



## SAFETY DATA SHEET

in accordance with REACH (1907/2006/EC, as amended by 453/2010/EC)

Revision date: 6 May 2013

Initial date of issue: 6 July 2007

SDS No. 119B-16

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

#### 1.1. Product identifier

**Product name:** 273 Electric Motor Cleaner (Bulk)

**Substance name:** Tetrachloroethylene

**EC No.:** 204-825-9

**REACH Registration No.:** 01-2119475329-28

**CAS No.:** 127-18-4

#### 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)  
E-mail (SDS questions): ProductMSDSs@chesterton.com  
E-mail: customer.service@chesterton.com  
SDS requests: www.chesterton.com

**Supplier:**

#### 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)

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the substance or mixture

##### 2.1.1. Classification according to Regulation (EC) No 1272/2008 [CLP] / GHS

Carc. 2, H351  
Skin Irrit. 2, H315  
Skin Sens. 1, H317  
STOT SE 3, H336  
Aquatic Chronic 2, H411

##### 2.1.2. Classification according to Directive 1999/45/EC

Carc. 3; R40  
Irritant; Xi; R38  
R43  
R67  
Dangerous for the environment; N; R51/53

##### 2.1.3. Canadian WHMIS classification

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 classification

Hazardous according to criteria of Safe Work Australia.

##### 2.1.5. Additional information

For full text of H-statements and R-phrases: see SECTIONS 2.2 and 16.

**2.2. Label elements**

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

Hazard pictograms:



Signal word: Warning

Hazard statements:

H351	Suspected of causing cancer.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements:

P201	Obtain special instructions before use.
P261	Avoid breathing vapors.
P281	Use personal protective equipment as required.
P280A	Wear protective gloves.
P308/313	IF exposed or concerned: Get medical advice/attention.
P273	Avoid release to the environment.

Supplemental information: EC No. 204-825-9

**2.3. Other hazards**

None known

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.1. Substances**

Hazardous Ingredients <sup>1</sup>	% Wt.	CAS No.	EC No.
Tetrachloroethylene	100	127-18-4	204-825-9

<sup>1</sup>Classified according to: \* 29 CFR 1910.1200, 1915, 1916, 1917, Mass. Right-to-Know Law (ch. 40, M.G.L..O. 111F), California Proposition 65  
 \* 1272/2008/EC, 67/548/EEC, 99/45/EC, REACH  
 \* Controlled Products Regulations  
 \* Safe Work Australia [NOHSC: 1008 (2004)]

**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 and wash before reuse. 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.

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

Treat symptoms.

**SECTION 5: FIRE-FIGHTING MEASURES****5.1. Extinguishing media**

**Suitable extinguishing media:** Not combustible. Use extinguishing media suitable for the surrounding fire.

**Unsuitable extinguishing media:** Not applicable

**5.2. Special hazards arising from the substance or mixture**

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:** –

**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**

Vapors are heavier than air and will collect in low areas. Keep container closed when not in use. Do not eat, drink or smoke in work area. Utilize exposure controls and personal protection as specified in Section 8. Wash thoroughly after handling.

**7.2. Conditions for safe storage, including any incompatibilities**

Store in a cool, dry and well-ventilated area. Keep container tightly closed.

**7.3. Specific end use(s)**

No special precautions.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1. Control parameters**

**Occupational exposure limit values**

Ingredients	OSHA PEL		ACGIH TLV		UK WEL		AUSTRALIA ES	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Tetrachloroethylene	100	–	25	172	50	345	50	340
	200 (Ceiling)	–	STEL:		STEL:		STEL:	
	300 (5 mins. in 3 hrs.)		100	689	100	689	150	1020

**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 limit is exceeded, use air-line or self-contained breathing apparatus (EN filter type A).

**Protective gloves:** Use Viton\* or Polyvinyl Alcohol gloves. \*DuPont's registered trademark.

Contact type	Glove material	Layer thickness	Breakthrough time*
Full	Viton	0.70 mm	> 480 min.
Splash	Nitrile rubber	0.40 mm	> 240 min.

\*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.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1. Information on basic physical and chemical properties**

<b>Physical state</b>	low viscosity liquid	<b>Odour</b>	solvent odor
<b>Colour</b>	clear	<b>Odour threshold</b>	no data available
<b>Initial boiling point</b>	121°C (250°F)	<b>Vapour pressure @ 20°C</b>	14.2 mm Hg
<b>Melting point</b>	not applicable	<b>% Aromatics by weight</b>	not determined
<b>% Volatile (by volume)</b>	100	<b>pH</b>	not applicable
<b>Flash point</b>	none	<b>Relative density</b>	1.6 kg/l
<b>Method</b>	ASTM D56	<b>Weight per volume</b>	13.3 lbs/gal.
<b>Viscosity</b>	not determined	<b>Partition coefficient: n-octanol/water</b>	< 1
<b>Autoignition temperature</b>	not determined	<b>Vapour density (air=1)</b>	> 1
<b>Decomposition temperature</b>	no data available	<b>Rate of evaporation (ether=1)</b>	< 1
<b>Upper/lower flammability or explosive limits</b>	none	<b>Solubility in water</b>	negligible
<b>Flammability (solid, gas)</b>	not applicable	<b>Oxidising properties</b>	none
<b>Explosive properties</b>	none		

**9.2. Other information**

None

**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

**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:** LD50, rat > 3000 mg/kg

**Dermal:** Prolonged contact with skin is unlikely to result in absorption of harmful amounts.  
LD50, rabbit > 10000 mg/kg

**Inhalation:** Excessive inhalation of vapors may result in dizziness, headache and other central nervous system effects and irritate the eyes and respiratory tract.  
LC50, rat, 4 h > 20 mg/l (vapor)

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

**Serious eye damage/irritation:** May cause slight eye irritation. Eye irritation, rabbit: 4/110.

**Respiratory or skin sensitisation:** May cause an allergic skin reaction. Skin sensitization, mouse: Sensitizing.

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

<b>Carcinogenicity:</b>	Tetrachloroethylene is considered to be an animal carcinogen by the National Toxicology Program (NTP) and the International Agency for Research on Cancer (IARC).
<b>Reproductive toxicity:</b>	Based on available data, the classification criteria are not met.
<b>STOT-single exposure:</b>	May cause drowsiness or dizziness.
<b>STOT-repeated exposure:</b>	Animal studies have reported liver and kidney effects. Based on available data, the classification criteria are not met.
<b>Aspiration hazard:</b>	Based on available data, the classification criteria are not met.
<b>Other information:</b>	WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

**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**

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**

Low potential for bioaccumulation (BCF: 49, measured; log Kow: 2.53, measured). Air, Henry's law constant (H): 2110 Pa.m<sup>3</sup>/mol.

**12.4. Mobility in soil**

Expected to have high mobility in soils (Koc: 50-150).

**12.5. Results of PBT and vPvB assessment**

According to the results of its assessment, this substance is not 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 91/689/EEC.

**European List of Wastes code:** 07 01 03

**SECTION 14: TRANSPORT INFORMATION****14.1. UN number**

<b>ADR/RID/ADN/IMDG/ICAO:</b>	UN1897
<b>TDG:</b>	UN1897
<b>US DOT:</b>	UN1897

**14.2. UN proper shipping name**

<b>ADR/RID/ADN/IMDG/ICAO:</b>	TETRACHLOROETHYLENE
<b>TDG:</b>	TETRACHLOROETHYLENE
<b>US DOT:</b>	TETRACHLOROETHYLENE

**14.3. Transport hazard class(es)**

<b>ADR/RID/ADN/IMDG/ICAO:</b>	6.1
<b>TDG:</b>	6.1
<b>US DOT:</b>	6.1

**14.4. Packing group**

<b>ADR/RID/ADN/IMDG/ICAO:</b>	III
<b>TDG:</b>	III
<b>US DOT:</b>	III

**14.5. Environmental hazards**

MARINE POLLUTANT

**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.160 May be shipped as Limited Quantities in packaging having a rated capacity gross weight of 66 lb. or less and in inner packages not over 5 Liters (49 CFR 173.153(b,2)) Reportable Quantity: TETRACHLOROETHYLENE 100 lbs (45.4kg) per package.

**IMDG:** EmS. F-A, S-A

**ADR:** Classification code T1, Tunnel restriction code (E)

**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 VIII:** None

**Other EU regulations:** Directive 94/33/EC on the protection of young people at work. Directive 92/85/EEC on the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding.

**15.1.2. National regulations****US EPA SARA TITLE III**

<b>312 Hazards:</b>	<b>313 Chemicals:</b>	
Immediate	Tetrachloroethylene	100%
		127-18-4
Delayed		

**Hazardous Materials Identification System (HMIS)**

4 = Severe Hazard  
3 = Serious Hazard  
2 = Moderate Hazard  
1 = Slight Hazard  
0 = Minimal Hazard  
\* = See Section 8

<b>HEALTH</b>	<b>2</b>
<b>FLAMMABILITY</b>	<b>0</b>
<b>REACTIVITY</b>	<b>1</b>
<b>Personal Protection</b>	<b>*</b>

**JAPAN PRTR****Class I Chemicals:**

Tetrachloroethylene

**Class II Chemicals:**

None

**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:** ACGIH: American Conference of Governmental Industrial Hygienists  
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  
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  
NOEL: No Observed Effect Level  
OSHA: Occupational Health & Safety Administration  
PBT: Persistent, Bioaccumulative and Toxic substance  
PEL: Permissible Exposure Limit  
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (1907/2006/EC)  
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail  
SDS: Safety Data Sheet  
STEL: Short Term Exposure Limit  
STOT: Specific Target Organ Toxicity  
TDG: Transportation of Dangerous Goods (Canada)  
TLV: Threshold Limit Value  
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](http://www.wikipedia.org).

<b>Key literature references and sources for data:</b>	Commission de la santé et de la sécurité du travail (CSST) European chemical Substances Information System (ESIS) European Chemicals Agency (ECHA) - Information on Chemicals Hazardous Substances Data Bank (HSDB) Hazardous Substances Information System (HSIS) Swedish Chemicals Agency (KEMI)
<b>Relevant H-statements:</b>	H315: Causes skin irritation. H317: May cause an allergic skin reaction. H336: May cause drowsiness or dizziness. H351: Suspected of causing cancer. H411: Toxic to aquatic life with long lasting effects.
<b>Relevant R-phrases:</b>	R38: Irritating to skin. R40: Limited evidence of a carcinogenic effect. R43: May cause sensitisation by skin contact. R67: Vapours may cause drowsiness and dizziness. R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>Hazard pictogram names:</b>	Health hazard, exclamation mark, environment
<b>Changes to the SDS in this revision:</b>	Sections 1-16, updated to new format.
<b>Further information:</b>	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.