



SAFETY DATA SHEET

AF-CLEAN

Section 1. Identification

GHS product identifier : AF-CLEAN
Product code : 57-B 100
SDS no. : L-137E
Product type : Liquid.

Identified uses

High-performance, VOC reduced cleaner and degreaser.

Manufacturer : Walter Surface Technologies Inc.
 Bio-Circle - A Division of Walter Surface Technologies Inc.
 810 Day Hill Road
 Windsor, CT 06095
 United States
 General Information: 18665925837
 info.us@walter.com
 www.walter.com

Emergency telephone number (with hours of operation) : INFOTRAC® 1-800-535-5053, Outside U.S.A. call collect: 1-352-323-3500
 24 hours/day, 7 days/week.

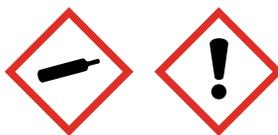
Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : GASES UNDER PRESSURE - Compressed gas
 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A

GHS label elements

Hazard pictograms :



Signal word : Warning
Hazard statements : H280 - Contains gas under pressure; may explode if heated.
 H319 - Causes serious eye irritation.

Precautionary statements

Prevention : P280 - Wear eye or face protection.
 P264 - Wash hands thoroughly after handling.
Response : P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337 + P313 - If eye irritation persists: Get medical attention.
Storage : P410 - Protect from sunlight.
 P403 - Store in a well-ventilated place.
Disposal : Not applicable.



Section 2. Hazards identification

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture
Product code : 57-B 100

CAS number/other identifiers

CAS number : Not applicable.

Ingredient name	%	CAS number
(2-Methoxymethylethoxy)propanol	10 - 30	34590-94-8
Isopropyl alcohol	5 - 10	67-63-0
2-(2-Butoxyethoxy)ethanol	1 - 5	112-34-5
Sodium N-(2-carboxyethyl)-N-dodecyl-β-alaninate	0.1 - 1	14960-06-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Continue to rinse for at least 20 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Irritating to mouth, throat and stomach.

Section 4. First aid measures

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

Special protective actions for fire-fighters : No special measures are required.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
(2-Methoxymethylethoxy)propanol	<p>ACGIH TLV (United States, 6/2013). Absorbed through skin. STEL: 150 ppm 15 minutes. TWA: 606 mg/m³ 8 hours. TWA: 100 ppm 8 hours. STEL: 909 mg/m³ 15 minutes.</p> <p>NIOSH REL (United States, 4/2013). Absorbed through skin. STEL: 900 mg/m³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 600 mg/m³ 10 hours. TWA: 100 ppm 10 hours.</p>

Section 8. Exposure controls/personal protection

<p>Isopropyl alcohol</p>	<p>OSHA PEL (United States, 2/2013). Absorbed through skin. TWA: 600 mg/m³ 8 hours. TWA: 100 ppm 8 hours.</p> <p>ACGIH TLV (United States, 4/2014). STEL: 400 ppm 15 minutes. TWA: 200 ppm 8 hours.</p> <p>NIOSH REL (United States, 10/2013). STEL: 1225 mg/m³ 15 minutes. STEL: 500 ppm 15 minutes. TWA: 980 mg/m³ 10 hours. TWA: 400 ppm 10 hours.</p>
<p>2-(2-Butoxyethoxy)ethanol</p>	<p>OSHA PEL (United States, 2/2013). TWA: 980 mg/m³ 8 hours. TWA: 400 ppm 8 hours.</p> <p>ACGIH TLV (United States, 4/2014). TWA: 10 ppm 8 hours. Form: Inhalable fraction and vapor</p>

Appropriate engineering controls : No personal respiratory protective equipment normally required. Avoid breathing dust/fume/gas/mist/vapors/spray. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a NIOSH/MSHA approved respirator if there is a risk of exposure at levels exceeding the exposure limits. Advice should be sought from respiratory protection specialists.

Section 9. Physical and chemical properties

Appearance

Physical state	: Liquid.
Color	: Transparent.
Odor	: Fragrant.
Odor threshold	: Not available.
pH	: 9 to 11
Melting point	: <0°C (<32°F)
Boiling point	: 88.7 to 215.3°C (191.7 to 419.5°F)
Flash point	: Closed cup: 41°C (105.8°F) [Pensky-Martens.]
Evaporation rate	: >1 (Butyl acetate = 1)
Flammability (solid, gas)	: Non-flammable in accordance with United Nations Manual of Test & Criteria Part 3, Sec. 31.4 and 31.5 –Ignition Distance Test and Enclosed Space Ignition Test for Spray aerosols.
Lower and upper explosive (flammable) limits	: Not applicable.
Vapor pressure	: >4.5 kPa (>33.753 mm Hg) [@ 20°C (68°F)]
Vapor density	: Not available.
Density	: 0.95 to 1.01 g/ml @ 20°C (68°F)
Solubility	: Soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Kinematic (@ 20°C (68°F)): 0.01 cm ² /s (1 cSt)
VOC content (g/L)	: 118

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials, acids and alkalis.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Isopropyl alcohol	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
2-(2-Butoxyethoxy)ethanol	LD50 Dermal	Rabbit	2700 mg/kg	-
	LD50 Oral	Rat	4500 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
(2-Methoxymethylethoxy)propanol	Eyes - Mild irritant	Human	-	8 mg	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
Isopropyl alcohol	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	10 mg	-
2-(2-Butoxyethoxy)ethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Eyes - Severe irritant	Rabbit	-	20 mg	-

Sensitization

There is no data available.

Carcinogenicity

Classification

Product/ingredient name	OSHA	IARC	NTP	ACGIH	EPA	NIOSH
Isopropyl alcohol	None.	3	-	A4	-	-

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Isopropyl alcohol	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : No known significant effects or critical hazards.
- Potential delayed effects** : No known significant effects or critical hazards.

Long term exposure

- Potential immediate effects** : No known significant effects or critical hazards.
- Potential delayed effects** : No known significant effects or critical hazards.

Potential chronic health effects

- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	38570.3 mg/kg
Dermal	66176.5 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Isopropyl alcohol	Acute LC50 1400000 to 1950000 µg/L Marine water	Crustaceans - Crangon crangon	48 hours
2-(2-Butoxyethoxy)ethanol	Acute LC50 1400000 µg/L	Fish - Gambusia affinis	96 hours
	Acute LC50 1300000 µg/L Fresh water	Fish - Lepomis macrochirus	96 hours

Persistence and degradability

There is no data available.

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
(2-Methoxymethylethoxy)propanol	0.004	-	low
Isopropyl alcohol	0.05	-	low
2-(2-Butoxyethoxy)ethanol	1	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	UN1950	UN1950	UN1950
UN proper shipping name	Aerosols, [non-flammable, (each not exceeding 1 L capacity)]	Aerosols, [non-flammable, (each not exceeding 1 L capacity)]	Aerosols, [non-flammable, (each not exceeding 1 L capacity)]
Transport hazard class(es)	2.2 	2.2 	2.2 
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Additional information	-	-	-

AERG : 126

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage. Protect from freezing. Freezing will damage product and render it unusable.

Section 14. Transport information

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : TSCA 8(a) PAIR: (2-Methoxymethylethoxy)propanol; Cinnamaldehyde
 TSCA 8(a) CDR Exempt/Partial exemption: Not determined
 TSCA 12(b) one-time export: (2-Methoxymethylethoxy)propanol
 United States inventory (TSCA 8b): All components are listed or exempted.
 Clean Water Act (CWA) 307: Diethyl phthalate
 Clean Water Act (CWA) 311: Ammonia, anhydrous

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Ammonia, anhydrous	0.01 - 0.025	Yes.	500	-	100	-

SARA 304 RQ : 555555.6 lbs / 252222.2 kg [67989.9 gal / 257369.6 L]

SARA 311/312

Classification : Sudden release of pressure
 Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
(2-Methoxymethylethoxy)propanol	10 - 30	Yes.	No.	No.	Yes.	No.
Isopropyl alcohol	5 - 10	Yes.	No.	No.	Yes.	No.
2-(2-Butoxyethoxy)ethanol	1 - 5	Yes.	No.	No.	Yes.	No.
Sodium N-(2-carboxyethyl)-N-dodecyl-β-alaninate	0.1 - 1	No.	No.	No.	Yes.	No.

SARA 313

Section 15. Regulatory information

	Product name	CAS number	%
Form R - Reporting requirements	Isopropyl alcohol 2-(2-Butoxyethoxy)ethanol	67-63-0 112-34-5	5 - 10 1 - 5
Supplier notification	Isopropyl alcohol 2-(2-Butoxyethoxy)ethanol	67-63-0 112-34-5	5 - 10 1 - 5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: (2-Methoxymethylethoxy)propanol; Isopropyl alcohol
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: (2-Methoxymethylethoxy)propanol; Isopropyl alcohol; 2-(2-Butoxyethoxy)ethanol
- Pennsylvania** : The following components are listed: (2-Methoxymethylethoxy)propanol; Isopropyl alcohol; 2-(2-Butoxyethoxy)ethanol

California Prop. 65

No products were found.

International lists

National inventory

- Australia** : All components are listed or exempted.
- Canada** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Europe** : All components are listed or exempted.
- Japan** : All components are listed or exempted.
- New Zealand** : All components are listed or exempted.
- Philippines** : All components are listed or exempted.
- Republic of Korea** : All components are listed or exempted.
- Taiwan** : All components are listed or exempted.

Section 16. Other information

History

Date of issue mm/dd/yyyy : 11/30/2015

Date of previous issue : 08/01/2015

Version : 1.2

Revised Section(s) : 2, 8, 16.

Prepared by : KMK Regulatory Services Inc.

Key to abbreviations

- : ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 UN = United Nations

Section 16. Other information

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.