SAFETY DATA SHEET

in accordance with 1907/2006/EC (REACH, as amended by 453/2010/EC) and 29 CFR 1910.1200

Revision date: 27 May 2015 **Initial date of issue:** 5 July 2007 **SDS No.** 182A-19

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

1.1. Product identifier

438 PTFE Coating (Aerosol)

1.2. Relevant identified uses of the substance or mixture and uses advised against

Provides a slippery, dry, clean coating of PTFE (Polytetrafluoroethylene). PTFE Coating is greaseless and nonstaining and can be used to protect and lubricate smooth nonporous surfaces. Synthetic Base Lubricant.

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:

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]

Aerosol 1, H222, H229
Repr. 2, H361d
Eye Irrit. 2, H319
STOT SE 3, H336
EUH066

2.1.2. Classification according to Directives 1999/45/EC and 1975/324/EEC

Extremely flammable; F+; R12
Irritant; Xi; R36
R66
R67

2.1.3. Classification according to 29 CFR 1910.1200 / WHMIS 2015

Aerosol 1, H222, H229
Repr. 2, H361d
STOT RE 2, H373
Eye Irrit. 2, H319
STOT SE 3, H336
EUH066

2.1.4. Classification according to WHMIS 1988

A: Compressed gases; B5: Flammable aerosols; D2A: Very toxic materials causing other effects; D2B: Toxic materials causing other effects

2.1.5. Australian statement of hazardous nature

Hazardous according to criteria of Safe Work Australia.

2.1.6. Additional information

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

2.2. Label elements

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

Hazard pictograms:

Signal word: Danger

Hazard statements:	H222	Extremely flammable aerosol.
	H229	Pressurized container: May burst if heated.
	H319	Causes serious eye irritation.
	H336	May cause drowsiness or dizziness.
	H361d	Suspected of damaging the unborn child.
Precautionary statements:	P201	Obtain special instructions before use.
	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P211	Do not spray on an open flame or other ignition source.
	P251	Do not pierce or burn, even after use.
	P261	Avoid breathing vapours/spray.
	P280	Wear protective gloves/clothing and eye/face protection.
	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: EUH066 Repeated exposure may cause skin dryness or cracking.

2.2.2. Labelling according to 29 CFR 1910.1200 / WHMIS 2015

Hazard pictograms:

Signal word: Danger

Hazard statements:	H222	Extremely flammable aerosol.
	H229	Pressurized container: May burst if heated.
	H319	Causes serious eye irritation.
	H336	May cause drowsiness or dizziness.
	H361d	Suspected of damaging the unborn child.
	H373	May cause damage to the central nervous system through prolonged or repeated exposure by inhalation.
	EUH066	Repeated exposure may cause skin dryness or cracking.
Precautionary statements:	P201	Obtain special instructions before use.
	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P211	Do not spray on an open flame or other ignition source.
	P251	Do not pierce or burn, even after use.
	P260	Do not breathe vapours/spray.
	P280	Wear protective gloves/clothing and eye/face protection.
	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: EUH066 Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

When heated to temperatures above 260ºC (500°F), PTFE resins begin to give off vapors that may cause temporary flu-like symptoms if inhaled. Thermal decomposition leads to the formation of oxidized products containing Carbon, Fluorine and Oxygen. The ACGIH states that no exposure limit is recommended pending determination of the toxicity of the products, but air concentration should be minimal. Likewise, when using this product avoid smoking for the same reason. If swallowed in large quantities, this product could be harmful or fatal.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Hazardous Ingredients[1]	% Wt.	CAS No./ EC No.	REACH Reg. No.	Classification (CLP/GHS)	Classification (67/548/EEC)
Acetone	50-60	67-64-1 200-662-2	NA	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	F; R11 Xi; R36 R66 R67
Butanone (Synonym: Methyl Ethyl Ketone)	10-20	78-93-3 201-159-0	NA	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	F; R11 Xi; R36 R66 R67
Petroleum gas*	10-20	68476-86-8 270-705-8	NA	Press. Gas Flam. Gas 1, H220	F+; R12
Toluene	1-5	108-88-3 203-625-9	NA	Flam. Liq. 2, H225 Repr. 2, H361d Asp. Tox. 1, H304 STOT RE 2, H373 Skin Irrit. 2, H315 STOT SE 3, H336	F; R11 Re 3, R63 Xn; R48/20-65 Xi; R38 R67

Indications of danger acc. to 67/548/EEC: F+: Extremely flammable; F: Highly flammable; Xn: Harmful; Xi: Irritant
For full text of H-statements and R-phrases: see SECTION 16.
*Contains less than 0.1 % w/w 1,3-Butadiene.

[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, 67/548/EEC, 99/45/EC, REACH
* WHMIS 2015
* 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. Contact physician.

Skin contact: 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. Contact physician immediately.

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

Direct eye contact will cause eye irritation. Excessive inhalation of vapors may result in dizziness, headache and other central nervous system effects and irritate the eyes and respiratory tract. Prolonged or repeated skin contact may cause skin irritation, possible allergic reaction and may defat skin. It can be absorbed through intact skin in harmful amounts. Animal studies have reported hearing loss and adverse fetal developmental effects with excessive exposure to toluene.

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

Treat symptoms.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Carbon Dioxide, dry chemical or foam

5.2. Special hazards arising from the substance or mixture

Pressurized containers, when heated, are a potential explosive hazard.

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: 3 **Y**

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. Keep away from sources of ignition - No smoking. If removal of ignition sources is not possible, then flush material away with water. 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. Vapor accumulations could flash and/or explode if ignited. Due to toxic decomposition, avoid smoking when handling PTFE products. Wash hands to avoid transfer to tobacco products.

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
Acetone	1000	2400	500 STEL 750	–	500 STEL: 1500	1210 STEL: 3620	500 STEL 1000	1185 STEL: 2375
Butanone	200	590	200 STEL 300	590 885	200 STEL: 300	600 STEL: 899	150 STEL 300	approx. 445 approx. 890
Petroleum gas	–	–	1000	–	1000	–	–	–
Toluene	200 300 (C)	–	20 (skin)	–	50 STEL: 100	191 STEL: 384	100 STEL 150	377 565

*Simple asphyxiant. No TLV.
[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].

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 approved organic vapor respirator (e.g., EN filter type A/P).

Protective gloves: Chemical resistant gloves.

Acetone:

Contact type	Glove material	Layer thickness	Breakthrough time*
Full	butyl rubber	0.7 mm	> 480 min.
Splash	Natural rubber	0.6 mm	> 10 min.

Eye and face protection: Safety goggles.

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**	strong solvent odor
Colour	milky white	**Odour threshold**	not determined
Initial boiling point	56°C (133°F)	**Vapour pressure @ 20°C**	not determined
Melting point	not determined	**% Aromatics by weight**	7.73%
% Volatile (by volume)	97.9%	**pH**	not applicable
Flash point	-18°C (0°F), product only	**Relative density**	0.75 kg/l
Method	Closed Cup	**Weight per volume**	6.28 lbs/gal.
Viscosity	not determined	**Coefficient (water/oil)**	< 1
Autoignition temperature	not determined	**Vapour density (air=1)**	> 1
Decomposition temperature	not determined	**Rate of evaporation (ether=1)**	< 1
Upper/lower flammability or explosive limits	not determined	**Solubility in water**	negligible
Flammability (solid, gas)	not determined	**Oxidising properties**	not determined
Explosive properties	not determined		

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

10.3. Possibility of hazardous reactions

No dangerous reactions known under conditions of normal use.

10.4. Conditions to avoid

Open flames and red hot surfaces.

10.5. Incompatible materials

Acids, bases and strong oxidizers like liquid Chlorine and concentrated Oxygen.

10.6. Hazardous decomposition products

Carbon Monoxide, Carbon Dioxide 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 pre-existing skin disorders and/or impaired lung function are generally aggravated by exposure.

Acute effects: Direct eye contact will cause eye irritation. 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
Toluene	LC50 inhalation, rat	49 mg/l/4 hours
Toluene	LD50 dermal rabbit	12124 mg/kg
Toluene	LD50 oral rat	636 mg/kg
Butanone	LC50 inhalation, rat	20 mg/l/4 hours
Butanone	LD50 dermal rabbit	> 8000 mg/kg
Butanone	LD50 oral rat	> 2600 mg/kg
Acetone	LC50 inhalation, rat	76 mg/l/4 hours
Acetone	LD50 dermal rabbit	20000 mg/kg
Acetone	LD50 oral rat	5800 mg/kg

Chronic effects: Prolonged or repeated skin contact may cause skin irritation, possible allergic reaction and may defat skin. It can be absorbed through intact skin in harmful amounts. Animal studies have reported hearing loss and adverse fetal developmental effects with excessive exposure to toluene.

Carcinogenicity: As per 29 CFR 1910.1200 (Hazard Communication), this product contains no carcinogens as listed by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), the Occupational Safety and Health Administration (OSHA) or Regulation (EC) No 1272/2008.

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 birth defects or other reproductive harm.

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

Long term adverse effects to aquatic organisms are not expected.

12.2. Persistence and degradability

Hazardous ingredients: will degrade in air; biodegradable

12.3. Bioaccumulative potential

Hazardous ingredients: low potential for bioaccumulation.

12.4. Mobility in soil

Liquid. Insoluble in water. The hazardous ingredients will rapidly evaporate to the air if released into the environment. Acetone, Toluene: expected to have moderate to high mobility in soils. Butanone: expected to have very high mobility in soils. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9).

12.5. Results of PBT and vPvB assessment

Not available

12.6. Other adverse effects

None known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Incinerate absorbed material with a properly licensed facility. Full or partially full containers may be incinerated or the contents may be recovered by an appropriate facility. 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, Flammable
IMDG: Aerosols
ADR/RID/ADN: Aerosols, *flammable*
TDG: Aerosols, *flammable*
US DOT: Aerosols, *flammable*

14.3. Transport hazard class(es)

ADR/RID/ADN/IMDG/ICAO: 2.1
TDG: 2.1
US DOT: 2.1

14.4. Packing group

ADR/RID/ADN/IMDG/ICAO: NOT APPLICABLE
TDG: NOT APPLICABLE
US DOT: NOT APPLICABLE

14.5. Environmental hazards

NO ENVIRONMENTAL HAZARDS

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: Shipped as Consumer Commodity ORM-D in packaging having a rated capacity gross weight of 66 lb. or less (49 CFR 173.306(i)). ERG NO. 126
IMDG: EmS. F-D, S-U, Shipped as Limited Quantity
ADR: Classification code 5F, Tunnel restriction code (E), Shipped as Limited Quantity

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

312 Hazards:
Fire
Immediate
Delayed
Pressure Release

313 Chemicals:

Methyl Ethyl Ketone	78-93-3	10-20%
Toluene	108-88-3	1-5%

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	**4**
PHYSICAL HAZARD	**1**
Personal Protection	*****

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
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
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)
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)
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)
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:

Classification	Classification procedure
Aerosol 1, H222	On basis of components
Repr. 2, H361d	Bridging principle "Dilution"
Eye Irrit. 2, H319	Calculation method
STOT SE 3, H336	Bridging principle "Dilution"
STOT RE 2, H373	Bridging principle "Dilution"

Relevant H-statements:

H220: Extremely flammable gas.
H222: Extremely flammable aerosol.
H225: Highly flammable liquid and vapour.
H229: Pressurized container: May burst if heated.
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.
H361d: Suspected of damaging the unborn child.
H373: May cause damage to organs through prolonged or repeated exposure.

Relevant R-phrases: R11: Highly flammable.
R12: Extremely flammable.
R36: Irritating to eyes.
R38: Irritating to skin.
R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R63: Possible risk of harm to the unborn child.
R65: Harmful: may cause lung damage if swallowed.
R66: Repeated exposure may cause skin dryness or cracking.
R67: Vapours may cause drowsiness and dizziness.

Hazard pictogram names: Flame, health hazard, exclamation mark

Changes to the SDS in this revision: Sections 2.1, 2.2.

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.