

**SAFETY DATA SHEET****SAN G - Surface Sanitizer**

SABS 1853 Permit no 6981/10346

Disinfectants, detergent disinfectants and antiseptics for use in food industry.

NRCS Registered Disinfectant - Act 29 GNR529/237687/040/471

NSF Registered Product - 158163 - Category D1



SAETY DATA SHEET (SDS) according to ISO / SANS 11014 : 2009 / 2010,

SECTION 1. identification - Chemical Product

Trade Name	SAN G
Product Code	BULK / SAN G / F95 55210
Chemical Technical Name	Blend of glutaraldehyde, QAC, and surfactant.
Proper Shipping Name	Not Regulated
UN Number	Not Regulated
CAS Number	Mixture
GHS Product Identifier	Glutaral
Chemical Family	Biocide
Recommended use of the Chemical	Broad spectrum disinfectant for use in the Food and Agricultuaral industry
Restrictions of the Chemical	Not for use in personal hygiene nor by untrained persons

SECTION 2. Hazards Identification**GHS Classification od the substance:** irritating to skin and eyes, and harmful to aquatic life.

Hazard Class		
Hazard Type	Hazard Category	GHS Hazard Statement
Acute toxicity oral	Category 4	H302 Harmful if swallowed
Acute toxicity dermal	Category 4	H315 May be harmful in contact with skin
Acute toxicity inhalation	Category 4 Vapour	H332 Harmful if inhaled
Respiratory sensitizer	Category 1B	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin corrosion/irritation	Category 2	H315 Causes skin irritation
Eye damage/irritation	Category 2	H319 Causes serious eye irritation
Aquatic Acute	Acute 2	H401 Very toxic to aquatic life
Aquatic Chronic	Chronic 1	H410 Very toxic to aquatic life with long lasting effects
Metal Corrosion	Category 1B	May be corrosive to metals.

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The most important adverse effects to know in emergency are -

GHS label elements, including precautionary Statements:



GHS07

GHS09

GHS 07 Skin & eye irritation health hazard - exclamation mark

GHS 09 Aquatic toxicity — dead tree and fish

Signal word: Warning

Hazard Statements —

H302 Harmful if swallowed

H312 Harmful in contact with skin

H332 Harmful if inhaled

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H315 Causes skin irritation

H319 Causes serious eye irritation

H401 Toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects

Precautionary statements:

P102 Keep out of reach of children

P280 Wear protective gloves

P264 Wash hands thoroughly after handling

P270 Do not eat, drink or smoke when using / handling this product

P280 Wear eye / face protection

P261 + P271 avoid breathing mist, wear eye & face protection and use in well ventilated area

P273 Avoid release to the environment

Response:

P302 + P352 If on SKIN wash off with plenty of water

P332 + P313 If skin irritation continues, get medical attention

P305 + P351 + P338 If in EYES rinse cautiously with water for several minutes. remove contact lenses if safe and easy to do, continue rinsing and get medical attention

P337 + P313 If eye irritation persists. get medical attention

P304 & P340 If INHALED and breathing is difficult — remove person to fresh air and get medical attention

P301 If SWALLOWED and feel unwell, get medical attention

Refer Sections 5, 6 and 8

Storage:

P391 Collect spillage

P501 Dispose of containers in accordance with regulations

Refer Section 7

Special Labelling requirements — refer Section 14 for transport labels

**SAFETY DATA SHEET****SAN G - Surface Sanitizer****SECTION 3. Composition / Information on ingredients**

Chemical Identity	Mixture of water based components
Other means of identity	Clear Blue Liquid
Common Name. synonyms. etc.	Blend of glutaraldehyde, quarternary ammonium compounds, surfactants and wetting agents.

Ingredient name	UN Number	CAS number	%	Classification EC 127212008
Glutaraldehyde (50% solution)	2922	001111-30-8	1-10	20.3-856-5
Benzyl -C8-18 alkyl dimethyl chloride 80%	2920	62449-41-2	1-10	270-325-2
Di-n-decydimethylammonium chloride (80%)	2920	7173-51-5	1-5	23C-525-2
Nynol Phenol 9 - Surfactant	3082	127087-87-0	1-5	Polymer

SECTION 4. First Aid Measures**Most important symptoms/effects, and necessary measures:**

Product in eye — can cause serious eye damage / irritation. Flush eyes with water for 15 mins whilst holding eyelids open and remove any contact lens if safe to do so. Repeat rinsing if irritation persists and get medical attention. NB care must be taken to avoid contaminated rinsing's running back into the eyes.

Product on skin — can cause skin irritation. Remove any contaminated clothing and wash affected area with running water for at least 20 mins. Wash contaminated clothing and shoes thoroughly before reuse.

Product ingested — do not induce vomiting, get victim to rinse mouth with water and then give at least 250 — 300ml water / milk to drink. If vomiting occurs, wipe mouth and give more water + get medical attention. NB if the victim is losing consciousness for any reason do NOT try to give anything by mouth!

Product inhaled or aspirated — may cause respiratory irritation. Move patient to fresh air and if any breathing difficulty persists get immediate medical advice.

SECTION 5. Fire-Fighting Measures.

Product is not flammable but toxic fumes could be released from breakdown if the product is involved in a large fire.

Suitable extinguishing media: dry chemical. CO₂, water spray, fog or foam

Unsuitable extinguishing material: not known

Small fires — immediate response action should quickly put out the fire.

Large fires — evacuate area, move containers out and away from fire if can be done safely without increasing risk. Isolate and contain fire as much as possible, and dike or use inert material for berm to contain any spilled materials and run-off water for later disposal. NB need to prevent run-off containing product from contaminating any water source as toxic to aquatic life.

Special hazards - Use water to keep containers cool to prevent pressure build up and possible explosion which could be caused through pressure build up

Protective clothing - Wear full protective clothing and self-contained, positive breathing apparatus for large fires — get professional emergency response where very large.

Refer to the ERG - Emergency Response Guide 2016 and SANS 10232 - 3

NB: prompt actions can prevent spread of small fires but Large fires involving chemicals require professional Emergency Response.

**SAFETY DATA SHEET****SAN G - Surface Sanitizer****SECTION 6. Accidental Release Measures.**

Personal precautions - Wear personal protection before attempting to respond and contain or cleanup spills. Refer section 8

Environmental precautions - Do not dispose large volumes of any chemical into watercourses or sewers, as components are environmental hazards.

Clean-up methods

Small Spills: wear protective clothing and gloves to contain and recover any spills. Wash contaminated area with plenty of water to remove any residues. Spill may be neutralized with soda ash to pH between 6 and 9; Caution in case of any fumes generated.

Large Spills: stop source of leaks if possible. and prevent entry into waterways. sewers or basements. Seal off area and contain by diking with soil or other inert material. Recover as much as possible and then apply an inert material such as sawdust or commercial absorbent to absorb the remainder. Collect in suitable containers and then wash and scrub away the residue.

GHS Disposal Precautionary Statement - P501 dispose of spilt product, waste and containers in accordance with SA National and / or regional Regulations refer National Environmental Management Waste Act - NEM: WA, it's Regulations and local by-laws. This informs permitted Waste Facilities and Service providers see the South African Waste Information Centre sawic.environment.gov.za

SECTION 7. Handling and Storage

Precautions for safe handling — wear appropriate personal protective equipment — see Section 8.

Eating, drinking and smoking shall be prohibited in areas where chemicals are handled, stored or processed. Workers must wash hands before eating, drinking or smoking to remove any chemicals that could be ingested or inhaled and should remove contaminated clothing and protective equipment before entering eating areas.

Storage requirements: Store in a cool place out of direct sun and avoid sources of potential contamination.

Handling precautions: Keep drums tightly closed when not in use. Avoid contact with skin, eyes or clothing. Avoid breathing mist. Handle as a corrosive liquid, wear rubber gloves if likely to come into skin contact.

Conditions for Safe Storage - refer SANS 10263: The Warehousing of dangerous goods, and 10263 - Part 8 The storage and handling of corrosive substances, for more specific information and relevant regulations and recognised practices for storage, warehousing and handling.

GHS Precautionary Statement P 406 store in corrosion resistant containers.

Suitable storage materials

PVC — Poly Vinyl Chloride, HDPE — High Density Polyethylene, PP — Polypropylene

Product Labels — Blue label including description, application, first aid & batch no + Transport see S 14

Product Shelf life — 24 months from date of manufacture.

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SECTION 8. Exposure controls / personal protection

Control parameters e.g occupational exposure limit values or biological limit values

Ingredient Name	%	Exposure limits - OHS Act South Africa 1993
Glutaraldehyde (50% solution)	1 - 10%	OEL short term 0.2ppm or 0.7mg/m ³
Benzyl -C8-18 alkyltrimethyl chloride 80%	1 - 10%	1000ppm ACGHI TWA (TLV 1880mg/m ³ Ethanol)
Di-n-decydimethylammonium chloride (80%)	1 - 5%	REL TWA 1900mg/m ³ - Ethanol REL TWA 1900mg/m ³ Ethanol
Nynol Phenol 9 (Surfactant)	1 - 5%	ACGIH 20ppm 72mg/m ³ TLV OSHA PEL 100ppm 360mg/m ³ TWA REL TWA 72mg/m ³ 20ppm skin A3

Engineering control measures: Local ventilation should be available if mists are produced.

Personal protection — respiratory: Unlikely route of exposure, but if mists are encountered could be irritating to the respiratory tract, use NIOSH approved respirator.

Personal protection — hand: skin irritant thus avoid contact with this chemical. Wear rubber gloves.

Personal protection — eye: eye irritant thus wear safety glasses with side shields at all times. Contact lenses should not be worn.

Personal protection — skin: skin irritant thus wear overalls, safety shoes/boots and apron.

Personal protection — ingestion: Restrict access to unauthorized persons. Wash hands after contact.

Other protection - A safety shower and eye wash facility should be nearby and ready for use.

Gloves	Eye Protection	Running Water	Dust Masks
Rubber / PVC 	Goggles / Shield 	Access 	Dust Mask Not Applicable

SECTION 9. Physical and chemical properties

Appearance	Clear Blue Liquid
Odour	Characteristic medicinal odour
Odour Threshold	Not Known
pH (of diluted product)	4.00 - 6.00 (1%)
Density	0.9 - 1.10 (1.02)
Initial boiling point / range	Not Assessed
Melting / Freezing point/ range	Not Assessed
Flash Point	>100°C
Explosive properties	Not Applicable
Flammability	Does not readily burn
Viscosity	Not Assessed
% Volatile by volume	Not Assessed but not readily volatile at ambient temperatures

**SAFETY DATA SHEET****SAN G - Surface Sanitizer****SECTION 9. Physical and chemical properties**

Water — insoluble matter content	<0.1g/l
Corrosion	No evidence of pitting, etching or discoloration
Foam Ability	>50ml
Glutaraldehyde content	>1°A. (1.25%)
Disinfectant test	6 drops x 0.17 = 1.02% (1.02%)
Working temperature	10 — 50°C
Phosphates	Absent
Hard water behavior	Sequesters, broad spectrum
Surface compatibility	No precipitation of solids or separation
Biodegradability	Glutaraldehyde is readily biodegradable

SECTION 10. Stability and Reactivity

Chemical Stability	Product is stable under normal operating and temperature conditions
Reactivity	Limited, but will react with explosively peroxide, nitrogen dioxide and performic acid giving off formaldehyde gas.
Conditions to Avoid	Direct sunlight, poor ventilation and high temperatures
Substances to Avoid	Peroxides. nitrogen dioxide & performic acid — see above
Incompatible materials	Proteins, ammonia and amines — will neutralize efficacy of product
Thermal decomposition products	Carbon monoxide, formaldehyde. nitrogen oxides and hydrogen chloride
Polymerization	Does not polymerise.

SECTION 11. Toxicological Information

Acute toxicity	Result	Species	Dose/Exposure	Caution
Oral	Acute Cat 5	ATE Mix Calculated	LD50 2729.82 mg/kg	May be harmful if
Dermal	Acute Cat 5	ATE Mix Calculated	LD50 >5000 mg/kg	Harmful in contact with
Inhalation	Acute Cat 4 V	ATE Mix Calculated	LD50 11.89 mg/l	Avoid inhaling mists

Skin Corrosion / Irritation	Category 3 Irritant
Eye Damage / Irritation	Category 1 Severe
Respiratory Sensitizer	Category 1B
Germ Cell Mutagenicity	No Evidence — Nynol Phenol Cat 2 NAOEL 13-19mg/kg
Carcinogenicity	No evidence Nynol Phenol is suspected Human A2 and Confirmed Animal A3 —
Reproductive Toxicity	Suspect as above
STOT Specific Target Organ Toxicity	No evidence - Glutaraldehyde is a Category 1 Respiratory. Nynol phenol
Single Exposure	Cat 2 250mg/kg/d 90 days
Aspiration Hazard	Harmful with possible respiratory irritation.

**SAFETY DATA SHEET****SAN G - Surface Sanitizer****SECTION 12. Ecological Information****GHS — EU Group Classification, and C & L Inventory:**

Hazardous to Aquatic Environment Aquatic Toxicity	Fish LC. (96hr) — 12.01ml/L (calculated ATE Mix) Daphnia LC. (48hr) — 0.8546mg/l (calculated ATE Mix) Algae EC. (72hr) — 0.6977mg/l (calculated ATE Mix)
Acute (Short Term)	Category 2
Chronic (Long Term)	Category 1
Hazardous to the ozone layer	
Biodegradability	Glutaraldehyde is readily Biodegradable >90% 10d Benzyl -C8-18 alkyldimethyl chloride 80% >70% Readily
Bio-accumulation	Glutaraldehyde BCF <100 Log Pow <3 Log Kow -0.36 Benzyl -C8-18 alkyldimethyl chloride 80% Log Kow 2.88
Mobility	Glutaraldehyde KOC 50-150 Par Coefficient 120-50 KOC Nynol Phenol KOC 6.1

SECTION 13. Disposal considerations**Disposal methods**

Disposal must be made in accordance with the applicable National and Regional Government regulations at approved and permitted chemical disposal sites — refer to the SA National Environmental Management Waste Act - NEM: WA, it's Regulations and local by-laws. This informs permitted Waste Facilities and Service providers see the South African Waste Information Centre sawic.environment.gov.za

Disposal of packaging

Packaging's and containers, even those that have been emptied, will retain product residue and vapours, handle empty containers as if they were full. Remove all possible traces of product and wash prior to disposal of packaging and containers. Dispose in compliance with Regulations — see above and Industry Best Practice
Always observe and comply with hazard warnings

SECTION 14. Transport information

UN Number	Not Regulated
UN proper shipping name — PSN	Not Regulated
Transport Class	
Packing group	
Environmental hazards	Harmful to aquatic life
IMDG	UN Certified drum Not a Marine pollutant - IMDG 2.9.3 below threshold Refer IMDG Code volume 2 Amendment 37-14
IATA	Refer IATA 2016 57. edition
Emergency Response Guide — ERG 2016	ERG 171 — Low to moderate Hazards

**SAFETY DATA SHEET****SAN G - Surface Sanitizer****SECTION 15. Regulatory information**

OHS Act - Occupational Health and Safety Act 85 of 1993: requires site Risk Assessment and monitoring to inform personnel Health / Biological Monitoring. **Section 9A** requirement to provide MSDS

MHI — Major Hazards Installations Regulations - OHS Act: require site Risk Assessment to ascertain potential impacts outside of the site and potential impacts on the public or neighbours. Copy to be lodged with the Dept Labour, and local Emergency Services.

Pressure Equipment Regulations - OHS Act: encompasses containers and service equipment

NEMA — National Environmental Management Act 107 of 1998: Duty of Care and Producer Responsibility for products and packaging on a Life Cycle basis. Environmental Impact Assessment Regulations for new installations or proposed increase in capacity over 25%

NEM:WA — National Environmental Waste Act 59 of 2008: Extended Producer Responsibility, requirements and regulations for waste management, classification and disposal

NEM:AQA — National Environmental Air Quality Act 39 of 2004: AQA Licenses and Emissions

NRCS Registered disinfectant - Act 29GNR529/237687/040/471

SABS Registered SANS 1853 Disinfectants, detergent — disinfectants and antiseptics for use in the Food Industry

NSF Registered Product — 158163 — Category D1

National Department of Health — Hazardous Substances Act 15 of 1973

EU Regulation EC 1272/2008 (EU GHS /CLP) — Safety Data Sheets and Labelling

SECTION 16. Other Information

ECHA — European Chemical Agency Website. Chemical information. C&L Inventory. Chemicals of Very High Concern (SVHCs) and Chemicals for Community Rolling Action Plan (CoRAP)

ERG 2016 Transport Canada and US Dept Transportation PHMSA - Pipeline and Hazardous Materials Safety Administration

Other relevant information including information on preparation and revision of the SDS —

ISO 11014:2009 Safety Data Sheets for Chemical Products — content and order of sections adopted as SANS 11014:2010

UN Recommendations for Transport of Dangerous Goods Model Regulations commonly known as the **TDG "Orange Books"** 18m revision 2013 currently in effect. 19th revision published June 2015

UN Globally Harmonized System of Classification and Labelling of Chemicals — GHS commonly known as the **GHS - "Purple Book"** 5. revision 2013 in effect. 6th revision published July 2015

IMDG — International Maritime Dangerous Goods Code. 2014 edition. amendment 37-14

IATA Technical Regulations 56. edition. January 2015

EXCLUSION OF LIABILITY

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication, however no guarantee is made to its accuracy. The information given is prepared only as guidance for safe handling, use, processing, storage, transportation, disposal and release and should not be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material when used in combination with any other materials or in any process, unless specified in this Safety Data Sheet.

**SAFETY DATA SHEET****SAN G - Surface Sanitizer**

**SANS 1853-Disinfectants, Detergent-Disinfectants
and Antiseptics for use in the food industry,
Permit No: H81/10346**

SAN G

NRCS Registration - Act 29 GNR 529/237687/040/471

San G is a broad spectrum, typel liquid, Glutaraldehyde, multichain QAC blended disinfectant with an 8% total actual purity. San G is suitable for use on hard surfaces within the food industry.

Product pH @ 1 % is between 4.00 - 6.00

Dilutions

Use @ 10 - 20 ml/L (1: 100 -1: 50) dilution with water depending on application. Allow a 5 min contact time followed by a cold water rinse. Use @ 1:50 for Fungi. Use diluted product within 7 days.

Do not mix with other chemicals. Only use product on a cleaned surface.

Product is more effective when used on an alkaline surface.

Microbial Efficacy

Bactericidal — Log 5 @ 1: 100 for 5 min. Escherichia coli, Staphylococcus aureus, Pseudomonas aeruginosa

Bactericidal - Log 5 - @ 1: 10 with a 5 min contact time — Listeria monocytogenes

Fungicidal - Log 4 — @ 1:10 with a 5 Min Contact time - Aspergillus brasiliensis

Sporicidal - Log 4 - @ 1: 10 with a 5 min Contact time - Bacillus subtilis spores

NSF Registered

Registered as a hard surface disinfectant in the food processing industry, requiring a rinse. Category code D1

Not registered for use in the United States of America

GHS Identification:

Warning

**PPE**

Gloves, Goggles, Personal Protective Clothing, Apron, Gumboots

**First Aid**

SKIN	EYES	INHALATION	ORAL
Wash off with plenty of water for 15 minutes	Rinse cautiously with water for several minutes, remove contact lenses if safe and easy to do so, continue rinsing and get medical attention	If INHALED remove person to fresh air and keep comfortable for breathing	Do NOT induce vomiting
If skin irritation continue, get medical attention			Drink water / milk / egg white
			Consult a Doctor

AVAILABLE IN 5Lt, 25Lt, 210Ltr 1000Lt