SAFETY DATA SHEET

in accordance with 1907/2006/EC (REACH, as amended by 2015/830/EU) 29 CFR 1910.1200 and WHMIS 2015

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

Canada: A.W. Chesterton Company Ltd., 889 Fraser Drive,
Unit 105, Burlington, Ontario L7L 4X8 - Tel. 905-335-5055
EU: Chesterton International GmbH, Am Lenzenfleck 23,
D85737 Ismaning, Germany – Tel. +49-89-996-5460

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)
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:

Signal word: Warning

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.
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:

Signal word: Warning

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

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

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

[1] 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, GHS, REACH
* WHMIS 2015
* Safe Work Australia

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

Occupational exposure limit values

Ingredients	OSHA PEL[1]		ACGIH TLV[2]		UK WEL[3]		AUSTRALIA ES[4]	
	ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3
Tetrachloroethylene	100 200 (Ceiling) 300 (max, 5 mins. in 3 hrs.)	– –	25 STEL: 100	172 689	50 STEL: 100	345 689	50 STEL: 150	340 1020
Carbon dioxide	5000	9000	5000 STEL: 30000	9000 54000	5000 STEL: 15000	9150 27400	5000 STEL: 30000	9000 54000

[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).

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: 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

Tetrachloroethylene: Expected to have high mobility in soils, (KOC: 50-150). Air, Henry's law constant (H): 2110 $Pa.m^3/mol$.

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.

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, 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 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:	**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
TDG: 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]:

Classification	Classification procedure
Carc. 2, H351	Bridging principle "Dilution"
Skin Irrit. 2, H315	Calculation method
Skin Sens. 3, H317	Bridging principle "Dilution"
Eye Irrit. 2, H319	Calculation method
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.
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.