Safety Data Sheet
acc. to OSHA HCS & WHMIS

Printing date 01/19/2018 Reviewed on 01/19/2018

1 Identification

- **Product identifier:** ES-16-A
- **Trade name:** CANTESCO® ES-16-A AEROSOL
- **Item number(s):** ES-16-A
- **MSDS Number:** 42
- **UPC bar code(s):** 699913-10245
- **Application of the substance / the mixture** PREMIUM ANTI-SPATTER
- **Manufacturer/Supplier:**
  WWW.CANTESCO.COM

USA ADDRESS:
KEMPER SYSTEM AMERICA, INC.
1200 NORTH AMERICA DR,
WEST SENECIA, NY 14224
PH (716) 558-2971

CANADIAN ADDRESS:
KEMPER SYSTEM CANADA
6345 NETHERHART ROAD
MISSISSAUGA, ON L5T 1B8
PH (905) 624-5463
FAX (905) 624-2840

- **Information department:**
  Tel: (716) 558-2971 ext. 228
  www.cantesco.com
- **Emergency telephone number:**
  ChemTrec (800) 424-9300 / 1-(703)-741-5970
  Canada only: CANUTEC (Call collect) (613) 996-6666

2 Hazard(s) identification

- **Classification of the substance or mixture:**
  ![Flame](https://via.placeholder.com/15)
  GHS02 Flame
  Flammable Aerosols - Category 1    H222 Extremely flammable aerosol.

  ![Gas cylinder](https://via.placeholder.com/15)
  GHS04 Gas cylinder
  Gases Under Pressure - Compressed Gas  H280 Contains gas under pressure; may explode if heated.

  ![Health hazard](https://via.placeholder.com/15)
  GHS08 Health hazard
  Carcinogenicity – Category 2    H351 Suspected of causing cancer.

(Contd. on page 2)
Label elements

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

Signal word: Danger

Hazard statements:
Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
Suspected of causing cancer.

Precautionary statements:
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not pierce or burn, even after use.
Do not spray on an open flame or other ignition source.
Wear protective gloves/protective clothing/eye protection/face protection.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
IF exposed or concerned: Get medical advice/attention.
Store locked up.
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
Dispose of contents/container in accordance with local/regional/national/international regulations.

NFPA ratings (scale 0 - 4):

Health = 0
Fire = 4
Reactivity = 0

Composition/information on ingredients

Chemical characterization: Mixtures

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

Dangerous components:

<table>
<thead>
<tr>
<th>Substance Code</th>
<th>Substance Name</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>115-10-6</td>
<td>dimethyl ether</td>
<td>10-30% w/w</td>
</tr>
<tr>
<td>68412-54-4</td>
<td>Polyoxyethylene (9) nonylphenylether, branched</td>
<td>1-5% w/w</td>
</tr>
<tr>
<td>112-80-1</td>
<td>oleic acid, pure</td>
<td>0.1-≤1% w/w</td>
</tr>
<tr>
<td>111-42-2</td>
<td>2,2'-iminodiethanol</td>
<td>0.1-&lt;1% w/w</td>
</tr>
</tbody>
</table>

Additional information: Exact concentrations and/or compositions are being withheld as trade secrets.

First-aid measures

After inhalation:
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.

After skin contact: Immediately rinse with water.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing:
Do not induce vomiting; immediately call for medical help.
Call a poison center/doctor if you feel unwell. Rinse mouth.

Most important symptoms and effects, both acute and delayed: No further relevant information available.
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- Indication of any immediate medical attention and special treatment needed:
  No further relevant information available.

5 Fire-fighting measures

- Suitable extinguishing agents: CO2, sand, extinguishing powder. Do not use water.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture: No further relevant information available.
- Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures:
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:
  Do not allow product to reach sewage system or any water course.
  Inform respective authorities in case of seepage into water course or sewage system.
  Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
  Ensure adequate ventilation.
  Do not flush with water or aqueous cleansing agents
- 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: Open and handle receptacle with care.
  - Information about protection against explosions and fires:
    Do not spray on a naked flame or any incandescent material.
    Keep ignition sources away - Do not smoke.
    Protect against electrostatic charges.
    Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.
- Storage
  - Requirements to be met by storerooms and receptacles:
    Store in a cool location.
    Observe official regulations on storing packagings with pressurized containers.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions:
    Keep receptacle tightly sealed.
    Do not gas tight seal receptacle.
    Store in cool, dry conditions in well sealed receptacles.
    Protect from heat and direct sunlight.
  - 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.

- Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Component</th>
<th>EL (Canada)</th>
<th>WEEL (USA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>115-10-6 dimethyl ether</td>
<td>Long-term value: 1000 ppm</td>
<td>Long-term value: 1000 ppm</td>
</tr>
<tr>
<td>111-42-2 2,2'-iminodiethanol</td>
<td>Long-term value: 2 mg/m³</td>
<td>Long-term value: 2 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Skin, IARC 2B</td>
<td>EV (Canada) Long-term value: 2 mg/m³</td>
</tr>
<tr>
<td></td>
<td>REL (USA) Long-term value: 15 mg/m³, 3 ppm</td>
<td>REL (USA) Long-term value: 15 mg/m³, 3 ppm</td>
</tr>
<tr>
<td></td>
<td>TLV (USA) Long-term value: 1* mg/m³, 0.2* ppm</td>
<td>TLV (USA) Long-term value: 1* mg/m³, 0.2* ppm</td>
</tr>
<tr>
<td></td>
<td>Skin; *inhalable fraction and vapor</td>
<td>Skin; *inhalable fraction and vapor</td>
</tr>
</tbody>
</table>

- Additional information: The lists that were valid during the creation were used as basis.

- Personal protective equipment

- General protective and hygienic measures: Wash hands before breaks and at the end of work.
- Breathing equipment: Use suitable respiratory protective device in case of insufficient ventilation.
- Protection of hands: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- Material of gloves: Protective gloves not normally required. People with sensitive skin may prefer to wear water-proof gloves, such as rubber or neoprene, to avoid skin contact.
- Eye protection: Tightly sealed goggles

9 Physical and chemical properties

- Form: Liquid Under Pressure
- Color: Light beige
- Odor: Mild
- Odor threshold: Not determined.
- pH-value: Not determined.
- Change in condition
  - Melting point/Melting range: Undetermined.
  - Boiling point/Boiling range: >100 °C (<-18 °C Prop.)
- Flash point: -42 °C (Prop.)
- Flammability (solid, gaseous): Extremely flammable liquefied gas.
- Ignition temperature: 235 °C
- Decomposition temperature: Not determined.
- Auto igniting: Product is not selfigniting.
### 44.3.3

**Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

**Explosion limits**
- **Lower:** 3.0 Vol %
- **Upper:** 18.6 Vol %

**Vapor pressure at 20 °C:** 5200 hPa

**Density:** Not determined.
- **Relative density:** Not determined.
- **Vapor density at 20 °C:** >1 (AIR=1)
- **Evaporation rate:** Not applicable.

**Solubility in / Miscibility with Water:** Partly soluble.

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

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

**Solvent content:**
- **Organic solvents:** 20.9 %
- **VOC content:** 20.9 %
  - 486.1 g/l / 4.06 lb/gl

**Other information**
- No further relevant information available.

### 10 Stability and reactivity

**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:** No further relevant information available.

**Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

**Information on toxicological effects:**

**Acute toxicity**

**Primary irritant effect**
- on the skin: No irritant effect.
- on the eye: No irritating effect.

**Sensitization:** No sensitizing effects known.

**Additional toxicological information:**

**Carcinogenic categories**

<table>
<thead>
<tr>
<th>IARC (International Agency for Research on Cancer)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>111-42-2 2,2'-iminodiestanol</td>
<td>2B</td>
</tr>
<tr>
<td>123-91-1 1,4-dioxane</td>
<td>2B</td>
</tr>
<tr>
<td>75-21-8 ethylene oxide</td>
<td>1</td>
</tr>
</tbody>
</table>
Trade name: CANTESCO® ES-16-A AEROSOL

<table>
<thead>
<tr>
<th>NTP (National Toxicology Program)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>123-91-1 1,4-dioxane</td>
<td>R</td>
</tr>
<tr>
<td>75-21-8 ethylene oxide</td>
<td>K</td>
</tr>
</tbody>
</table>

### 12 Ecological information

- **Aquatic toxicity:** No further relevant information available.
- **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:**
    - Water hazard class 1 (Self-assessment): slightly hazardous for water
    - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  - **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:**
    - Place in a sealed container and label as waste. Place in a safe area, and comply with all federal, state, provincial and local regulations for disposal.

### 14 Transport information

- **UN-Number**
  - DOT, TDG, IMDG, IATA: UN1950
- **UN proper shipping name**
  - DOT: Aerosols
  - TDG: 1950 Aerosols
  - IMDG, IATA: AEROSOLS
- **Transport hazard class(es)**
  - **DOT**
    - **Class:** 2 Gases
## Trade name: CANTESCO® ES-16-A AEROSOL

<table>
<thead>
<tr>
<th>Label</th>
<th>2.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDG, IATA</td>
<td></td>
</tr>
</tbody>
</table>

### TDG, IATA
- **Class**: 2 Gases
- **Label**: 2.1

### IMDG
- **Class**: 2.1
- **Label**: 2.1

### Packing group
- **DOT, TDG, IMDG, IATA**: Not regulated

### Environmental hazards:
- **Marine pollutant**: No

### Special precautions for user:
- **Warning**: Gases
- **Danger code (Kemler)**: 2.1
- **EMS Number**: F-D,S-U
- **Stowage Code**: SW1 Protected from sources of heat. SW22 For AEROSOLS with a capacity up to 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.

### Segregation Code
- **Segregation Code**: SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.

### 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: 75 kg
  - On cargo aircraft only: 150 kg
  - **Remarks**: This product may be shipped according to the Limited Quantity Exceptions provided that all Limited Quantity shipping requirements are met.

- **TDG**
  - **Remarks**: This product may be shipped according to the Limited Quantity Exceptions provided that all Limited Quantity shipping requirements are met.

- **Excepted quantities (EQ)**
  - **Code**: E0
  - **Not permitted as Excepted Quantity**
**Trade name:** CANTESCO® ES-16-A AEROSOL

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**IMDG**
- **Limited quantities (LQ)**: 1L
- **Excepted quantities (EQ)**: Code: E0
  - Not permitted as Excepted Quantity
- **Remarks:**
  - This product may be shipped according to the Limited Quantity Exceptions provided that all Limited Quantity shipping requirements are met.

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**IATA**
- **Remarks:**
  - This product may be shipped according to the Limited Quantity Exceptions provided that all Limited Quantity shipping requirements are met.

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**UN "Model Regulation":**
- **UN 1950 AEROSOLS, 2.1**

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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):**
      - 75-21-8 ethylene oxide
    - **Section 313 (Specific toxic chemical listings):**
      - 111-42-2 2,2’-iminodiethanol
      - 123-91-1 1,4-dioxane
      - 75-21-8 ethylene oxide
  - **TSCA (Toxic Substances Control Act):**
    - All ingredients are listed or exempted
  - **Proposition 65**
    - **Chemicals known to cause cancer:**
      - 111-42-2 2,2’-iminodiethanol
      - 123-91-1 1,4-dioxane
      - 75-21-8 ethylene oxide
    - **Chemicals known to cause reproductive toxicity for females:**
      - 75-21-8 ethylene oxide
    - **Chemicals known to cause reproductive toxicity for males:**
      - 75-21-8 ethylene oxide
    - **Chemicals known to cause developmental toxicity:**
      - 75-21-8 ethylene oxide
  - **Canadian substance listings**
    - **Canadian Domestic Substances List (DSL/NDSL):**
      - All ingredients are listed.
    - **Canadian Ingredient Disclosure list (limit 0.1%):**
      - None of the ingredients is listed.
    - **Canadian Ingredient Disclosure list (limit 1%):**
      - 112-80-1 oleic acid, pure
  - **GHS label elements**
    - The product is classified and labeled according to the Globally Harmonized System (GHS).
Hazard pictograms

GHS02  GHS04  GHS08

Signal word Danger

Hazard statements

Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
Suspected of causing cancer.

Precautionary statements

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not pierce or burn, even after use.
Do not spray on an open flame or other ignition source.
Wear protective gloves/protective clothing/eye protection/face protection.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
IF exposed or concerned: Get medical advice/attention.
Store locked up.
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Other information

This SDS format meets ANSI Z400.1-2010, OSHA 1910.1200 and WHMIS requirements. Kemper System America, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Product use and conditions of use are beyond the control of Kemper System America, Inc. Warranty of materials is limited to test results of product performance as detailed in certificates of compliance. Interpretation of test results is the responsibility of end-user. No other warranties, expressed or implied, are made. Kemper System America, Inc is an ISO 9001:2015 and ISO 14001:2015 registered company.

Department issuing SDS: Product safety department
Contact: Stephen Nowicki
Date of preparation / last revision 01/19/2018 / -
Abbreviations and acronyms:
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)
VOC: Volatile Organic Compounds (USA, EU)