SECTION 1: Product and company identification

Product name: Hospital Surface Disinfectant
Use of the substance/mixture: Aerosol Disinfectant
Product code: 8421
Company: Total Solutions
P.O. Box 240014
Milwaukee, WI 53224 - USA
T (414) 354-6417
Emergency number: Chemtec: (800) 424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)
Flam. Aerosol H222
Eye Irrit. 2A H319

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling
Hazard pictograms (GHS-US): GHS02 GHS07

Signal word (GHS-US): Danger
Hazard statements (GHS-US): Extremely flammable aerosol
Causes serious eye irritation

Precautionary statements (GHS-US): Keep away from heat, sparks, open flames, hot surfaces. - No smoking
Do not spray on an open flame or other ignition source
Pressurized container: Do not pierce or burn, even after use
Wash thoroughly after handling
Wear eye protection, face protection
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing 
If eye irritation persists: Get medical advice/attention
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F
Dispose of contents/container to comply with local/regional/national/international regulations.

2.3. Other hazards
No additional information available

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance
Not applicable
Full text of H-phrases: see section 16

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethanol</td>
<td>(CAS No) 64-17-5</td>
<td>40 - 60</td>
<td>Flam. Liq. 2, H225, STOT SE 3, H536</td>
</tr>
<tr>
<td>butane</td>
<td>(CAS No) 106-97-8</td>
<td>10 - 20</td>
<td>Flam. Gas 1, H220, Compressed gas, H280</td>
</tr>
<tr>
<td>propane</td>
<td>(CAS No) 74-98-6</td>
<td>2.5 - 10</td>
<td>Flam. Gas 1, H220, Compressed gas, H280</td>
</tr>
<tr>
<td>2-phenylphenol (ISO), biphenyl-2-ol, 2-hydroxybiphenyl</td>
<td>(CAS No) 90-43-7</td>
<td>0.1 - 1</td>
<td>Skin Irrit. 2, H315, Eye Irrit. 2A, H319, STOT SE 3, H335, Aquatic Acute 1, H400</td>
</tr>
</tbody>
</table>

Date of issue: 9/1/2015  Revision date: 05/15/2015  Version: 1.0
SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures general: Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
First-aid measures after inhalation: Remove the victim into fresh air. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact: Wash with water and soap. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact: Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion: Ingestion unlikely. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/injuries: Causes eye irritation. Irritation of the nasal mucous membranes.
Symptoms/injuries after eye contact: Causes serious eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Unsuitable extinguishing media: No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture
Explosion hazard: Pressurized container: may burst if heated.
Reactivity: The product is non-reactive under normal conditions of use, storage and transport.

5.3. Advice for firefighters
Firefighting instructions: Move containers away from the fire area if this can be done without risk. Use water spray or fog for cooling exposed containers. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
General measures: Evacuate unnecessary personnel. Stay upwind/keep distance from source. Gas is denser than air. May accumulate in low areas e.g. close to the ground.

6.1.1. For non-emergency personnel
Protective equipment: Do not enter without an appropriate protective equipment. DO NOT touch spilled material. Ventilate the area thoroughly, especially low lying areas (basements, work pits etc.). Advice local authorities if considered necessary.

6.1.2. For emergency responders
No additional information available

6.2. Environmental precautions
Avoid release to the environment. Advice local authorities if considered necessary. Stop leak if safe to do so. Do not contaminate water with the product or its container. Do not allow to enter drains or water courses.

6.3. Methods and material for containment and cleaning up
For containment: Eliminate every possible source of ignition. Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if safe to do so. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Collect spillage. Prevent the product from entering drains or confined areas. Following product recovery, flush area with water. For further information refer to section 8 : Exposure-controls/personal protection™.

6.4. Reference to other sections
No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Additional hazards when processed: Pressurized container: Do not pierce or burn, even after use.
Precautions for safe handling: Do not use if spray button is missing or defective. Do not spray on a naked flame or any incandescent material. Do not smoke while handling product. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Ground/bond container and receiving equipment. Do not re-use empty containers. Use only outdoors or in a well-ventilated area.

Hygiene measures: Avoid contact with eyes. Use good personal hygiene practices. Wash thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Pressurized container. Do not puncture, incinerate or crush. Take precautionary measures against static discharge.

Storage conditions: Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Incompatible materials: Heat sources. Sources of ignition.

Storage area: Aerosol 2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Compound</th>
<th>ACGIH STEL (ppm)</th>
<th>ACGIH TWA (ppm)</th>
<th>ACGIH TWA (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethanol (64-17-5)</td>
<td>1000 ppm</td>
<td>1000 ppm</td>
<td>URT irr</td>
</tr>
<tr>
<td>butane (106-97-8)</td>
<td>ACGIH STEL (ppm)</td>
<td>ACGIH TWA (ppm)</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>propane (74-98-6)</td>
<td>OSHA PEL (TWA) (ppm)</td>
<td>1000 ppm</td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment: Gloves. Safety glasses. Protective clothing.

Materials for protective clothing: Chemically resistant protective gloves.

Hand protection: Protective gloves.

Eye protection: Wear eye/face protection. Chemical goggles or safety glasses.

Respiratory protection: If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

Thermal hazard protection: Use appropriate personal protective equipment when risk assessment indicates this is necessary.

Consumer exposure controls: When using do not smoke. Use good personal hygiene practices. Wash hands immediately after handling the product. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Take off contaminated clothing and wash before reuse.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Gas</td>
</tr>
<tr>
<td>Appearance</td>
<td>Aerosol</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available on odour</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>-156 °F Propellant estimated</td>
</tr>
<tr>
<td>Relative evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>
**Hospital Surface Disinfectant**  
**Safety Data Sheet**

Vapor pressure: 6.1 - 6.8 atm @70F estimated
Relative density: No data available
Relative vapor density at 20 ºC: No data available
Specific gravity / density: 0.79 g/ml estimated
Solubility: No data available
Log Pow: No data available
Log Kow: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available

**SECTION 10: Stability and reactivity**

10.1. Reactivity
The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
Hazardous polymerization does not occur.

10.4. Conditions to avoid
Aerosol containers are unstable at temperatures above 49°C. Avoid temperatures exceeding the flash point.

10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information**

11.1. Information on toxicological effects

**Acute toxicity**

*ethanol (64-17-5)*
LD50 oral rat 10740 mg/kg body weight (Rat; OECD 401: Acute Oral Toxicity; Experimental value)
LD50 dermal rabbit > 16000 mg/kg (Rabbit; Literature study)
ATE CLP (oral) 10740.000 mg/kg body weight

*sodium nitrite (7632-00-0)*
ATE CLP (oral) 100.000 mg/kg body weight

**Skin corrosion/irritation**
Not classified

**Serious eye damage/irritation**
Causes serious eye irritation.

**Respiratory or skin sensitzation**
Not classified

**Germ cell mutagenicity**
Not classified

**Carcinogenicity**
Not classified.

**2-phenylphenol (ISO), biphenyl-2-ol, 2-hydroxybiphenyl (90-43-7)**

**IARC group**
3 - Not Classifiable

**Reproductive toxicity**
Not classified

**Specific target organ toxicity (single exposure)**
Not classified.

**Specific target organ toxicity (repeated exposure)**
Not classified

**Aspiration hazard**
Not classified

**Symptoms/injuries after eye contact**
Causes serious eye irritation.

**SECTION 12: Ecological information**

12.1. Toxicity

*ethanol (64-17-5)*
ethanol (64-17-5)

| LC50 fish 1 | 14200 mg/l (96 h; Pimephales promelas) |
| EC50 Daphnia 1 | 9300 mg/l (48 h; Daphnia magna) |
| LC50 fish 2 | 13000 mg/l 96 h; Salmo gairdneri (Oncorhyncus mykiss) |
| EC50 Daphnia 2 | 10800 mg/l (24 h; Daphnia magna) |
| Threshold limit other aquatic organisms 1 | 65 mg/l (72 h; Protozoa) |
| Threshold limit algae 1 | 1450 mg/l (192 h; Microcystis aeruginosa; Growth rate) |
| Threshold limit algae 2 | 5000 mg/l (168 h; Scenedesmus quadricauda; Growth rate) |

12.2. Persistence and degradability

ethanol (64-17-5)

Persistence and degradability


Biochemical oxygen demand (BOD)

0.8 - 0.967 g O₂ /g substance

Chemical oxygen demand (COD)

1.70 g O₂ /g substance

ThOD

2.10 g O₂ /g substance

BOD (% of ThOD)

0.43 % ThOD

12.3. Bioaccumulative potential

ethanol (64-17-5)

BCF fish 1

1 (72 h; Cyprinus carpio)

Log Pow

-0.31 (Experimental value)

Bioaccumulative potential

Low potential for bioaccumulation (Log Kow < 4).

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow into drains or water courses or dispose of where ground or surface waters may be affected. Do not contaminate ponds, waterways or ditches with chemical or used container Dispose of contents/container to comply with local/regional/national/international regulations.

Waste disposal recommendations

Dispose in a safe manner in accordance with local/national regulations.

Additional information

Handle empty containers with care because residual vapors are flammable. Handle unclean empty containers as full ones.

SECTION 14: Transport information

Department of Transportation (DOT)

Transport document description

UN1950 Aerosols (flammable, (each not exceeding 1 L capacity)), 2.1

UN-No.(DOT)

UN1950

Proper Shipping Name (DOT)

Aerosols flammable, (each not exceeding 1 L capacity)

Transport hazard class(es) (DOT)

2.1 - Class 2.1 - Flammable gas 49 CFR 173.115

Hazard labels (DOT)

2.1 - Flammable gas

DOT Packaging Non Bulk (49 CFR 173.xxx)

None

DOT Packaging Bulk (49 CFR 173.xxx)

None

DOT Special Provisions (49 CFR 172.102)

N82

DOT Packaging Exceptions (49 CFR 173.xxx)

306

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)

75 kg

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)

150 kg

DOT Vessel Stowage Location

A
DOT Vessel Stowage Other : 25 - Shade from radiant heat, 87 - Stow "separated from" Class 1 (explosives) except Division 14, 126 - Segregation same as for Class 9, miscellaneous hazardous materials

Additional information

Other information : This product may be eligible to be shipped as a Limited Quantity or Consumer Commodity ORM-D utilizing the exception found at 49 CFR 173.306.

ADR

No additional information available

Transport by sea

UN-No. (IMDG) : UN1950
Proper Shipping Name (IMDG) : Aerosols
Class (IMDG) : 2.1 - Flammable gases

Air transport

UN-No. (IATA) : UN1950
Proper Shipping Name (IATA) : Aerosols
Class (IATA) : 2.1 - Gases : Flammable

SECTION 15: Regulatory information

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS No</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-phenylphenol (ISO), biphenyl-2-ol, 2-hydroxybiphenyl</td>
<td>90-43-7</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>sodium nitrite</td>
<td>7632-00-0</td>
<td>0.1 - 1</td>
</tr>
<tr>
<td>butane (106-97-8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>propane (74-98-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-phenylphenol (ISO), biphenyl-2-ol, 2-hydroxybiphenyl (90-43-7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listed on SARA Section 313 (Specific toxic chemical listings)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sodium nitrite (7632-00-0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listed on SARA Section 313 (Specific toxic chemical listings)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RQ (Reportable quantity, section 304 of EPA's List of Lists)</td>
<td>100 lb</td>
<td></td>
</tr>
</tbody>
</table>

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer and/or reproductive toxicity.

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labelling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION: Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. NOTE: This product contains a chemical(s) known to the state of California to cause cancer.

SECTION 16: Other information

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Full text of H-phrases:

Acute Tox. 3 (Oral) Acute toxicity (oral) Category 3
Aquatic Acute 1 Hazardous to the aquatic environment - Acute Hazard Category 1
<table>
<thead>
<tr>
<th>Carcinogenicity Category 1B</th>
<th>Gases under pressure Compressed gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye irritation Category 2A</td>
<td>Serious eye damage/eye irritation Category 2A</td>
</tr>
<tr>
<td>Flammable aerosol Category 1</td>
<td>Flammable gases Category 1</td>
</tr>
<tr>
<td>Flammable liquids Category 2</td>
<td>Oxidizing solids Category 3</td>
</tr>
<tr>
<td>Skin corrosion/irritation Category 2</td>
<td>Specific target organ toxicity (single exposure) Category 3</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure) Category 3</td>
<td></td>
</tr>
<tr>
<td>H220</td>
<td>Extremely flammable gas</td>
</tr>
<tr>
<td>H222</td>
<td>Extremely flammable aerosol</td>
</tr>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapor</td>
</tr>
<tr>
<td>H272</td>
<td>May intensify fire; oxidizer</td>
</tr>
<tr>
<td>H280</td>
<td>Contains gas under pressure; may explode if heated</td>
</tr>
<tr>
<td>H301</td>
<td>Toxic if swallowed</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>H336</td>
<td>May cause drowsiness or dizziness</td>
</tr>
<tr>
<td>H350</td>
<td>May cause cancer</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life</td>
</tr>
</tbody>
</table>

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
NFPA fire hazard : 3 - Liquids and solids that can be ignited under almost all ambient conditions.
NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

Prepared by: Technical Department

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. No warranty is expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Our company assumes no responsibility for personal injury or property damage to the vendee, users or third parties caused by the material. Such vendees or users assume all risks associated with the use of this material.