SAFETY DATA SHEET

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

Revision date: 29 June 2015 **Initial date of issue:** 5 July 2007 **SDS No.** 179B-19

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

1.1. Product identifier

610 Synthetic Lubricating Fluid (Bulk)

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

Synthetic Base Lubricant. For the lubrication of equipment operating at temperatures to 270°C (518°F).

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]

Aquatic Chronic 2, H411

2.1.2. Classification according to 29 CFR 1910.1200 / WHMIS 2015

Repr. 2, H361
Aquatic Chronic 2, H411

2.1.3. Classification according to WHMIS 1988

Not controlled

2.1.4. Australian statement of hazardous nature

Not classified as hazardous according to criteria of Safe Work Australia.

2.1.5. Additional information

None

2.2. Label elements

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

Hazard pictograms:

Signal word:	none	
Hazard statements:	H411	Toxic to aquatic life with long lasting effects.
Precautionary statements:	P273	Avoid release to the environment.
	P391	Collect spillage.
	P501A	Dispose of contents/container to an approved waste disposal plant.
Supplemental information:	EUH210	Safety data sheet available on request.

2.2.2. Labelling according to 29 CFR 1910.1200 / WHMIS 2015

Hazard pictograms:

Signal word: Warning

Hazard statements:	H361	Suspected of damaging fertility or the unborn child.
	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.
	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.
	P391	Collect spillage.
	P501A	Dispose of contents/container to an approved waste disposal plant.

Supplemental information: None

2.3. Other hazards

None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Hazardous Ingredients[1]	% Wt.	CAS No./ EC No.	REACH Reg. No.	CLP/GHS Classification
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	1-5	68411-46-1 270-128-1	NA	Aquatic Chronic 3; H412
tris(methylphenyl) phosphate (Tricresyl phosphate)*	2 - <3	1330-78-5 215-548-8	NA	Repr. 2: H361 Aquatic Acute 1; H400 (M-factor 1) Aquatic Chronic 1; H410

For full text of H-statements: see SECTION 16.
*Contains less than 0.15% w/w ortho isomer.

[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, 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. Remove contaminated clothing. 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: If conscious, drink large quantities of water. Do not induce vomiting. Contact physician immediately.

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

Sensitizing effects

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: Carbon Dioxide, dry chemical, foam, alcohol-resistant foam, water mist

Unsuitable extinguishing media: Water jets

5.2. Special hazards arising from the substance or mixture

Water may cause frothing.

5.3. Advice for firefighters

Recommend Firefighters wear self-contained breathing apparatus.

Flammability Classification: not determined

HAZCHEM Emergency Action Code: 2 Z

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

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. Surface may be slippery. 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

Utilize exposure controls and personal protection as specified in Section 8. May attack some rubber materials and paints. As with any product involved with moving equipment, care is recommended. If in doubt, stop equipment prior to application.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry area.

7.3. Specific end use(s)

For the lubrication of equipment operating at temperatures to 270°C (518°F). Refer to the product data sheet for more detailed application information.

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
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	–	–	–	–	–	–	–	–
tris(methylphenyl) phosphate	–	–	–	–	–	–	–	–

Chesterton recommended limit: 5 mg/m^3 (oil mist).
[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

No special requirements. If using under extreme heat, use local exhaust.

8.2.2. Individual protection measures

Respiratory protection: Not normally needed.

Protective gloves: Neoprene gloves

Eye and face protection: Safety glasses

Other: Long sleeves, long pants and good personal hygiene to minimize skin contact.

8.2.3. Environmental exposure controls

Keep out of sewers, streams and waterways.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	liquid	**Odour**	mild
Colour	amber	**Odour threshold**	not determined
Initial boiling point	not determined	**Vapour pressure @ 20°C**	not determined
Melting point	not determined	**% Aromatics by weight**	0%
% Volatile (by volume)	1%	**pH**	not applicable
Flash point	> 282°C (> 540°F)	**Relative density**	0.97 kg/l
Method	Cleveland Open Cup	**Weight per volume**	8.1 lbs/gal.
Viscosity	150 cps @ 25°C	**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 applicable	**Solubility in water**	slightly soluble
Flammability (solid, gas)	not applicable	**Oxidising properties**	not determined
Explosive properties	not applicable		

9.2. Other information

None

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No dangerous reactions known under conditions of normal use.

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

Temperatures over 270°C (518°F)

10.5. Incompatible materials

Strong oxidizers like liquid Chlorine and concentrated oxygen, caustic and acid solutions.

10.6. Hazardous decomposition products

Carbon Monoxide, Carbon Dioxide, Oxides of Phosphorus and other toxic fumes.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Primary route of exposure under normal use: Skin and eye contact.

Acute toxicity -

Oral: Not classified due to lack of data.

Substance	Test	Result
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	LD50 oral, rat (OECD 401)	> 2000 mg/kg
tris(methylphenyl) phosphate	LD50 oral, rat	> 5000 mg/kg

Dermal: Not classified due to lack of data.

Substance	Test	Result
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	LD50 dermal, rat	> 2000 mg/kg
tris(methylphenyl) phosphate	LD50 dermal, rabbit	>10000 mg/kg

Inhalation: Not classified due to lack of data.

Substance	Test	Result
tris(methylphenyl) phosphate	LC50 inhalation, rat	> 11.1 mg/l

Skin corrosion/irritation: Not classified due to lack of data.

Substance	Test	Result
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Skin irritation, rabbit, (OECD 404)	No skin irritation
tris(methylphenyl) phosphate	Skin irritation, rabbit, 24 h	No skin irritation

Serious eye damage/ irritation: Not classified due to lack of data.

Substance	Test	Result
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Eye irritation, rabbit (OECD 405)	No eye irritation
tris(methylphenyl) phosphate	Eye irritation, rabbit	No eye irritation

Respiratory or skin sensitisation: Not classified due to lack of data.

Substance	Test	Result
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Skin sensitization, guinea pig (OECD 406)	No skin sensitization
tris(methylphenyl) phosphate	Skin sensitization	No skin sensitization

Germ cell mutagenicity: Not classified due to lack of data.

Carcinogenicity: Not classified due to lack of data. 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) or the Occupational Safety and Health Administration (OSHA).

Reproductive toxicity: Not classified due to lack of data. Tricresyl phosphate has caused impaired fertility in animal ingestion studies.

STOT-single exposure: Not classified due to lack of data.

STOT-repeated exposure: Not classified due to lack of data. Based on the presence of tricresyl phosphate, exposure over time may cause neurological disturbances which may progress to delayed neurotoxicity characterized by ataxia and tremors.

Substance	Test	Result
tris(methylphenyl) phosphate	mouse, male / female, days/weeks	NOEL: 50 mg/kg LOEL: 100 mg/kg

Aspiration hazard: Based on available data, the classification criteria are not met.

Other information: Information is based on available data on product components. Product as a whole has not been evaluated.

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

Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene: not readily biodegradable (CO2 Evolution Test). Tricresyl phosphate: biodegradable.

12.3. Bioaccumulative potential

Tricresyl phosphate: may bioaccumulate.

12.4. Mobility in soil

Liquid. Slightly soluble in water. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9). Tricresyl phosphate: expected to be relatively immobile 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

Incinerate absorbed material. Incinerate or stabilize and solidify for secure landfill. Check local, state and national/federal regulations and comply with the most stringent requirement.

European List of Wastes code: Not determined

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

ADR/RID/ADN/IMDG/ICAO:	UN3082
TDG:	UN3082
US DOT:	UN3082

14.2. UN proper shipping name

ADR/RID/ADN/IMDG/ICAO:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (tris(methylphenyl) phosphate)
TDG:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (tris(methylphenyl) phosphate)
US DOT:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (tris(methylphenyl) phosphate)

14.3. Transport hazard class(es)

ADR/RID/ADN/IMDG/ICAO:	9
TDG:	9
US DOT:	9

14.4. Packing group

ADR/RID/ADN/IMDG/ICAO:	III
TDG:	III
US DOT:	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.171,
May be shipped as NON-RESTRICTED in non-bulk packagings (119 gallons or less) by motor vehicle, rail car or aircraft. (49 CFR 171.4(c))

IMDG: EmS. F-A, S-F
May be shipped as NON-RESTRICTED in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less. (IMDG CODE Amendment 37-14, 2.10.2.7)

ICAO/IATA: May be shipped as NON-RESTRICTED in single or combination packagings containing a net quantity per single or inner

packaging of 5 L or less.(IATA Dangerous Goods Regulation 56th edition, 4.4 Special Provisions A197)

ADR: Classification code M6 Tunnel restriction code (E)
May be shipped as NON-RESTRICTED in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less. (ADR 2015 Volume 1, Chapter 3.3 Special Provisions 375)

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: None

Restrictions under Title VIII: None

Other EU regulations: Not applicable

15.1.2. National regulations

US EPA SARA TITLE III

312 Hazards: Immediate, Delayed

313 Chemicals: None

Hazardous Materials Identification System (HMIS)

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

HEALTH	**1**
FLAMMABILITY	**1**
PHYSICAL HAZARD	**1**
Personal Protection	*****

Other national regulations: None

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 RE: Specific Target Organ Toxicity, Repeated Exposure
STOT SE: Specific Target Organ Toxicity, Single Exposure
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
Aquatic Chronic 2, H411	Calculation method

Relevant H-statements: H361f: Suspected of damaging fertility.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.
H412: Harmful to aquatic life with long lasting effects.

Hazard pictogram names: Health hazard, Environment

Changes to the SDS in this revision: Section 14.

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.