SAFETY DATA SHEET

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

Revision date: 27 November 2012 **Initial date of issue:** 10 August 2007 **SDS No.** 110B-14

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

1.1. Product identifier

421 Clear Protective Coating (Bulk)

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

General duty, impermeable, flexible plastic coating. Protects against air, water, oils, chemicals, corrosion.

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 Directive 1999/45/EC

Highly flammable; F; R11
Harmful; Xn: R48/20
Repr. Cat. 3; R63
Irritant; Xi; R36/38
R67

2.1.2. Canadian WHMIS classification

B2: Flammable liquids; D2A: Very toxic materials causing other effects; D2B: Toxic materials causing other effects

2.1.3. Australian classification

Hazardous according to criteria of Safe Work Australia.

2.1.4. Additional information

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

2.2. Label elements

Labelling according to Directive 1999/45/EC

Danger symbols: F - Highly flammable; Xn - Harmful

R-phrases:

R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R63	Possible risk of harm to the unborn child.
R36/38	Irritating to eyes and skin.
R67	Vapours may cause drowsiness and dizziness. *

S-phrases:

S16	Keep away from sources of ignition - No smoking.
S36/37	Wear suitable protective clothing and gloves.
S23C	Do not breathe vapour/spray.
S51	Use only in well-ventilated areas.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Other 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)
Toluene	45-50	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, Xn; R11-38-48/20-63-65-67
Methyl Ethyl Ketone	30-35	78-93-3 201-159-0	NA	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	F, Xi; R11-36-66-67
2-Methoxy-1-Methylethyl Acetate	5-10	108-65-6 203-603-9	NA	Flam. Liq. 3, H226	Xi; R10-36

Indications of danger acc. to 67/548/EEC: F: Highly flammable; Xn: Harmful; Xi: Irritant.
For full text of H-statements and R-phrases: 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, 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. Contact physician.

Skin contact: Wash skin with soap and water. Remove contaminated clothing. Contact physician.

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

Ingestion: Do not induce vomiting. Contact physician immediately.

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

Direct eye contact will cause moderate eye irritation. Excessive inhalation of vapors will cause dizziness, headache, nausea, eye and respiratory tract irritation, irregular heartbeats (arrhythmia) and in extreme cases, loss of consciousness. 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. Repeated excessive exposure to 2-Methoxy-1-Methylethyl Acetate may cause respiratory irritation, liver and kidney effects, and prolonged contact with large amounts can cause drowsiness. This is unlikely as 2-Methoxy-1-Methylethyl Acetate is present in a 1-5% concentration. 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. Do not administer adrenaline (epinephrine).

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Carbon Dioxide, dry chemical, foam or water fog

5.2. Special hazards arising from the substance or mixture

None

5.3. Advice for firefighters

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

Flammability Classification: –

HAZCHEM Emergency Action Code: 2 Z

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

Electrically ground and bond equipment during transfer operations. Vapors are heavier than air and will collect in low areas. Keep container tightly closed when not in use. Utilize exposure controls and personal protection as specified in Section 8.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry and well-ventilated area.

7.3. Specific end use(s)

No special precautions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Hazardous 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
Toluene	200 (Ceiling) 300	– –	20	–	50 STEL: 100	191 STEL: 384	50 STEL: 150	191 574
Methyl Ethyl Ketone	200	590	200 STEL: 300	590 885	200 STEL: 300	600 STEL: 899	150 STEL: 300	445 890
2-Methoxy-1-Methylethyl Acetate	–	–	–	–	50 STEL: 100	274 STEL: 548	50 STEL: 100	274 548

8.2. Exposure controls

8.2.1. Engineering measures

Use only in well-ventilated areas. If exposure limits are exceeded, provide adequate explosion-proof ventilation.

8.2.2. Individual protection measures

Respiratory protection: Not normally needed. If exposure limits are exceeded, use approved organic vapor respirator.

Protective gloves: Chemical resistant gloves (e.g. Viton*, Polyvinyl Alcohol). *DuPont's registered trademark.

Toluene:

Contact type	Glove material	Layer thickness	Breakthrough time*
Full	Viton*	0.70 mm	> 480 min.
Splash	Nitrile rubber	0.40 mm	> 10 min.

*Determined according to EN374 standard.

Eye and face protection: Safety goggles.

Other: Impervious clothing as necessary to prevent skin contact. Remove contaminated clothing and wash before reuse.

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 determined	**Vapour pressure @ 20°C**	not determined
Melting point	not determined	**% Aromatics by weight**	46%
% Volatile (by volume)	90.6%	**pH**	not applicable
Flash point	-4°C (25°F)	**Relative density**	0,88 kg/l
Method	PM Closed Cup	**Weight per volume**	7.31 lbs/gal.
Viscosity	8-14 cps @25°C	**Coefficient (water/oil)**	< 1
Autoignition temperature	not determined	**Vapour density (air=1)**	> 1
Decomposition temperature	no data available	**Rate of evaporation (ether=1)**	< 1
Upper/lower flammability or explosive limits	not determined	**Solubility in water**	negligible
Flammability (solid, gas)	not applicable	**Oxidising properties**	not applicable
Explosive properties	not applicable		

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

Some strong 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 eye, skin and respiratory disorders are generally aggravated by exposure.

Acute effects: Direct eye contact will cause moderate eye irritation. Excessive inhalation of vapors will cause dizziness, headache, nausea, eye and respiratory tract irritation, irregular heartbeats (arrhythmia) and in extreme cases, loss of consciousness.

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
Methyl Ethyl Ketone	LC50 inhalation, rat	20 mg/l/4 hours
Methyl Ethyl Ketone	LD50 dermal, rabbit	> 8000 mg/kg
Methyl Ethyl Ketone	LD50 oral, rat	> 2600 mg/kg
2-Methoxy-1-Methylethyl Acetate	LC50 inhalation, rat	23,8 mg/l/6 h
2-Methoxy-1-Methylethyl Acetate	LD50 dermal, rabbit	> 5000 mg/kg
2-Methoxy-1-Methylethyl Acetate	LD50 oral, rat	8532 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. Repeated excessive exposure to 2-Methoxy-1-Methylethyl Acetate may cause respiratory irritation, liver and kidney effects, and prolonged contact with large amounts can cause drowsiness. This is unlikely as 2-Methoxy-1-Methylethyl Acetate is present in a 1-5% concentration. 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 in 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. WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

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: readily biodegradable. Methyl Ethyl Ketone, Toluene: can degrade rapidly in air.

12.3. Bioaccumulative potential

Hazardous ingredients: low potential for bioaccumulation.

12.4. Mobility in soil

Liquid. Insoluble in water. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9). Methyl Ethyl Ketone, 2-Methoxy-1-Methylethyl Acetate: expected to have very high mobility in soils. Toluene: expected to have moderate mobility in soil.

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

Destruction and removal of hazardous constituents; incineration; or recovery of organics. 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: 08 01 11

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

ADR/RID/ADN/IMDG/ICAO:	UN1263
TDG:	UN1263
US DOT:	UN1263

14.2. UN proper shipping name

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

14.3. Transport hazard class(es)

ADR/RID/ADN/IMDG/ICAO:	3
TDG:	3
US DOT:	3

14.4. Packing group

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

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: ERG NO. 128
IMDG: EmS F-E, S-E
ADR: Classification code F1 , Tunnel restriction code (D/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.

15.1.2. National regulations

US EPA SARA TITLE III

312 Hazards:	**313 Chemicals:**		
Immediate	Toluene	108-88-3	45-50%
Fire	Methyl Ethyl Ketone		78-93-3 30-35%
Delayed			

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	**3**
REACTIVITY	**1**
Personal Protection	*****

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Class I Chemicals:	**Class II Chemicals:**
Toluene	None

Other national regulations: National implementation of the EC Directive 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.

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)

Relevant H-statements:

H225: Highly flammable liquid and vapour.
H226: Flammable liquid and vapour.
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:

R10: Flammable.
R11: Highly 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.

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

Further information: *R65: not applicable according to criteria.

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.