SAFETY DATA SHEET

in accordance with 1907/2006/EC (REACH, as amended by 453/2010/EC) 29 CFR 1910.1200 and WHMIS 2015

Revision date: 26 April 2018 **Initial date of issue:** 25 June 2008 **SDS No.** 223B-15a

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

1.1. Product identifier

388 Synthetic Tapping Fluid (Bulk)

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

A high-performance, synthetic metal working fluid. Synthetic Tapping fluid provides the industrial performance of conventional petroleum and solvent based fluids while eliminating the hazards normally associated with these traditional products. Effective for all hand and automatic tapping operations and is used for a variety of demanding metal cutting operations over a broad range of metals, including aluminum. Nonflammable.

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)

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 / WHMIS 2015 / GHS

This product does not meet the criteria for classification in any hazard class according to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, 29 CFR 1910.1200, WHMIS 2015 and GHS.

2.1.2. Classification according to WHMIS 1988

Not controlled

2.1.3. Australian statement of hazardous nature

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

2.1.4. Additional information

None

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP] / 29 CFR 1910.1200 / WHMIS 2015 / GHS

Hazard pictograms: N/A

Signal word: None

Hazard statements: None

Precautionary statements: None

Supplemental information: Contains 7a-Ethyldihydro-1H, 3H, 5H-oxazolo [3,4-c] oxazole. May produce an allergic reaction.

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
Ethylene oxide-Propylene oxide copolymer monobutyl ether	0.1-0.99	9038-95-3 Polymer	NA	Acute Tox. 2, H330 STOT RE 2, H373
7a-Ethyldihydro-1H, 3H, 5H-oxazolo [3,4-c] oxazole	0.01-0.05	7747-35-5 231-810-4	NA	Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Chronic 3, H412

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, REACH
* WHMIS 2015
* Safe Work Australia [NOHSC: 1008 (2004)]

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation: Remove person to fresh air and keep comfortable for breathing. Contact physician immediately.

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. If conscious, drink milk, egg whites, gelatin. Contact physician immediately.

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

Direct eye contact will cause minimal eye irritation. This product has the potential for slight skin irritation, rarely irritating to people.

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: Nonflammable. Use extinguisher appropriate to the surrounding fire.

Unsuitable extinguishing media: Not applicable

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: Section

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Surfaces can be slippery. Evacuate area. Provide adequate ventilation. Utilize exposure controls and personal protection as specified in Section 8.

6.2. Environmental Precautions

No special requirements.

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. Clean with an industrial detergent followed by complete rinsing with water.

6.4. Reference to other sections

Refer to section 13 for disposal advice.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid breathing mist. Do not contaminate with sodium nitrite or other nitrosating agents, which could cause the formation of cancer-causing nitrosamine. 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 area. Do not store near food or feed.

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
Ethylene oxide-Propylene oxide copolymer monobutyl ether	–	–	–	–	–	–	–	–
7a-Ethyldihydro-1H, 3H, 5H-oxazolo [3,4-c] oxazole	–	–	–	–	–	–	–	–

[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.

8.2.2. Individual protection measures

Respiratory protection: Not normally needed. In case of insufficient ventilation, use an approved amine cartridge respirator (e.g., EN filter type A-P).

Protective gloves: Barrier Cream or chemical resistant gloves (e.g., rubber, PVC) as appropriate.

Eye and face protection: Safety glasses

Other: None

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**	mild odor
Colour	amber	**Odour threshold**	not determined
Initial boiling point	100°C (212°F)	**Vapour pressure @ 20°C**	not determined
Melting point	0°C (32°F)	**% Aromatics by weight**	not applicable
% Volatile (by volume)	85%	**pH**	8.2
Flash point	none	**Relative density**	1.02 kg/l
Method	PM Closed Cup	**Weight per volume**	8.5 lbs/gal.
Viscosity	5 cps @ 25°C	**Coefficient (water/oil)**	> 1
Autoignition temperature	not applicable	**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**	complete
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

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

None

10.5. Incompatible materials

Strong reducers, alkali and strong oxidizers like liquid Chlorine and concentrated Oxygen.

10.6. Hazardous decomposition products

Oxides of Carbon and Nitrogen 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: Based on available data on components, the classification criteria are not met.

Substance	Test	Result
Ethylene oxide-Propylene oxide copolymer monobutyl ether	LD50 oral, rat	> 45000 mg/kg

Dermal: Based on available data on components, the classification criteria are not met.

Substance	Test	Result
Ethylene oxide-Propylene oxide copolymer monobutyl ether	LD50 dermal, rabbit	> 21140 mg/kg

Inhalation: ATE-mix = 9.3 mg/l (mist).

Substance	Test	Result
Ethylene oxide-Propylene oxide copolymer monobutyl ether	LC50 inhalation, rat, 4 h	0.106 - 0.26 mg/l (mist)

Skin corrosion/irritation: This product has the potential for slight skin irritation, rarely irritating to people.

Serious eye damage/ irritation: Direct eye contact will cause minimal eye irritation.

Respiratory or skin sensitisation: Ethylene oxide-Propylene oxide copolymer monobutyl ether: a similar material did not cause allergic skin reactions when tested in humans.

Germ cell mutagenicity: 7a-Ethyldihydro-1H, 3H, 5H-oxazolo [3,4-c] oxazole: based on available data, the classification criteria are not met.

Substance	Test	Result
7a-Ethyldihydro-1H, 3H, 5H-oxazolo [3,4-c] oxazole	Skin sensitization (OECD 405)	Sensitizing

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: 7a-Ethyldihydro-1H, 3H, 5H-oxazolo [3,4-c] oxazole: based on available data, the classification criteria are not met.

STOT-single exposure: 7a-Ethyldihydro-1H, 3H, 5H-oxazolo [3,4-c] oxazole: based on available data, the classification criteria are not met.

STOT-repeated exposure: Not expected to cause toxicity.

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

Not expected to be harmful to aquatic organisms. Long term adverse effects to aquatic organisms are not expected.

12.2. Persistence and degradability

Ethylene oxide-Propylene oxide copolymer monobutyl ether, biodegradation: 7% (OECD 301B, 28 days). 7a-Ethyldihydro-1H, 3H, 5H-oxazolo [3,4-c] oxazole: inherently biodegradable.

12.3. Bioaccumulative potential

Ethylene oxide-Propylene oxide copolymer monobutyl ether: not expected to bioaccumulate. 7a-Ethyldihydro-1H, 3H, 5H-oxazolo [3,4-c] oxazole: low potential for bioaccumulation (BCF: 2-3, fish, measured).

12.4. Mobility in soil

Liquid. Soluble in water. 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. Free product may be amenable to wastewater treatment with organic extraction. Removal of organics with activated carbon or biological treatment may be necessary. Check local, state and national/federal regulations and comply with the most stringent requirement. Unused product is not classified as a hazardous waste according to 2008/98/EC.

European List of Wastes code: 12 01 09

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:	**313 Chemicals:**
Immediate	None

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 [CLP] / GHS:

Classification	Classification procedure
Not applicable	Not applicable

Relevant H-statements:

H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H330: Fatal if inhaled.
H332: Harmful if inhaled.
H373: May cause damage to organs through prolonged or repeated exposure.
H412: Harmful to aquatic life with long lasting effects.

Hazard pictogram names: Not applicable

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.