SAFETY DATA SHEET

Revision date: 26 April 2018  Initial date of issue: 3 July 2007  SDS No. 119A-19a

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier
273 Electric Motor Cleaner (Aerosol)

1.2. Relevant identified uses of the substance or mixture and uses advised against
Removes grease, sludge, dirt from operating (or disassembled) motors and electrical systems. This is a solvent base cleaner.

1.3. Details of the supplier of the safety data sheet
Company: A.W. CHESTERTON COMPANY
860 Salem Street
Groveland, MA 01834-1507, USA
Tel. +1 978-469-6446    Fax: +1 978-469-6785
(Mon. - Fri. 8:30 - 5:00 PM EST)
SDS requests: www.chesterton.com
E-mail (SDS questions): ProductMSDSs@chesterton.com
E-mail: customer.service@chesterton.com

Supplier:
Canada: A.W. Chesterton Company Ltd., 889 Fraser Drive,
Unit 105, Burlington, Ontario L7L 4X6 - Tel. 905-335-5055
EU: Chesterton International GmbH, Am Lenzenfleck 23,
D85737 Ismaning, Germany – Tel. +49-89-996-5460

1.4. Emergency telephone number
24 hours per day, 7 days per week
Call Infotrac: 1-800-535-5053
Outside N. America: +1 352-323-3500 (collect)
NSW Poisons Information Centre (Australia): 13 11 26

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture
2.1.1. Classification according to Regulation (EC) No 1272/2008 [CLP]
Aerosol 3, H229
Skin Irrit. 2, H315
Skin Sens. 1B, H317
Eye Irrit. 2, H319
STOT SE 3, H336
Carc. 2, H351
Aquatic Chronic 2, H411

2.1.2. Classification according to 29 CFR 1910.1200 / WHMIS 2015
Press. Gas (Comp.), H280
Skin Irrit. 2, H315
Skin Sens. 1B, H317
Eye Irrit. 2, H319
STOT SE 3, H336
Carc. 2, H351
Aquatic Chronic 2, H411

2.1.3. Classification according to WHMIS 1988
A: Compressed gases; D1B: Toxic materials causing immediate and serious effects; D2A: Very toxic materials causing other effects; D2B: Toxic materials causing other effects

2.1.4. Australian statement of hazardous nature
Hazardous according to criteria of Safe Work Australia.
2.1.5. Additional information
For full text of H-statements: see SECTIONS 2.2 and 16. None

2.2. Label elements

2.2.1. Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictograms:

<table>
<thead>
<tr>
<th>Signal word:</th>
<th>Warning</th>
</tr>
</thead>
</table>

Hazard statements:
- H229 Pressurized container: May burst if heated.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.
- H351 Suspected of causing cancer.
- H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:
- P201 Obtain special instructions before use.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P251 Do not pierce or burn, even after use.
- P271 Use only outdoors or in a well-ventilated area.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/clothing and eye/face protection.
- P302/352 IF ON SKIN: Wash with plenty of soap and water.
- P304/340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305/351/338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308/313 IF exposed or concerned: Get medical advice/attention.
- P362/364 Take off contaminated clothing and wash it before reuse.
- P410/412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

Supplemental information: None

2.2.2. Labelling according to 29 CFR 1910.1200 / WHMIS 2015

Hazard pictograms:

<table>
<thead>
<tr>
<th>Signal word:</th>
<th>Warning</th>
</tr>
</thead>
</table>

Hazard statements:
- H280 Contains gas under pressure; may explode if heated.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.
- H351 Suspected of causing cancer.
- H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing must not be allowed out of the workplace.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/clothing and eye/face protection.
- P302/352 IF ON SKIN: Wash with plenty of soap and water.
- P304/340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305/351/338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308/313 IF exposed or concerned: Get medical advice/attention.
- P362/364 Take off contaminated clothing and wash it before reuse.
- P405 Store locked up.
- P410/403 Protect from sunlight. Store in a well-ventilated place.
- P501 Dispose of contents/container to an approved waste disposal plant.

Supplemental information: None

2.3. Other hazards
None known
SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

<table>
<thead>
<tr>
<th>Hazardous Ingredients¹</th>
<th>% Wt.</th>
<th>CAS No./EC No.</th>
<th>REACH Reg. No.</th>
<th>CLP/GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrachloroethylene</td>
<td>95-99</td>
<td>127-18-4</td>
<td>NA</td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td>204-825-9</td>
<td></td>
<td>Skin Sens. 1B, H317</td>
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<td></td>
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<td></td>
<td>Eye Irrit. 2, H319</td>
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<tr>
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<td></td>
<td>STOT SE 3, H336</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td>Carc. 2, H351</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Aquatic Chronic 2, H411</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Press. Gas (Comp.), H280</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>1-5</td>
<td>124-38-9</td>
<td>NA</td>
<td>Press. Gas (Comp.), H280</td>
</tr>
<tr>
<td></td>
<td></td>
<td>204-696-9</td>
<td></td>
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</tr>
</tbody>
</table>

For full text of H-statements: see SECTION 16.


SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation: Remove to fresh air. If not breathing, administer artificial respiration. Do not administer adrenaline (epinephrine). Contact physician.

Skin contact: Take off contaminated clothing. Wash skin with soap and water. Contact physician if irritation persists.

Eye contact: Flush eyes for at least 15 minutes with large amounts of water. Contact physician if irritation persists.

Ingestion: Do not induce vomiting. If conscious, give copious amounts of water to dilute stomach contents. Contact physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Excessive inhalation of vapors may result in dizziness, headache and other central nervous system effects and irritate the eyes and respiratory tract. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.

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

Treat symptoms.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Nonflammable. Use extinguisher appropriate to the surrounding fire.

Unsuitable extinguishing media: Not applicable

5.2. Special hazards arising from the substance or mixture

Pressurized containers, when heated, are a potential explosive hazard. Thermal decomposition can form Hydrogen Chloride and other toxic fumes.

5.3. Advice for firefighters

Cool exposed containers with water. Recommend Firefighters wear self-contained breathing apparatus.

Flammability Classification: not determined

HAZCHEM Emergency Action Code: not applicable

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Provide adequate ventilation. Utilize exposure controls and personal protection as specified in Section 8.

6.2. Environmental Precautions

Keep out of sewers, streams and waterways.
6.3. Methods and material for containment and cleaning up
Contain spill to a small area. Pick up with absorbent material (sand, sawdust, clay, etc.) and place in a suitable container for disposal.

6.4. Reference to other sections
Refer to section 13 for disposal advice.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling
Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No Smoking. Vapors are heavier than air and will collect in low areas. Do not eat, drink or smoke in work area. Wash thoroughly after handling. Utilize exposure controls and personal protection as specified in Section 8.

7.2. Conditions for safe storage, including any incompatibilities
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C (120°F). Do not pierce or burn, even after use.

7.3. Specific end use(s)
No special precautions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>OSHA PEL¹ ppm</th>
<th>mg/m³</th>
<th>ACGIH TLV² ppm</th>
<th>mg/m³</th>
<th>UK WEL³ ppm</th>
<th>mg/m³</th>
<th>AUSTRALIA ES⁴ ppm</th>
<th>mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrachloroethylene</td>
<td>100</td>
<td>–</td>
<td>25</td>
<td>172</td>
<td>50</td>
<td>345</td>
<td>50</td>
<td>340</td>
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<tr>
<td>(Ceiling)</td>
<td>200</td>
<td>–</td>
<td>STEL:</td>
<td>100</td>
<td>STEL:</td>
<td>689</td>
<td>STEL:</td>
<td>150</td>
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<td>(max, 5 mins. in 3 hrs.)</td>
<td>300</td>
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<td>Carbon dioxide</td>
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<td>15000</td>
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<td>STEL:</td>
<td>54000</td>
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</table>

¹ United States Occupational Health & Safety Administration permissible exposure limits.
² American Conference of Governmental Industrial Hygienists threshold limit values.
³ EH40 Workplace exposure limits, Health & Safety Executive
⁴ Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003].

Derived No Effect Level (DNEL) according to Regulation (EC) No 1907/2006:
Workers
Not available

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No 1907/2006:
Not available

8.2. Exposure controls

8.2.1. Engineering measures
Use only in well-ventilated areas. If exposure limits are exceeded, provide adequate ventilation.

8.2.2. Individual protection measures
Respiratory protection: Not normally needed. If exposure limits are exceeded, use air-line or self-contained breathing apparatus (EN filter type A).
**Product:** 273 Electric Motor Cleaner (Aerosol)

**Date:** 26 April 2018  
**SDS No:** 119A-19a

**Protective gloves:**  
Use Viton® or Polyvinyl Alcohol gloves. *DuPont’s registered trademark.

Tetrachloroethylene:

<table>
<thead>
<tr>
<th>Contact type</th>
<th>Glove material</th>
<th>Layer thickness</th>
<th>Breakthrough time*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full</td>
<td>Viton</td>
<td>0.70 mm</td>
<td>&gt; 480 min.</td>
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<tr>
<td>Splash</td>
<td>Nitrile rubber</td>
<td>0.40 mm</td>
<td>&gt; 240 min.</td>
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</tbody>
</table>

*Determined according to EN374 standard.

**Eye and face protection:**  
Safety glasses with side-shields.

**Other:**  
Impervious clothing as necessary to prevent skin contact.

8.2.3. Environmental exposure controls

Refer to sections 6 and 12.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Odour</th>
<th>Odour threshold</th>
<th>Vapour pressure @ 20°C</th>
<th>% Aromatics by weight</th>
<th>pH</th>
<th>Relative density</th>
<th>Weight per volume</th>
<th>Coefficient (water/oil)</th>
<th>Vapour density (air=1)</th>
<th>Rate of evaporation (ether=1)</th>
<th>Solubility in water</th>
<th>Oxidising properties</th>
<th>Explosive properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>low viscosity liquid</td>
<td>solvent odor</td>
<td>not determined</td>
<td>not determined</td>
<td>not determined</td>
<td>not applicable</td>
<td>1.6 kg/l</td>
<td>13.3 lbs/gal.</td>
<td>&lt; 1</td>
<td>&gt; 1</td>
<td>&lt; 1</td>
<td>negligible</td>
<td>none</td>
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</tbody>
</table>

9.2. Other information

None

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**SECTION 10: STABILITY AND REACTIVITY**

10.1. Reactivity

Refer to sections 10.3 and 10.5.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under conditions of normal use.

10.4. Conditions to avoid

Open flames, red hot surfaces and electric arc machines.

10.5. Incompatible materials

Barium, Lithium and strong oxidizers like liquid Chlorine and concentrated Oxygen.

10.6. Hazardous decomposition products

Hydrogen Chloride and other toxic fumes

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**SECTION 11: TOXICOLOGICAL INFORMATION**

11.1. Information on toxicological effects

**Primary route of exposure under normal use:**  
Inhalation, skin and eye contact. Personnel with acute and chronic liver disease, rhythm disorders of the heart and neuritis are generally aggravated by exposure.

**Acute toxicity - Oral:**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrachloroethylene</td>
<td>LD50, rat</td>
<td>&gt; 3000 mg/kg</td>
</tr>
</tbody>
</table>

Dermal: Prolonged contact with skin is unlikely to result in absorption of harmful amounts.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrachloroethylene</td>
<td>LD50, rabbit</td>
<td>&gt; 10000 mg/kg</td>
</tr>
</tbody>
</table>

Inhalation: Excessive inhalation of vapors may result in dizziness, headache and other central nervous system effects and irritate the eyes and respiratory tract.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrachloroethylene</td>
<td>LC50, rat, 4 h</td>
<td>&gt; 20 mg/l (vapor)</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Causes skin irritation. Tetrachloroethylene: This product produced irritation on rabbit skin (Primary Skin Irritation Index = 5.7 - 5.9).

Serious eye damage/irritation: Causes serious eye irritation.

Respiratory or skin sensitisation: May cause an allergic skin reaction.

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Tetrachloroethylene is considered to be an animal carcinogen by the National Toxicology Program (NTP) and the International Agency for Research on Cancer (IARC).

Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure: May cause drowsiness or dizziness.

STOT-repeated exposure: Tetrachloroethylene: Animal studies have reported liver and kidney effects. Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

Other information: None

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. The information given below is based on a knowledge of the components and the ecotoxicology of similar substances.

12.1. Toxicity
Material is moderately toxic to aquatic organisms on an acute basis. May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability
Tetrachloroethylene: Biodegradation may occur under anaerobic conditions; degradation is expected in the atmospheric environment within days to weeks; OECD 301C (28 days): 11% Biodegradability; Theoretical Oxygen Demand (ThOD): 0.19 mg/mg.

12.3. Bioaccumulative potential
Tetrachloroethylene: Low potential for bioaccumulation (BCF: 49, measured; log Kow: 2.53, measured).

12.4. Mobility in soil

12.5. Results of PBT and vPvB assessment
This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6. Other adverse effects
None known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Incinerate absorbed material in an approved incinerator, or treat to appropriate treatment standard. Spent or unused solvent can be recovered and reclaimed. Check local, state and national/federal regulations and comply with the most stringent requirement. This product is classified as a hazardous waste according to 2008/98/EC.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number
ADR/RID/ADN/IMDG/ICAO: UN1950
TDG: UN1950
US DOT: UN1950
<table>
<thead>
<tr>
<th>Section</th>
<th>Text</th>
</tr>
</thead>
</table>
| 14.2. UN proper shipping name | **ICAO:** Aerosols, non-flammable, containing substances in Division 6.1, Packing Group III  
**IMDG:** Aerosols  
**ADR/RID/ADN:** Aerosols, Toxic  
**TDG:** Aerosols  
**US DOT:** Aerosols |
| 14.3. Transport hazard class(es) | **ADR/RID/ADN/IMDG/ICAO:** 2.2, (6.1)  
**TDG:** 2.2, (6.1)  
**US DOT:** 2.2, (6.1) |
| 14.4. Packing group | **ADR/RID/ADN/IMDG/ICAO:** NOT APPLICABLE  
**TDG:** NOT APPLICABLE  
**US DOT:** NOT APPLICABLE |
| 14.5. Environmental hazards | MARINE POLLUTANT (TETRACHLOROETHYLENE – PG III) |
| 14.6. Special precautions for user | NO SPECIAL PRECAUTIONS FOR USER |
| 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | NOT APPLICABLE |
| 14.8. Other information | US DOT: ERG NO. 126  
IMDG: EmS. F-D, S-U, MARINE POLLUTANT (TETRACHLOROETHYLENE – PG III)  
ADR: Classification code 5T, Tunnel restriction code (D) |

**SECTION 15: REGULATORY INFORMATION**

| 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture | |
| 15.1.1. EU regulations | Authorisations under Title VII: Not applicable  
Restrictions under Title VII: None |
| 15.1.2. National regulations | |
| **US EPA SARA TITLE III** | |
| 312 Hazards: | 313 Chemicals: |
| Immediate | Tetrachloroethylene 127-18-4 95-99% |
| Delayed | |

**Other national regulations:** National implementations of the EC Directives referred to in section 15.1.1.

15.2. Chemical safety assessment  
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.
SECTION 16: OTHER INFORMATION

Abbreviations and acronyms:
- ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE: Acute Toxicity Estimate
- BCF: Bioconcentration Factor
- cATpE: Converted Acute Toxicity point Estimate
- CLP: Classification Labelling Packaging Regulation (1272/2008/EC)
- ES: Exposure Standard
- GHS: Globally Harmonized System
- ICAO: International Civil Aviation Organization
- IMDG: International Maritime Dangerous Goods
- LC50: Lethal Concentration to 50 % of a test population
- LD50: Lethal Dose to 50% of a test population
- LOEL: Lowest Observed Effect Level
- N/A: Not Applicable
- NA: Not Available
- NOEC: No Observed Effect Concentration
- NOEL: No Observed Effect Level
- OECD: Organization for Economic Co-operation and Development
- PBT: Persistent, Bioaccumulative and Toxic substance
- (Q)SAR: Quantitative Structure-Activity Relationship
- REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (1907/2006/EC)
- REL: Recommended Exposure Limit
- RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
- SDS: Safety Data Sheet
- STEL: Short Term Exposure Limit
- STOT RE: Specific Target Organ Toxicity, Repeated Exposure
- STOT SE: Specific Target Organ Toxicity, Single Exposure
- TGD: Transportation of Dangerous Goods (Canada)
- TWA: Time Weighted Average
- US DOT: United States Department of Transportation
- vPvB: very Persistent and very Bioaccumulative substance
- WEL: Workplace Exposure Limit
- WHMIS: Workplace Hazardous Materials Information System
- Other abbreviations and acronyms can be looked up at www.wikipedia.org.

Key literature references and sources for data:
- Commission des normes, de l’équité, de la santé et de la sécurité du travail (CNESST)
- Chemical Classification and Information Database (CCID)
- European Chemicals Agency (ECHA) - Information on Chemicals
- Hazardous Substances Information System (HSIS)
- National Institute of Technology and Evaluation (NITE)
- Swedish Chemicals Agency (KEMI)
- U.S. National Library of Medicine Toxicology Data Network (TOXNET)

Procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008 [CLP]:

<table>
<thead>
<tr>
<th>Classification</th>
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<tr>
<td>Carc. 2, H351</td>
<td>Bridging principle &quot;Dilution&quot;</td>
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<td>Skin Irrit. 2, H315</td>
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<td>Skin Sens. 3, H317</td>
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<td>STOT SE 3, H336</td>
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<td>Aquatic Chronic 2, H411</td>
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</tbody>
</table>

Relevant H-statements:
- H229: Pressurized container: May burst if heated.
- H315: Causes skin irritation.
- H317: May cause an allergic skin reaction.
- H319: Causes serious eye irritation.
- H336: May cause drowsiness or dizziness.
- H351: Suspected of causing cancer.
- H411: Toxic to aquatic life with long lasting effects.

Hazard pictogram names: Gas cylinder (non-CLP) exclamation mark, health hazard, environment

Changes to the SDS in this revision: Section 1.3.

Revision date: 26 April 2018

Further information: None
This information is based solely on data provided by suppliers of the materials used, not on the mixture itself. No warranty is expressed or implied regarding the suitability of the product for the user’s particular purpose. The user must make their own determination as to suitability.