1 Identification

Trade name: 5768 Cleaner

Article number: C8-00-5768

Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

Details of the supplier of the safety data sheet

Manufacturer/Supplier:
Keyster Inc.
800 West Thomdale Avenue
Itasca, IL 60143 USA
Tel (630) 616-4000
Tel International 00 1 630 616-4000

ITW Specialty Materials (Suzhou) Co., Ltd.
Heng Qiao Road
Wujiang Economic Development Zone
Suzhou, Jiangsu 215200 China
Tel +86 512 82060808

Keyster GmbH
Ganghofer Strasse 45
D-82216 Gerlnlinden Germany
Tel +49 (0) 8142 4785 0

Information department:
Product Compliance: EHS_Kester@keyster.com

Emergency telephone number:
CHEMTREC 24-Hour Emergency Response Telephone Number: (800) 424-9300
CHEMTREC 24-Hour Emergency Response (Outside US & Canada) Telephone Number: (703) 527-3887

2 Hazard(s) identification

Classification of the substance or mixture

Health hazard

Carc. 2  H351  Suspected of causing cancer.
STOT RE 2  H373  May cause damage to organs through prolonged or repeated exposure.

Corrosion

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

Acute Tox. 4  H302  Harmful if swallowed.

Label elements

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
1. If iSol = aO
2. Ds = oT
3. cwD
4. seToG
5. IpSc
6. kSo
7. oR
dOc
8. 3R-
9. 5Rw%
10. W
11. IpD
12. cao
13. 4
14. 5
15. Image 11x680 to 156x792
16. T
17. rAt
18. C
19. DvO
20. REACTIVITY
21. FIRE
22. HEALTH
23. N
24. P
25. P
26. P
27. e
28. o
29. t
30. H302 Harmful if swallowed.
31. H314 Causes severe skin burns and eye damage.
32. H351 Suspected of causing cancer.
33. H373 May cause damage to organs through prolonged or repeated exposure.
34. Precautionary statements
36. P264 Wash thoroughly after handling.
37. P280 Wear protective gloves/protective clothing/eye protection/face protection.
39. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
40. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
41. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
42. P308+P313 IF exposed or concerned: Get medical advice/attention.
43. P405 Store locked up.
44. P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
45. Classification system:
46. NFPA ratings (scale 0 - 4)
47. Health = 3
48. Fire = 1
49. Reactivity = 0
50. HMIS-ratings (scale 0 - 4)
51. HEALTH
52. Fire = 1
53. Reactivity = 0
54. Other hazards
55. Results of PBT and vPvB assessment
56. PBT: Not applicable.
57. vPvB: Not applicable.

3 Composition/information on ingredients

Description: Mixture of the substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Description</th>
<th>% Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS: 112-34-5</td>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>Eye Irrit. 2A, H319</td>
</tr>
</tbody>
</table>

(Contd. on page 3)
Trade name: 5768 Cleaner

<table>
<thead>
<tr>
<th>CAS: 111-42-2</th>
<th>diethanolamine</th>
<th>(Contd. of page 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Carc. 2, H351; STOT RE 2, H373</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin Corr. 1B, H314; Eye Dam. 1, H318</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute Tox. 4, H302</td>
</tr>
<tr>
<td></td>
<td>25-40%</td>
<td></td>
</tr>
<tr>
<td>CAS: 141-43-5</td>
<td>ethanolamine</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute Tox. 3, H311</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin Corr. 1B, H314; Eye Dam. 1, H318</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flam. Liq. 4, H227</td>
</tr>
<tr>
<td></td>
<td>10-25%</td>
<td></td>
</tr>
<tr>
<td>Trade Secret</td>
<td>Aliphatic hydroxyl diol</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eye Irrit. 2A, H319</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flam. Liq. 4, H227</td>
</tr>
<tr>
<td></td>
<td>1-3%</td>
<td></td>
</tr>
</tbody>
</table>

4 First-aid measures

Description of first aid measures
General information:
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Follow general first aid procedures.
After inhalation: Supply fresh air; consult doctor in case of complaints.
After skin contact: Immediately wash with water and soap and rinse thoroughly.
After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
After swallowing: Seek immediate medical advice.
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.

5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture
Nitrogen oxides (NOx)
In case of fire, the following can be released:
Advice for firefighters
Protective equipment: No special measures required.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Environmental precautions: Do not allow to enter sewers/ surface or ground water.
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
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
Store in cool, dry place in tightly closed receptacles.
Prevent formation of aerosols.
Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities

Storage:
Requirements to be met by storerooms and receptacles: Store in a cool location.
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 item 7.

Control parameters
Components with limit values that require monitoring at the workplace:
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

<table>
<thead>
<tr>
<th>CAS</th>
<th>Chemical</th>
<th>TLV Long-term value</th>
<th>REL Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>112-34-5</td>
<td>2-(2-butoxyethoxy)ethanol</td>
<td>67.5 mg/m³, 10 ppm</td>
<td>15 mg/m³, 3 ppm</td>
</tr>
<tr>
<td>111-42-2</td>
<td>diethanolamine</td>
<td>*Inhalable fraction and vapor</td>
<td>*Inhalable fraction and vapor</td>
</tr>
<tr>
<td>141-43-5</td>
<td>ethanolamine</td>
<td>1 mg/m³, 0.2 ppm</td>
<td>3 ppm</td>
</tr>
<tr>
<td></td>
<td>Aliphatic hydroxyl diol</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Trade name: 5768 Cleaner

<table>
<thead>
<tr>
<th>CAS: 141-43-5 ethanolamine</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL</td>
</tr>
<tr>
<td>REL</td>
</tr>
<tr>
<td>TLV</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Additional information:
PEL = Permissible Exposure Limit (OSHA)
TLV = Threshold Limit Value (ACGIH)
OSHA = Occupational Safety and Health Administration
ACGIH = American Conference of Governmental Industrial Hygienists

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.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
Breathing equipment:
When ventilation is not sufficient to remove fumes from the breathing zone, a safety approved respirator or self-contained breathing apparatus should be worn.
Not necessary if room is well-ventilated.
Use suitable respiratory protective device in case of insufficient ventilation.
Protection of hands:

Proper gloves

Material of gloves:
Nitrile rubber, NBR
Natural rubber, NR
Penetration time of glove material:
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Safety glasses

9 Physical and chemical properties

Information on basic physical and chemical properties
General Information
Appearance:
Form: Liquid
Color: Colorless to light yellow
Odor: Ammonia-like
pH-value at 20°C (68 °F): 11.4
Change in condition
Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 171°C (339.8 °F)
Flash point: > 100°C (>212 °F)
Ignition temperature: 225°C (437 °F)
Auto igniting: Product is not selfigniting.
Danger of explosion: Product does not present an explosion hazard.

Explosion limits:
Lower: 0.9Vol %
Upper: 10.6Vol %

Vapor pressure at 20°C (68 °F): 0.3hPa (0.2 mm Hg)
Density at 20°C (68 °F): 0.99g/cm³ (8.26 lbs/gal)

Solubility in / Miscibility with Water: Not miscible or difficult to mix.
Solvent content:
Organic solvents: 97.1%
Solids content: 0.2%

10 Stability and reactivity
Reactivity No further relevant information available.
Chemical stability
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.
Incompatible materials: Strong acids, strong oxidizers.
Hazardous decomposition products:
Nitrogen oxides
When heated to soldering temperatures, solvents will be evaporated and organic materrial may release aliphatic aldehydes and acids.

11 Toxicological information
Information on toxicological effects
Acute toxicity:

LD/LC50 values that are relevant for classification:

<table>
<thead>
<tr>
<th>CAS: 112-34-5 2-(2-butoxyethoxy)ethanol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD₅₀</td>
</tr>
<tr>
<td>Dermal LD₅₀</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS: 111-42-2 diethanolamine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD₅₀</td>
</tr>
<tr>
<td>Dermal LD₅₀</td>
</tr>
</tbody>
</table>
Trade name: 5768 Cleaner

(Contd. of page 6)

**CAS: 141-43-5 ethanolamine**

<table>
<thead>
<tr>
<th>Route</th>
<th>LD50</th>
<th>LC50/4 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>2,050 mg/kg (rat)</td>
<td>11 mg/l (ATE)</td>
</tr>
<tr>
<td>Dermal</td>
<td>1,000 mg/kg (rabbit)</td>
<td></td>
</tr>
</tbody>
</table>

**Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Irritating effect.
- **through inhalation:** May cause respiratory irritation.
- **through ingestion:** May cause gastrointestinal irritation.

**Sensitization:** Sensitization possible through inhalation.

**Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
- Harmful
- Corrosive
- Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

**Carcinogenic categories**

<table>
<thead>
<tr>
<th>Agency</th>
<th>CAS: 111-42-2 diethanolamine</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IARC (International Agency for Research on Cancer)</strong></td>
<td>2B</td>
<td></td>
</tr>
</tbody>
</table>

**NTP (National Toxicology Program)**
None of the ingredients is listed.

**OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

12 Ecological information

**Toxicity**

**Aquatic toxicity:** No further relevant information available.

**Additional ecological information:**

**General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.

**Results of PBT and vPvB assessment**
PBT: Not applicable.
vPvB: Not applicable.

13 Disposal considerations

**Waste treatment methods**

**Recommendation:**
Disposal must be made according to official regulations.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.
14 Transport information

<table>
<thead>
<tr>
<th>UN-Number</th>
<th>UN3267</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT, ADR, IMDG, IATA</td>
<td>Corrosive liquid, basic, organic, n.o.s. (diethanolamine)</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>3267 Corrosive liquid, basic, organic, n.o.s. (diethanolamine)</td>
</tr>
</tbody>
</table>

Transport hazard class(es)

<table>
<thead>
<tr>
<th>DOT</th>
<th>8 Corrosive substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td>8</td>
</tr>
<tr>
<td>Label</td>
<td>8</td>
</tr>
</tbody>
</table>

ADR, IMDG, IATA

<table>
<thead>
<tr>
<th>Class</th>
<th>8 Corrosive substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Label</td>
<td>8</td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
</tr>
<tr>
<td>DOT, IMDG, IATA</td>
<td>No</td>
</tr>
<tr>
<td>Marine pollutant:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Danger code (Kemler):</td>
<td>80</td>
</tr>
<tr>
<td>EMS Number:</td>
<td>F-A,S-B</td>
</tr>
<tr>
<td>Segregation groups</td>
<td>Alkalis</td>
</tr>
<tr>
<td>Stowage Category</td>
<td>B</td>
</tr>
<tr>
<td>Stowage Code</td>
<td>SW2 Clear of living quarters.</td>
</tr>
<tr>
<td>Segregation Code</td>
<td>SG35 Stow &quot;separated from&quot; acids.</td>
</tr>
</tbody>
</table>

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

Transport/Additional information:

<table>
<thead>
<tr>
<th>DOT</th>
<th>On passenger aircraft/rail: 1 L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity limitations</td>
<td>On cargo aircraft only: 30 L</td>
</tr>
</tbody>
</table>

ADR

<table>
<thead>
<tr>
<th>Excepted quantities (EQ)</th>
<th>Code: E2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum net quantity per inner packaging: 30 ml</td>
<td></td>
</tr>
<tr>
<td>Maximum net quantity per outer packaging: 500 ml</td>
<td></td>
</tr>
</tbody>
</table>

IMDG

<table>
<thead>
<tr>
<th>Limited quantities (LQ)</th>
<th>1L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excepted quantities (EQ)</td>
<td>Maximum net quantity per inner packaging: 30 ml</td>
</tr>
</tbody>
</table>

(Contd. of page 7)
## 15 Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

All ingredients are listed on the following Government Inventories:
- **China:** Inventory of Existing Chemical Substances in China (IECSC)
- **Korea:** Korea Existing Chemicals List (ECL)
- **Europe:** European Inventory of Existing Commercial Chemical Substances (EINECS)
- **Japan:** Inventory of Existing and New Chemical Substances (ENCS)
- **Philippines:** Philippine Inventory of Chemicals and Chemical Substances (PICCS)
- **USA:** TSCA (Toxic Substances Control Act) TSCA Inventory of Chemical Substances

---

### USA

The following information relates to product regulation specific to the USA.

#### SARA (Superfund Amendments and Reauthorization Act)

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>355</td>
<td>(extremely hazardous substances)</td>
<td>None of the ingredient is listed.</td>
</tr>
<tr>
<td>313</td>
<td>(Specific toxic chemical listings)</td>
<td>CAS: 112-34-5 2-(2-butoxyethoxy)ethanol&lt;br&gt;CAS: 111-42-2 diethanolamine</td>
</tr>
</tbody>
</table>

### California Proposition 65

<table>
<thead>
<tr>
<th>Chemicals known to cause cancer:</th>
<th>diethanolamine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemicals known to cause reproductive toxicity:</td>
<td>None of the ingredients is listed.</td>
</tr>
</tbody>
</table>

### Carcinogenic categories

<table>
<thead>
<tr>
<th>EPA (Environmental Protection Agency)</th>
<th>None of the ingredients is listed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIOSH-Ca (National Institute for Occupational Safety and Health)</td>
<td>None of the ingredients is listed.</td>
</tr>
</tbody>
</table>

### CANADA:

Workplace Hazardous Materials Identification (WHMIS):

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR) and the Safety Data Sheet (SDS) contains all of the information required by the CPR.

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

**Hazard pictograms**

- GHS05
- GHS07
- GHS08

**Signal word** Danger

**Hazard-determining components of labeling:**

- diethanolamine
- ethanolamine
Trade name: 5768 Cleaner

Hazard statements
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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

16 Other information
The information contained herein is based on data considered accurate and is offered solely for information, consideration and investigation. Kester extends no warranties, makes no representations and assumes no responsibility as to the accuracy, completeness or suitability of this data for any purchaser’s use. The data on this Material Safety Data Sheet relates only to this product and does not relate to use with any other material or in any process. All chemical products should be used only by, or under the direction of, technically qualified personnel who are aware of the hazards involved and the necessity for reasonable care in handling. Hazard communication regulations require that employees must be trained on how to use a Material Safety Data Sheet as a source for hazard information.

Department issuing Safety Data Sheet (SDS): Product Compliance / EHS Department
Contact: EHS_Kester@kester.com

Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
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)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flam. Liq. 4: Flammable liquids – Category 4
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 3: Acute toxicity – Category 3
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irit. 2A: Serious eye damage/eye irritation – Category 2A
Carc. 2: Carcinogenicity – Category 2
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

* Data compared to the previous version altered.