

Safety Data Sheet

Safety Data Sheet (in compliance with Regulation (EC) 1907/2006, Regulation (EC) 1272/2008 and Regulation (EC) 453/2010)

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1. PRODUCT IDENTIFICATION

Trade Name (as labeled):	Volo™ Disinfectant/Deodorizing/Cleaning Wipes
Chemical Name/Classification:	Mixture
Product Identifier (Part/Item Number):	90100, 90101
U.N. Number:	UN3175
U.N. Dangerous Goods Classification:	4.1, PGII
Recommended Use:	Disinfectant Cleaner
Restrictions on Use:	For professional use only
Manufacturer/Supplier Name:	Sultan Healthcare
Manufacturer/Supplier Address:	411 Hackensack Avenue, 9 th Floor Hackensack, NJ
Manufacturer/Supplier Telephone Number:	1-201-871-1232 or 800-637-8582 (Product Information)
Emergency Contact Telephone Number:	800-535-5053 (INFOTRAC) 1-352-323-3500 (Outside the United States-Call Collect)
Email address:	customer.service@sultanhc.com

2. HAZARD(s) IDENTIFICATION

EU Classification (1999/45/EC as amended): Flammable, Irritant (Xi) R10, R36, R67

EU Labelling:

 Irritant	Contains Isopropanol R10 Flammable R36 Irritating to eyes. R67 Vapours may cause drowsiness and dizziness. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S51 Use only in well-ventilated areas. S35 This material and its container must be disposed of in a safe way.
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US Hazard Classification: Hazardous

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Hazardous Components	C.A.S. # EC#	IUPAC Name	Substance Classification	WT %
Isopropyl Alcohol	67-63-0 / 200-661-7	propan-2-ol	F, Xi R11, R36, R67 Flam Liq 2 (H225), Eye Irrit. 2A (H319), STOT SE 3 (H336)	41.6%
2-butoxyethanol	111-76-2 / 203-905-0	2-butoxyethanol	Xn, Xi R20/21/22, R36/28 Acute Tox 4 (H332, H312, H302), Eye Irrit. 2A (H319), Skin Irrit. 2 (H315)	<6%
Alkyl dimethyl benzyl ammonium chloride	53516-76-0 /	2-[4-(2- hydroxyphenyl)- 2-phenyl-1,3- thiazol-5- yl]acetic acid	C, N R34, R50	0.12%
N-alkyl dimethyl ethyl benzyl ammonium chloride	85409-23-0 / 287-090-7		C, N R34, R50	0.12%
Water	7732-18-5 / 231-791-2	oxidane	Not applicable	58.2%

Refer to Section 16 for the full text of the EU Classifications and R Phrases.

4. FIRST-AID MEASURES

Routes of Exposure	First Aid Instructions
Eye	Immediately flush eyes with large quantities of water for at least 15 minutes, holding the eyelids apart. Get medical attention if irritation persists.
Skin	Rinse hands with water after use. Discontinue use and get medical attention if irritation or other symptoms develop.
Inhalation	None normally needed. If symptoms develop, remove to fresh air. Get medical attention if symptoms persist.
Ingestion	If conscious, rinse mouth with water and give one glass of water to drink. Never give anything by mouth to an unconscious or convulsing person. Get medical attention if symptoms persist.
Most important symptoms of exposure	May cause eye irritation on direct contact.
Other	None known.
Note to Physicians (Treatment, Testing, and Monitoring): Treatment of overexposure should be directed at the control of symptoms and clinical conditions.	

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:	Use water, alcohol foam, carbon dioxide or dry chemical.		
Fire Fighting Procedures:	Cool fire exposed containers and structures with water.		
Specific Hazards Arising from the Chemical:	Flammable liquid. Vapors are heavier than air and may flow along surfaces to remote ignition sources and flash back.		
Precautions for Fire Fighters:	Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing.		
Recommended Protective Equipment for Fire Fighters:			
EYES/FACE	SKIN	RESPIRATORY	THERMAL
			

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, PPE and Emergency Procedures: None required.

Environmental Precautions: Prevent spill from entering sewers and water courses. Report releases as required by local and national authorities.

Methods and Materials for Containment and Clean-up: Remove all sources of ignition. Pick up wipes. Collect liquid using an inert non-combustible absorbent material and place in appropriate containers for disposal.

Recommended Personal Protective Equipment for Containment and Clean-up:			
EYES/FACE	SKIN	RESPIRATORY	THERMAL
			

7. HANDLING AND STORAGE

Precautions for Safe Handling: Avoid contact with the eyes and prolonged skin contact. Do not smoke when using. Keep away from heat, sparks, flames, hot surfaces and all other sources of ignition. Use in accordance with package instructions.

Conditions for Safe Storage: Store in original container in a dry, well ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:

Isopropyl Alcohol	United States	400 ppm TWA OSHA PEL 200 ppm TWA ACGIH TLV, 400 ppm STEL
	Germany	200 ppm TWA DFG MAK
	United Kingdom	400 ppm TWA UK OEL, 500 ppm STEL
	France	400 ppm TWA INRS VLCT
	Spain	400 ppm TWA VLA-ED, 500 ppm VAL-EC
	Italy	None Established
	European Union	None Established
2-Butoxyethanol	United States	50 ppm, skin TWA OSHA PEL 20 ppm, skin TWA ACGIH TLV,
	Germany	10 ppm, skin TWA DFG MAK, 20 ppm STEL
	United Kingdom	25 ppm TWA UK OEL, 50 ppm STEL
	France	2 ppm TWA INRS VME, 30 ppm INRS VLCT
	Spain	20 ppm TWA VLA-ED, 50 ppm VAL-EC
	Italy	20 ppm TWA, 50 ppm STEL
	European Union	20 ppm TWA EU IOEL, 50 ppm STEL
Alkyl dimethyl benzyl ammonium chloride	United States	None Established
	Germany	None Established
	United Kingdom	None Established
	France	None Established
	Spain	None Established
	Italy	None Established
	European Union	None Established
N-alkyl dimethyl ethyl benzyl ammonium chloride	United States	None Established
	Germany	None Established
	United Kingdom	None Established
	France	None Established
	Spain	None Established
	Italy	None Established
	European Union	None Established
Water	United States	None Established
	Germany	None Established
	United Kingdom	None Established
	France	None Established
	Spain	None Established
	Italy	None Established
	European Union	None Established

Biological Exposure Limits: 2-Butoxyethanol – End of shift 200 mg/g creatinine

Appropriate Engineering Controls: No special controls normally required.			
Individual Protection Measures (PPE) Specific Eye/face Protection: Avoid eye contact. Follow facility requirements. Specific Skin Protection: Wear impervious gloves such as butyl rubber for prolonged contact. Recommended glove: Butyl rubber gloves. Consult glove supplier for thickness and breakthrough times. Specific Respiratory Protection: None required under normal use conditions. Specific Thermal Hazards: Not applicable			
Recommended Personal Protective Equipment			
EYES/FACE	SKIN	RESPIRATORY	THERMAL
			
Environmental Exposure Controls: None required for normal use.			
General Hygiene Considerations and Work Practices: Avoid eye contact and prolonged skin contact. Wash hands thoroughly after use.			
Protective Measures During Repair and Maintenance of Contaminated Equipment: Not applicable for product use.			

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear liquid impregnated on a white wipe	Explosive limits:	Not applicable
Odor:	Alcohol	Vapor pressure:	Not determined
Odor threshold:	Not available	Vapor density:	Not available
pH:	5.25	Relative density:	0.916 (liquid) @ 25°C
Melting/freezing point:	Not available	Solubility:	Wipe insoluble – liquid soluble
Initial boiling point and range:	Not determined	Partition coefficient: n-octanol/water:	Not available
Flash point:	74°F / 23.3°C	Auto-ignition temperature:	None
Evaporation rate:	Not determined	Decomposition temperature:	Not available
Flammability:	Flammable	Viscosity:	Not available
Explosive Properties:	None	Oxidizing Properties:	None

10. STABILITY AND REACTIVITY

Reactivity: Will not polymerize or react dangerously.

Chemical Stability: Stable under normal use conditions.

Possibility of Hazardous Reactions: None known.

Conditions to Avoid: None known.

Incompatible materials: Avoid strong oxidizing agents.

Hazardous Decomposition Products: Thermal decomposition may produce carbon monoxide, carbon dioxide, aldehydes, ketones and organic acids.

11. TOXICOLOGICAL INFORMATION

Potential Health Effects:

Eyes: May cause eye irritation on direct contact.

Skin: May cause irritation on prolonged contact. 2-butoxyethanol may be absorbed through the skin in harmful amounts.

Ingestion: No adverse effects are expected.

Inhalation: Not applicable to product form.

Chronic Health Effects: Prolonged overexposure to 2-butoxyethanol may cause liver, kidney, blood, and lymphatic system effects.

Carcinogenicity: 2-Butoxyethanol is listed by ACGIH as a Confirmed Animal Carcinogen with Unknown Relevance to Humans. None of the other components are listed as a carcinogen by IARC, NTP, OSHA, ACGIH or the EU Substances Directive. There is inadequate evidence of carcinogenicity of isopropyl alcohol in humans and animals.

Mutagenicity: Isopropyl Alcohol: In an in-vivo study, isopropanol did not induce micronuclei in bone marrow of mice. Studies conducted in mammalian cells in-vitro, did not induce sister chromatid exchanges or gene mutations. 2-Butoxyethanol tested negative in the AMES test and in the CHO assay.

Medical Conditions Aggravated by Exposure: Employees with pre-existing skin disorders may be at increased risk from exposure.

Acute Toxicity Data:

Alkyl dimethyl benzyl ammonium chloride: No data available

Ethyl benzene ammonium chloride: No data available.

Isopropyl Alcohol: Oral rat LD50 5,045 mg/kg, Skin rabbit LD50 12,800 mg/kg

2-Butoxyethanol: LD50 Oral Rat: 1480 mg/kg, LD50 Skin Rabbit: 400 mg/kg, LC50 Inhalation Rat: 450 ppm/4 hr

Reproductive Toxicity Data: 2-Butoxyethanol: In a reproductive study, rats were given 11180 mg/kg/day in water by gavage on days 6-13 of gestation. 2-Butoxyethanol caused 20% mortality in treated dams but had no effects on the offspring. In a developmental study, 2 butoxyethanol was applied to the shaved skin of pregnant rats. No embryotoxic, fetotoxic, or teratogenic effects were detected.

Specific Target Organ Toxicity (STOT):

Single Exposure: No data available

Repeated Exposure: Isopropyl Alcohol: A 13 week inhalation study with rats found effects of narcosis at 5,000 ppm. These effects were reversible at the cessation of exposure. A 73 week chronic study found male reproductive effects at 2,500 and 5,000 ppm and liver effects at 2,500 ppm. 2-Butoxyethanol: In a 6 week study, rats were given 2-butoxyethanol at dose levels of 222, 443 and 885 mg/kg/day for 6 weeks. Changes in blood chemistry, increased spleen weight and damage to the kidneys and liver were observed.

12. ECOLOGICAL INFORMATION

Toxicity:

Isopropyl Alcohol: 96 hr LC50 Pimephales promelas (fathead minnow) 6.12 mg/L

Alkyl dimethyl benzyl ammonium chloride: No data available. This chemical is expected to be very toxic to aquatic organisms.

Ethyl benzene ammonium chloride: No data available. This chemical is expected to be very toxic to aquatic organisms.

2-butoxyethanol: 96 hr LC50 Cyprinodon variegatus (Sheepshead minnow) 116 mg/L, 48 hr EC50 daphnia 1800 mg/L, 72 hr EC50 Pseudokirchneriella subcapitata 911 mg/L

Persistence and Degradability: 2-Butoxyethanol is readily biodegradable (91% in 14 days).

Bio-accumulative Potential: 2-Butoxyethanol and isopropanol have an estimated BCF of 3 which suggests the potential for bioconcentration in aquatic organisms is low.

Mobility in Soil: 2-Butoxyethanol and isopropanol are expected to have a high mobility in soil.

Other Adverse Effects: No data available for product.

Results of PBT/vPvB Assessment: Not required

13. DISPOSAL CONSIDERATIONS

Regulations: Dispose in accordance with local and national environmental regulations.

Properties (Physical/Chemical) Affecting Disposal: None known.

Waste Treatment Recommendations: None known.

14. TRANSPORT INFORMATION

UN-Number	ADR/RID: UN3175	IMDG: UN3175	IATA: UN3175	DOT: UN3175
UN proper shipping name	ADR/RID: Solids Containing Flammable Liquid, n.o.s. (Isopropanol) IMDG: Solids Containing Flammable Liquid, n.o.s. (Isopropanol) IATA: Solids Containing Flammable Liquid, n.o.s. (Isopropanol) DOT: Solids Containing Flammable Liquid, n.o.s. (Isopropanol)			
Transport hazard class(es)	ADR/RID: 4.1	IMDG: 4.1	IATA: 4.1	DOT: 4.1
Packaging group	ADR/RID: PGII	IMDG: PGII	IATA: PGII	DOT: PGII
Environmental hazards	ADR/RID: No	IMDG Marine pollutant: No	IATA: No	DOT: No

Special precautions for user: Solids containing flammable liquid.

15. REGULATORY INFORMATION

U.S. Federal Regulations

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA): This product is not subject to CERCLA release reporting. Many states have more stringent regulations. Report all spills in accordance with local, state, and federal regulations.

Toxic Substances Control Act (TSCA): All of the ingredients in this product are listed on the EPA TSCA Inventory or exempt.

OSHA Hazard Classification: Acute Health, Chronic Health, Flammable

Clean Water Act (CWA): Not Listed

Clean Air Act (CAA): Not Listed

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

SARA Section 311/312 (40 CFR 370) Hazard Categories:

Immediate Hazard:	Yes	Pressure Hazard:	No
Delayed Hazard:	Yes	Reactivity Hazard:	No
Fire Hazard:	Yes		

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372):

Components	C.A.S. #	WT %
Glycol Ethers (2-butoxyethanol)	111-76-2	<6

State Regulations

California: This product contains the following chemical(s) known to the State of California to cause cancer, birth defects or reproductive harm:

Components	C.A.S. #	WT %
None known		

International Regulations

EU REACH: The substances in this product comply with the EU REACH regulation as applicable.

16. OTHER INFORMATION

Full text of Classification abbreviations used in Section 2 and 3:

C Corrosive
F Highly Flammable
N Dangerous for the environment.
Xi Irritant
Xn Harmful
R11 Highly flammable
R20/21/22
R34 Causes burns.
R36 Irritating to eyes.
R36/38 Irritating to eyes and skin.
R50 Very toxic to aquatic organisms.
R67 Vapours may cause drowsiness and dizziness.

Flam. Liq. 2 Flammable Liquid Category 2
Eye Irrit. 2A Eye Irritation Category 2A
Skin Irrit. 2 Skin Irritation Category 2
STOT SE 3 Single Target Organ Toxicity, Single Exposure Category 3
Acute Tox. 4 Acute Toxicity Category 4

H225 Flammable liquid and vapor.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.

Date of SDS Preparation/Revision: 20 October 2011

Data Sources: US NLM ChemID Plus and HSDB, Substance SDS for components, IUCLID Dataset EU Chemical Bureau, ESIS, and Country websites for occupational exposure limits.