



SAFETY DATA SHEET

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

Revision date: 13 May 2013

Initial date of issue: 3 July 2007

SDS No. 119A-18

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)
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

Aerosol, H229
Carc. 2, H351
Skin Irrit. 2, H315
Skin Sens. 1B, H317
STOT SE 3, H336
Aquatic Chronic 2, H411

2.1.2. Classification according to Directive 1999/45/EC

Carc. Cat. 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; A: Compressed gases

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. None

2.2. Label elements**Labelling according to Regulation (EC) No 1272/2008 [CLP] / GHS****Hazard pictograms:****Signal word:**

Warning

Hazard statements:

H229 Pressurized container: May burst if heated.
 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.
 P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
 P251 Pressurized container: Do not pierce or burn, even after use.
 P271 Use only outdoors or in a well-ventilated area.
 P281 Use personal protective equipment as required.
 P280 Wear protective gloves.
 P308/313 IF exposed or concerned: Get medical advice/attention.
 P410/412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.

Supplemental information:

None

2.3. Other hazards

None known

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.2. Mixtures**

Hazardous Ingredients ¹	% Wt.	CAS No./ EC No.	REACH Reg. No.	Classification (acc. to 1272/2008/EC)	Classification (67/548/EEC)
Tetrachloroethylene	95-99	127-18-4 204-825-9	NA	Carc. 2, H351 Skin Irrit. 2, H315 Skin Sens. 1B, H317 STOT SE 3, H336 Aquatic Chronic 2, H411	Carc. 3; R40 Xi; R38 R43 R67 N; R51/53 Not classified
Carbon Dioxide	1-5	124-38-9 204-696-9	NA	Not classified	Not classified

Indications of danger acc. to 67/548/EEC: Xi: Irritant; N: Dangerous for the environment
 For full text of H-statements and R-phrases: see SECTION 16.

¹Classified 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: 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****Occupational exposure limit values**

Ingredients	OSHA PEL		ACGIH TLV		UK WEL		AUSTRALIA ES	
	ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
Tetrachloroethylene	100	–	25	172	50	345	50	340
	200 (Ceiling)	–	STEL: 100	689	STEL: 100	689	STEL: 150	1020
	300 (max, 5 mins. in 3 hrs.)							
Carbon Dioxide	5000	9000	5000	9000	5000	9150	5000	9000
			STEL: 30000	54000	STEL: 15000	27400	STEL: 30000	54000

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).

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

Tetrachloroethylene:

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**

Physical state	low viscosity liquid	Odour	solvent odor
Colour	clear	Odour threshold	not determined
Initial boiling point	not applicable	Vapour pressure @ 20°C	not determined
Melting point	-22.4°C (-8.32°F)	% Aromatics by weight	not determined
% Volatile (by volume)	100	pH	not applicable
Flash point	none	Relative density	1.6 kg/l
Method	ASTM D56	Weight per volume	13.3 lbs/gal.
Viscosity	not determined	Coefficient (water/oil)	< 1
Autoignition temperature	not applicable	Vapour density (air=1)	> 1
Decomposition temperature	no data available	Rate of evaporation (ether=1)	< 1
Upper/lower flammability or explosive limits	none	Solubility in water	negligible
Flammability (solid, gas)	not applicable	Oxidising properties	none
Explosive properties	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:**

Substance	Test	Result
Tetrachloroethylene	LD50, rat	> 3000 mg/kg

Dermal:

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

Substance	Test	Result
Tetrachloroethylene	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.

Substance	Test	Result
Tetrachloroethylene	LC50, rat, 4 h	> 20 mg/l (vapor)

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:

May cause slight eye irritation.

Substance	Test	Result
Tetrachloroethylene	Eye irritation, rabbit	4/110

Respiratory or skin sensitisation:

May cause an allergic skin reaction.

Substance	Test	Result
Tetrachloroethylene	Skin sensitization, mouse	Sensitizing

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:

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

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

Tetrachloroethylene: Expected to have high mobility in soils, (KOC: 50-150). Air, Henry's law constant (H): 2110 Pa.m³/mol.

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.

European List of Wastes code: 15 01 10

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

ADR/RID/ADN/IMDG/ICAO: UN1950

TDG: UN1950

US DOT: UN1950

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

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)

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, Shipped as Limited Quantity

ADR: Classification code , Tunnel restriction code ()

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. Directive 75/324/EEC on the approximation of the laws of the Member States relating to aerosol dispensers.

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

312 Hazards: Immediate
Delayed

313 Chemicals: Tetrachloroethylene 127-18-4 95-99%

Hazardous Materials Identification System (HMIS)

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

HEALTH	2
FLAMMABILITY	0
REACTIVITY	1
Personal Protection	*

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
ATE: Acute Toxicity Estimate
BCF: Bioconcentration Factor
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
NOAEL: No Observed Adverse Effect Level
NOEL: No Observed Effect Level
OSHA: Occupational Health & Safety Administration
PBT: Persistent, Bioaccumulative and Toxic substance
PEL: Permissible Exposure Limit
(Q)SAR: Quantitative Structure-Activity Relationship
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.

Key literature references and sources for data: 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)

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

Classification	Classification procedure
Carc. 2, H351	Bridging principle "Dilution"
Skin Irrit. 2, H315	Calculation method
Skin Sens. 3, H317	Bridging principle "Dilution"
STOT SE 3, H336	Bridging principle "Dilution"
Aquatic Chronic 2, H411	Calculation method

Relevant H-statements: H229: Pressurized container: May burst if heated.
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.

Relevant R-phrases: 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.

Hazard pictogram names: Health hazard, exclamation mark, environment

Changes to the SDS in this revision: Sections 1-16, updated to new format.

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.