Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 05/22/2015 Reviewed on 05/22/2015

*

1 Identification

· **Product identifier**

· **Trade name: Z-88**
· **Product number:** 252
· **Relevant identified uses of the substance or mixture and uses advised against**
Z-88 is an all purpose concentrated non-ammoniated cleaner for watch, clock and jewelry metal parts. For professional use only. Keep away from children.
· **Product description**
Z-88 removes residue and lapping compounds from jewelry with ease. Ideal to clean metal watch bands and watch casings.
· **Application of the substance / the mixture**
Everyone in the jewelry and watch repair business should use this product because it is water based, environmentally friendly and very effective in cleaning.

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Zenith Solutions, Inc.
69-22 Manse St.
Forest Hills, NY 11375
Phone: 1-888-777-6887
Fax: 1-718-575-8570
· **Emergency telephone number:**
Within USA and Canada: 1-800-424-9300 (CHEMTREC, 24 hours)
Outside USA and Canada: +1-703-527-3887 (CHEMTREC, 24 hours)

2 Hazard(s) identification

· **Classification of the substance or mixture**

GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.

GHS05 Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS05 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
Monoethanolamine
Coconut diethanolamide - anionic surfactant

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dodecylbenzenesulphonic acid
Disodium Metasilicate
tetrasodium ethylenediaminetetraacetate

· ***Hazard statements***
Causes severe skin burns and eye damage.
Suspected of causing cancer.

· ***Precautionary statements***
Do not breathe dusts or mists.
Wear eye protection / face protection.
Wash thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.
If swallowed: Rinse mouth. Do NOT induce vomiting.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· ***Unknown acute toxicity:***
31.8 percent of the mixture consists of ingredient(s) of unknown toxicity.

· ***Classification system:***

· ***NFPA ratings (scale 0 - 4)***

Health = 2
Fire = 0
Reactivity = 0

· ***HMIS-ratings (scale 0 - 4)***

Health = 2
Fire = 0
Reactivity = 0

· ***Hazard(s) not otherwise classified (HNOC):*** None known

*
3 Composition/information on ingredients

· ***Chemical characterization: Mixtures***
· ***Description:*** Mixture of substances listed below with nonhazardous additions.

· ***Dangerous Components:***		
CAS: 68603-42-9	Coconut diethanolamide - anionic surfactant Carc. 2, H351; Acute Tox. 4, H302; Skin Irrit. 2, H315	Proprietary%
CAS: 141-43-5 RTECS: KJ 5775000	Monoethanolamine Skin Corr. 1B, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Flam. Liq. 4, H227	Proprietary%

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CAS: 27176-87-0	dodecylbenzenesulphonic acid Skin Corr. 1A, H314; Eye Dam. 1, H318; Acute Tox. 4, H302	Proprietary%
CAS: 111-76-2 RTECS: KJ 8575000	Ethylene Glycol Monobutyl Ether Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Flam. Liq. 4, H227	Proprietary%
CAS: 6834-92-0	Disodium Metasilicate Skin Corr. 1B, H314; STOT SE 3, H335	Proprietary%
CAS: 64-02-8 RTECS: AH 5075000	tetrasodium ethylenediaminetetraacetate Eye Dam. 1, H318; Acute Tox. 4, H302	Proprietary%

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4 First-aid measures

· ***Description of first aid measures***
· ***General information:*** Immediately remove any clothing soiled by the product.
· ***After inhalation:***
Supply fresh air. If required, provide artificial respiration. Consult doctor if symptoms persist.
In case of unconsciousness, place patient securely on side position for transportation.
· ***After skin contact:***
Immediately wash with water and soap and rinse thoroughly.
If skin irritation occurs, consult a doctor.
· ***After eye contact:***
Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention.
· ***After swallowing:***
Rinse out mouth and then drink plenty of water.
Do not induce vomiting.
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
· ***Information for doctor:***
· ***Most important symptoms and effects, both acute and delayed:*** No further relevant information available.
· ***Indication of any immediate medical attention and special treatment needed***
No further relevant information available.

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5 Fire-fighting measures

· ***Extinguishing media***
· ***Suitable extinguishing agents:***
CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· ***Special hazards arising from the substance or mixture***
If incinerated, product will release the following toxic fumes: Carbon Oxides, Sodium Oxides, Sulfur Oxides, and Nitrogen Oxides (NOx).
· ***Advice for firefighters***
· ***Protective equipment:***
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

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6 Accidental release measures

· ***Personal precautions, protective equipment and emergency procedures***
Ensure adequate ventilation
Keep away from ignition sources.
Material can create slippery conditions.
Wear protective equipment. Keep unprotected persons away.
· ***Environmental precautions:*** Do not allow to enter sewers/ surface or ground water.

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· ***Methods and material for containment and cleaning up:***
Absorb with liquid-binding material (ie. sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
Dispose of the collected material according to regulations.
· ***Reference to other sections***
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

* 7 Handling and storage

· ***Handling:***
· ***Precautions for safe handling***
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· ***Information about protection against explosions and fires:*** No special measures required.

· ***Conditions for safe storage, including any incompatibilities***
Store away from strong acids, strong bases, strong oxidizing agents, strong reducing agents and rubber.
· ***Storage:***
· ***Requirements to be met by storerooms and receptacles:*** No special requirements.
· ***Information about storage in one common storage facility:*** Not required.
· ***Further information about storage conditions:*** Keep receptacle tightly sealed.
· ***Specific end use(s)*** No further relevant information available.

* 8 Exposure controls/personal protection

· ***Additional information about design of technical systems:*** No further data; see section 7.

· ***Control parameters***
All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Use mechanical (general) ventilation for storage areas. Use appropriate ventilation as required to keep Exposure Limits in Air below TLV & PEL limits.

· ***Components with occupational exposure limits:***	
141-43-5 Monoethanolamine	
PEL	Long-term value: 6 mg/m³, 3 ppm
REL	Short-term value: 15 mg/m³, 6 ppm Long-term value: 8 mg/m³, 3 ppm
TLV	Short-term value: 15 mg/m³, 6 ppm Long-term value: 7.5 mg/m³, 3 ppm
111-76-2 Ethylene Glycol Monobutyl Ether	
PEL	Long-term value: 240 mg/m³, 50 ppm Skin
REL	Long-term value: 24 mg/m³, 5 ppm Skin
TLV	Long-term value: 97 mg/m³, 20 ppm BEI

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· **Ingredients with biological limit values:**	
111-76-2 Ethylene Glycol Monobutyl Ether	
BEI	200 mg/g creatinine urine end of shift Butoxyacetic acid with hydrolysis

· **Additional information:** The lists that were valid during the creation of this SDS were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing and wash before reuse.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· **Breathing equipment:**
Not necessary if room is well-ventilated.
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure, use respiratory protective device that is independent of circulating air.
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Select glove material based on penetration times, rates of diffusion and degradation.
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.
· **Eye protection:**

Tightly sealed goggles

· **Body protection:**

Protective work clothing

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* 9 Physical and chemical properties

· **Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**
Form: Liquid
Color: Clear, colorless
· **Odor:** Mild
· **Odor threshold:** Not determined.

· **pH-value:** >11.5

· **Change in condition**
Melting point/Melting range: Not determined.
Boiling point/Boiling range: 100 °C (212 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** > 200 °C (> 392 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not self-igniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**
Lower: 0.0 Vol %
Upper: 0.0 Vol %

· **Vapor pressure @ 20 °C (68 °F):** 23 hPa (17 mm Hg)

· **Density:**
Relative density Not determined.
Vapor density Not determined.
Evaporation rate Not determined.

· **Solubility in / Miscibility with**
Water: Soluble.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**
Dynamic: Not determined.
Kinematic: Not determined.

· **Solvent content:**
Organic solvents: 12.7 %
VOC content: 12.7 %
· **Other information** No further relevant information available.

* 10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability** Stable under normal conditions.
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.

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· ***Incompatible materials:***
Strong acids, strong bases, strong oxidizing agents, strong reducing agents and rubber.
· ***Hazardous decomposition products:***
Carbon Oxides, Sodium Oxides, Sulfur Oxides, and Nitrogen Oxides (NOx).

* 11 Toxicological information

· ***Information on toxicological effects***
· ***Acute toxicity:***

· ***LD/LC50 values that are relevant for classification:***		
68603-42-9 Coconut diethanolamide - anionic surfactant		
Oral	LD50	1600 mg/kg (rat)
Dermal	LD50	12200 mg/kg (rabbit)
141-43-5 Monoethanolamine		
Oral	LD50	2050 mg/kg (rat)
Dermal	LD50	1000 mg/kg (rabbit)
27176-87-0 dodecylbenzenesulphonic acid		
Oral	LD50	1150 mg/kg (rat)
111-76-2 Ethylene Glycol Monobutyl Ether		
Oral	LD50	470 mg/kg (rat)
Dermal	LD50	220 mg/kg (rab)
Inhalative	LC50/4 h	2174.91 mg/l (rat)
6834-92-0 Disodium Metasilicate		
Oral	LD50	1280 mg/kg (rat)
64-02-8 tetrasodium ethylenediaminetetraacetate		
Oral	LD50	630-1260 mg/kg (rat)

· ***Primary irritant effect:***
· ***on the skin:*** Strong caustic effect on skin and mucous membranes.
· ***on the eye:***
Strong irritant with the danger of severe eye injury.
Corrosive effect.
Causes serious eye irritation.
· ***Additional toxicological information:***
The product shows the following dangers according to internally approved calculation methods for preparations:
Corrosive
Irritant
Swallowing will lead to a corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· ***Carcinogenic categories***
· ***IARC (International Agency for Research on Cancer)***
Group 1 - Carcinogenic to humans
Group 2A - Probably carcinogenic to humans
Group 2B - Possibly carcinogenic to humans
Group 3 - Not classifiable as to its carcinogenicity to humans
Group 4 - Probably not carcinogenic to humans

68603-42-9	Coconut diethanolamide - anionic surfactant	2B

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111-76-2	Ethylene Glycol Monobutyl Ether	3

· **NTP (National Toxicology Program)**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

* 12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

111-76-2 Ethylene Glycol Monobutyl Ether	
EC50	1815 mg/l (Water flea)
6834-92-0 Disodium Metasilicate	
EC50	247 mg/l (Water flea)

· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even small quantities leak into the ground.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

* 13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:**
Dispose of as unused product.
Disposal must be made according to official regulations.

* 14 Transport information

· **UN-Number**
· **DOT, ADR, IMDG, IATA** UN1760
· **UN proper shipping name**
· **DOT** Corrosive liquids, n.o.s. (dodecylbenzenesulphonic acid, Ethanolamine)
· **ADR** UN1760 Corrosive liquids, n.o.s. (dodecylbenzenesulphonic acid, Ethanolamine)
· **IMDG, IATA** CORROSIVE LIQUID, N.O.S. (dodecylbenzenesulphonic acid, ETHANOLAMINE)

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· **Transport hazard class(es)**

· **DOT**

· **Class**	8 Corrosive substances
· **Label**	8

· **ADR**

· **Class**	8 (C9) Corrosive substances
· **Label**	8

· **IMDG, IATA**

· **Class**	8 Corrosive substances
· **Label**	8
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	III
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Warning: Corrosive substances
· **Danger code (Kemler):**	80
· **EMS Number:**	F-A,S-B
· **Segregation groups**	Acids, alkalis
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.

· **Transport/Additional information:**

· **DOT**

· **Quantity limitations**	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L

· **ADR**

· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

· **IMDG**

· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **UN "Model Regulation":**	UN1760, Corrosive liquids, n.o.s. (dodecylbenzenesulphonic acid, Ethanolamine), 8, III

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15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

111-76-2	Ethylene Glycol Monobutyl Ether

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **California Proposition 65**

· **Chemicals known to cause cancer:**

68603-42-9	Coconut diethanolamide - anionic surfactant

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients are listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

111-76-2	Ethylene Glycol Monobutyl Ether	NL

· **TLV (Threshold Limit Value established by ACGIH)**

111-76-2	Ethylene Glycol Monobutyl Ether	A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients are listed.

· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS05 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
Monoethanolamine
Coconut diethanolamide - anionic surfactant
dodecylbenzenesulphonic acid
Disodium Metasilicate
tetrasodium ethylenediaminetetraacetate
· **Hazard statements**
Causes severe skin burns and eye damage.
Suspected of causing cancer.

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· ***Precautionary statements***
Do not breathe dusts or mists.
Wear eye protection / face protection.
Wash thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.
If swallowed: Rinse mouth. Do NOT induce vomiting.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· ***National regulations:***

The product is subject to be classified according with the latest version of the regulations on hazardous substances.

· ***State Right to Know***

CAS: 68603-42-9	Coconut diethanolamide - anionic surfactant Carc. 2, H351; Acute Tox. 4, H302; Skin Irrit. 2, H315	Proprietary%
CAS: 141-43-5 RTECS: KJ 5775000	Monoethanolamine Skin Corr. 1B, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Flam. Liq. 4, H227	Proprietary%
CAS: 27176-87-0	dodecylbenzenesulphonic acid Skin Corr. 1A, H314; Eye Dam. 1, H318; Acute Tox. 4, H302	Proprietary%
CAS: 111-76-2 RTECS: KJ 8575000	Ethylene Glycol Monobutyl Ether Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Flam. Liq. 4, H227	Proprietary%
CAS: 6834-92-0	Disodium Metasilicate Skin Corr. 1B, H314; STOT SE 3, H335	Proprietary%

All ingredients are listed.

· ***Chemical safety assessment:*** A Chemical Safety Assessment has not been carried out.

16 Other information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· ***Date of preparation / last revision*** 05/22/2015 / -

· ***Abbreviations and acronyms:***
ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)

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NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Flam. Liq. 4: Flammable liquids, Hazard Category 4
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Carc. 2: Carcinogenicity, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

· **** Data compared to the previous version altered.***

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