

SAFETY DATA SHEET

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

Revision date: 6 February 2015 **Initial date of issue:** 12 July 2007 **SDS No.** 108B-20

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

1.1. Product identifier

601 Chain Drive Pin & Bushing Lubricant (Bulk)

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

Petroleum 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] / 29 CFR 1910.1200 / GHS

Asp. Tox. 1, H304
Aquatic Chronic 3, H412

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

R52/53

2.1.4. Canadian WHMIS classification

D2B: Toxic materials causing other effects

2.1.5. Australian classification

Hazardous according to criteria of Safe Work Australia.

2.1.6. Additional information

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

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP] / 29 CFR 1910.1200 / GHS

Hazard pictograms:



Signal word:

Danger

Hazard statements:

H304 May be fatal if swallowed and enters airways.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements: P273 Avoid release to the environment.
 P301/310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 P331 Do NOT induce vomiting.
 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.	Classification (CLP/GHS)	Classification (67/548/EEC)
Distillates (petroleum), hydrotreated heavy naphthenic*	70-80	64742-52-5 265-155-0	NA	Asp. Tox. 1, H304	Not classified
N-Methyl-2-pyrrolidone	1-2	872-50-4 212-828-1	NA	Repr. 1B, H360D Eye Irrit. 2, H319 Skin Irrit. 2, H315 STOT SE 3, H335	Repr. Cat. 2; R61 Xi; R36/37/38
2,6-di-tert-butyl-p-cresol	0.1-0.9	128-37-0 204-881-4	NA	[Eye Irrit. 2B, H320]** STOT SE 3, H335 Aquatic Acute 1, H410 Aquatic Chronic 1, H400 (M-factor = 1, self-classification)	Xi; R37 N; R50/53

Other ingredients:

Acetic acid, C11-14-isoalkyl esters, C13-rich	5-10	108419-35-8 283-740-9	NA	Not classified	Not classified
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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.

*Contains less than 3 % DMSO extract as measured by IP 346. **Non-CLP classification.

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. 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

Aspiration into the lungs may cause chemical pneumonitis or pulmonary oedema. Direct eye contact may cause eye irritation. High vapor concentration can cause eye and respiratory irritation, headache and dizziness. Prolonged or repeated skin contact may defat the skin and cause skin irritation.

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 or foam

Unsuitable extinguishing media: Water jets

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: not determined

HAZCHEM Emergency Action Code: 3 **Z**

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures**

Cordon off spill area. Surfaces can be slippery. 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**

Utilize exposure controls and personal protection as specified in Section 8.

7.2. Conditions for safe storage, including any incompatibilities

Keep container closed when not in use. Store in a cool, dry area.

7.3. Specific end use(s)

Petroleum base lubricant. Refer to the product instructions and 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 [□]	
	ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
Oil mist, mineral	–	5	–	5	–	–	–	5
N-Methyl-2-pyrrolidone**	–	–	–	–	25	103	25	103
					STEL:		STEL:	
					75	309	75	309
2,6-di-tert-butyl-p-cresol	–	–	–	2***	–	10	–	10
Oxo-Alcohol Acetic Acid Ester*	–	–	–	–	–	–	–	–

*Chesterton recommended limit, 8 hr TWA: 50 ppm, 10 mg/m³.

**American Industrial Hygiene Association (AIHA) recommended limit, 8 hr TWA: 10 ppm, skin.

***Inhalable fraction and vapor

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

□ 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 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.

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

Eye and face protection: Safety goggles or glasses.
Other: Impervious gloves and clothing as necessary for repetitive, prolonged contact with liquid.

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	petroleum odor
Colour	amber	Odour threshold	not determined
Initial boiling point	220°C (428°F)	Vapour pressure @ 20°C	not determined
Melting point	not determined	% Aromatics by weight	< 1%
% Volatile (by volume)	9%	pH	not applicable
Flash point	132°C (270°F)	Relative density	0.9 kg/l
Method	PM Closed Cup	Weight per volume	7.5 lbs/gal.
Viscosity	28 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 determined	Solubility in water	slightly soluble
Flammability (solid, gas)	not applicable	Oxidising properties	not determined
Explosive properties	not determined		

9.2. Other information

Kinematic viscosity at 40°C: 17.7 cSt.

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 and red hot surfaces.

10.5. Incompatible materials

Caustics, 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.

Acute toxicity -

Oral:

Substance	Test	Result
Distillates (petroleum), hydrotreated heavy naphthenic	LD50, rat	> 5000 mg/kg, estimated
Acetic acid, C11-14-isoalkyl esters, C13-rich	LD50, rat	> 5000 mg/kg
N-Methyl-2-pyrrolidone	LD50, rat	3598 mg/kg
2,6-di-tert-butyl-p-cresol	LD50, rat	6000 mg/kg

Dermal:

Substance	Test	Result
Distillates (petroleum), hydrotreated heavy naphthenic	LD50, rat	> 2000 mg/kg, estimated
Acetic acid, C11-14-isoalkyl esters, C13-rich	LD50, rabbit	> 5000 mg/kg
N-Methyl-2-pyrrolidone	LD50, rabbit	8000 mg/kg
2,6-di-tert-butyl-p-cresol	LD50, rat	2000 mg/kg

Inhalation:

High vapor concentration can cause eye and respiratory irritation, headache and dizziness.

Substance	Test	Result
Distillates (petroleum), hydrotreated heavy naphthenic	LC50, rat, 4 hours	> 5 mg/l, estimated
N-Methyl-2-pyrrolidone	LC50, rat, 4 hours	> 5.1 mg/l

Skin corrosion/irritation:

Prolonged or repeated skin contact may defat the skin and cause skin irritation.

Substance	Test	Result
Distillates (petroleum), hydrotreated heavy naphthenic	Skin irritation, rabbit	< 0.5 / 8.0, estimated
Acetic acid, C11-14-isoalkyl esters, C13-rich	Skin irritation, rabbit	Slightly irritating
N-Methyl-2-pyrrolidone	Skin irritation, rabbit, human experience	Irritating

Serious eye damage/irritation:

Direct eye contact may cause eye irritation.

Substance	Test	Result
Distillates (petroleum), hydrotreated heavy naphthenic	Eye irritation, rabbit	< 15 / 110, estimated
Acetic acid, C11-14-isoalkyl esters, C13-rich	Eye irritation, rabbit	Slightly irritating
N-Methyl-2-pyrrolidone	Eye irritation, rabbit	Moderate irritation

Respiratory or skin sensitisation:

Distillates (petroleum), hydrotreated heavy naphthenic: Skin sensitization is indicated as non-sensitizing based on data from similar products. N-Methyl-2-pyrrolidone: based on available data, the classification criteria are not met. Acetic acid, C11-14-isoalkyl esters, C13-rich: did not produce any evidence of skin irritation or skin sensitization response in a repeated insult patch test in human volunteers.

Germ cell mutagenicity:

Distillates (petroleum), hydrotreated heavy naphthenic: this substance is considered non-mutagenic and has a negative potential for tumor development based on results from the Modified Ames Assay, with a Mutagenic Index of less than 1.0. N-Methyl-2-pyrrolidone 2,6-di-tert-butyl-p-cresol: based on available data, the classification criteria are not met. Acetic acid, C11-14-isoalkyl esters, C13-rich: expected to be non-mutagenic based on data from similar materials.

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.

Reproductive toxicity:

Distillates (petroleum), hydrotreated heavy naphthenic: based on available data, the classification criteria are not met. N-Methyl-2-Pyrrolidone has produced reproductive/teratogenic effects in animal studies. WARNING: This product contains chemical(s) known to the State of California to cause reproductive toxicity. 2,6-di-tert-butyl-p-cresol: not expected to be a reproductive toxicant. Acetic acid, C11-14-isoalkyl esters, C13-rich, maternal NOAEL, rat: 500 mg/kg / day; developmental NOAEL, rat: 2500 mg/kg / day.

STOT-single exposure:

Distillates (petroleum), hydrotreated heavy naphthenic: based on available data, the classification criteria are not met. Acetic acid, C11-14-isoalkyl esters, C13-rich: High vapor concentration can cause eye and respiratory irritation, headache and dizziness. N-Methyl-2-pyrrolidone, 2,6-di-tert-butyl-p-cresol: May cause respiratory irritation.

STOT-repeated exposure:

Distillates (petroleum), hydrotreated heavy naphthenic, N-Methyl-2-pyrrolidone: based on available data, the classification criteria are not met. Acetic acid, C11-14-isoalkyl esters, C13-rich: NOAEL, 90-day oral subchronic study, rat: 500 mg/kg / day.

Aspiration hazard: May be fatal if swallowed and enters airways.

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

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment [2,6-di-tert-butyl-p-cresol: 48 h EC50 (for daphnia) = 0.48 mg/l]. Distillates (petroleum), hydrotreated heavy naphthenic, N-Methyl-2-pyrrolidone: available data indicate this product is not acutely toxic.

12.2. Persistence and degradability

Distillates (petroleum), hydrotreated heavy naphthenic: 31% biodegradation (OECD 301F, 28 days). Acetic acid, C11-14-isoalkyl esters, C13-rich: expected to biodegrade slowly in soil and water. N-Methyl-2-pyrrolidone; biodegradation: 73% (OECD 301C, 28 days), readily biodegradable. 2,6-di-tert-butyl-p-cresol: not readily biodegradable.

12.3. Bioaccumulative potential

Distillates (petroleum), hydrotreated heavy naphthenic, N-Methyl-2-pyrrolidone: not expected to bioaccumulate. Acetic acid, C11-14-isoalkyl esters, C13-rich: expected to bioaccumulate. 2,6-di-tert-butyl-p-cresol: may bioaccumulate in fish and aquatic organisms (BCF = 230 – 2500, fish, 56 days; log Kow = 5.1).

12.4. Mobility in soil

Low viscosity liquid. Slightly soluble in water. negligible. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9). Distillates (petroleum), hydrotreated heavy naphthenic: large volumes may penetrate soil and contaminate groundwater. Acetic acid, C11-14-isoalkyl esters, C13-rich: expected to have high affinity for adsorption to soil and sediments. N-Methyl-2-pyrrolidone: expected to have very high mobility in soils.

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. Free product should be incinerated or may be amenable to fuels blending. 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: 13 02 05

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

ADR/RID/ADN/IMDG/ICAO: NOT APPLICABLE

TDG: NOT APPLICABLE

US DOT: NOT APPLICABLE

14.2. UN proper shipping name

ADR/RID/ADN/IMDG/ICAO: NON-HAZARDOUS, NON REGULATED

TDG: NON-HAZARDOUS, NON REGULATED

US DOT: NON-HAZARDOUS, NON REGULATED

14.3. Transport hazard class(es)

ADR/RID/ADN/IMDG/ICAO: NOT APPLICABLE

TDG: NOT APPLICABLE

US DOT: NOT APPLICABLE

14.4. Packing group

ADR/RID/ADN/IMDG/ICAO: NOT APPLICABLE

TDG: NOT APPLICABLE

US DOT: NOT APPLICABLE

14.5. Environmental hazards

NOT APPLICABLE

14.6. Special precautions for user

NOT APPLICABLE

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

NOT APPLICABLE

14.8. Other information

NOT APPLICABLE

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:** None**15.1.2. National regulations****US EPA SARA TITLE III**

312 Hazards: Immediate
313 Chemicals: N-Methyl-2-pyrrolidone 1-2%

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
 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)
 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
Asp. Tox. 1, H304	On basis of test data
Aquatic Chronic 3, H412	Calculation method

Relevant H-statements: H304: May be fatal if swallowed and enters airways.
 H315: Causes skin irritation.
 H319: Causes serious eye irritation.
 H335: May cause respiratory irritation.
 H360D: May damage fertility or the unborn child.
 H412: Harmful to aquatic life with long lasting effects.

Relevant R-phrases: R36/37/38: Irritating to eyes, respiratory system and skin.
 R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 R61: May cause harm to the unborn child.

Hazard pictogram names: Health hazard

Changes to the SDS in this revision: Sections 2.1, 2.2, 3.2, 5.3, 8.1, 9, 11.1, 12.1, 12.2, 12.3, 12.4, 16.

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.