiary Risks	II/III
	None

15. REGULATORY INFORMATION

15.1	EEC Hazard Classification:	5.1
15.2	Risk Phrases:	R 8-22-34

Contact with combustible material may cause fire.

15.3	Safety Phrases:	S-Phrases
		S 26-36/37/39-45

In case of raw product getting into eyes, rinse immediately with plenty of water and seek medical advice.
Wear suitable protective clothing, gloves and eye/face protection when handling the raw product.
In case of accident or if you feel unwell, seek medical advice immediately. (Show the label where possible)

If substance is freely available (public product), the following additional Safety advice is required:
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15.4	National Legislation:	Keep locked up and out of reach of small children
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16. OTHER INFORMATION

Further information on properties and safe handling of product can be obtained from the Owners: Scientific Sanitation Solutions (Pty) Ltd.

www.scisan.co.za

+2712 111 1313

DISCLAIMER: This information is based on our current knowledge and is intended to describe the product for the purposes of health and safety requirements only. It should not, therefore, in itself be construed as a guarantee of any specific quality relating to the product, in raw or diluted form. The user must satisfy himself/herself that the product is suitable for his/her purpose. Product is not tested on fabrics, leather, dyed hair, damaged skin and animals, in its diluted form of 6g =1lt. When SANI-99™ raw product is *on-selled* by the buyer who has been invoiced by the manufacturer, the manufacturer does not take responsibility for the incorrect use of the product by the end-user. It is the responsibility of the invoiced person/on-seller, to give proper induction to the end-user on proper use, dosage, correct dilutions and risks, when using the product in raw, or diluted format.