# SAFETY DATA SHEET

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

**Revision date:** 20 May 2015 **Initial date of issue:** 5 July 2007 **SDS No.** 141-24

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

### 1.1. Product identifier

380 Machinery Coolant

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

For use on metal working operations requiring cooling and lubrication. This is a nonflammable, water-based lubricant (pH 9.35)

### 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]

Eye Irrit. 2, H319
Skin Irrit. 2, H315
Skin Sens. 1, H317
Aquatic Chronic 3, H412

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

Irritant; Xi; R36-38
R43

#### 2.1.3. Classification according to 29 CFR 1910.1200 / WHMIS 2015

Eye Irrit. 2, H319
Skin Irrit. 2, H315
Skin Sens. 1, H317
STOT RE 2, H373
Aquatic Chronic 3, H412

#### 2.1.4. Classification according to WHMIS 1988

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:** Warning

**Hazard statements:**

| | |
|---|---|
| H319 | Causes serious eye irritation. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H412 | Harmful to aquatic life with long lasting effects. |

**Precautionary statements:**

| | |
|---|---|
| P280 | Wear protective gloves and eye/face protection. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P305/351/338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P337/313 | If eye irritation persists: Get medical advice/attention. |
| P302/352 | IF ON SKIN: Wash with plenty of soap and water. |
| P333/313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P362/364 | Take off contaminated clothing and wash it before reuse. |

**Supplemental information:** None

**2.2.2. Labelling according to 29 CFR 1910.1200 / WHMIS 2015**

**Hazard pictograms:**

**Signal word:** Warning

**Hazard statements:**

| | |
|---|---|
| H319 | Causes serious eye irritation. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H373 | May cause damage to the liver, blood and kidneys through prolonged or repeated exposure if swallowed. |
| H412 | Harmful to aquatic life with long lasting effects. |

**Precautionary statements:** Same as section 2.2.1.

**Supplemental 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 (CLP/GHS) | Classification (67/548/EEC) |
|---|---|---|---|---|---|
| Diethanolamine | 5-9 | 111-42-2<br>203-868-0 | NA | Acute Tox. 4, H302<br>STOT RE 2, H373F<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318 | Xn; R22-48/22<br>Xi; R38-41 |
| Potassium hydroxide | 1-3 | 1310-58-3<br>215-181-3 | NA | Acute Tox. 4, H302<br>Skin Corr. 1A, H314<br>Met. Corr. 1, H290 | C; R35<br>Xn; R22 |
| 7a-Ethyldihydro-1H, 3H, 5H-oxazolo [3,4-c] oxazole | 1-2 | 7747-35-5<br>231-810-4 | NA | Acute Tox. 4, H332<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Skin Sens. 1A, H317<br>Aquatic Chronic 3, H412 | Xn; R20<br>Xi; R36-41<br>R43 |

| | | | | | |
|---|---|---|---|---|---|
| 2-Pyridinethiol-1-oxide, sodium salt | 0.1-0.2 | 3811-73-2<br>223-296-5 | NA | Acute Tox. 4, H302/H312/H332<br>Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319<br>Aquatic Acute 1, H400 (M-factor 100)<br>Aquatic Chronic 1, H410 (M-factor 10) | Xn; R20/21/22<br>Xi; R36/38<br>N; R50 |
| Other ingredients: | | | | | |
| Triethanolamine | 5-10 | 102-71-6<br>203-049-8 | NA | Not classified* | Not classified |

Indications of danger acc. to 67/548/EEC: Xn: Harmful; Xi: Irritant
*Substance with a workplace exposure limit.
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
* 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.

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

**Ingestion:** If conscious, do not induce vomiting; drink milk or water. Contact physician immediately.

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

Direct contact with supplied product (concentrate) causes eye irritation and may cause skin irritation. Mist or heated product can cause eye and respiratory tract irritation. May cause skin sensitization in susceptible individuals.

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

Treat symptoms.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing media

Nonflammable.

### 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:** not applicable

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

Surface may be slippery. 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. 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

Do not contaminate with sodium nitrite or other nitrosating agents, which could cause the formation of cancer-causing nitrosamine. Avoid breathing mist. Utilize exposure controls and personal protection as specified in Section 8.

### 7.2. Conditions for safe storage, including any incompatibilities

Store in 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$^3$ |
| Diethanolamine | 3 | – | 1 | – | – | – | 3 | 13 |
| Potassium hydroxide | – | – | (Ceiling) | 2 | (STEL) | 2 | (Ceiling) | 2 |
| 7a-Ethyldihydro-1H, 3H, 5H-oxazolo [3,4-c] oxazole | – | – | – | – | – | – | – | – |
| 2-Pyridinethiol-1-oxide, sodium salt | – | – | – | – | – | – | – | – |
| Triethanolamine | – | – | – | 5 | – | – | – | 5 |

[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 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/P2).

**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** | liquid | **Odour** | mild |
| **Colour** | dark blue | **Odour threshold** | not determined |
| **Initial boiling point** | 100°C (212°F) | **Vapour pressure @ 20°C** | not determined |
| **Melting point** | -4°C (25°F) | **% Aromatics by weight** | not determined |
| **% Volatile (by volume)** | 50% | **pH** | 9.4 |
| **Flash point** | None | **Relative density** | 1.11 kg/l |
| **Method** | PM Closed Cup | **Weight per volume** | 9.3 lbs/gal. |
| **Viscosity** | 5 cps @ 25°C | **Coefficient (water/oil)** | > 1 |
| **Autoignition temperature** | not applicable | **Vapour density (air=1)** | > 1 |
| **Decomposition temperature** | no data available | **Rate of evaporation (ether=1)** | < 1 |
| **Upper/lower flammability or explosive limits** | None | **Solubility in water** | complete |
| **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**

None

**10.5. Incompatible materials**

Reducers, acids and strong oxidizers like liquid Chlorine and concentrated Oxygen.

**10.6. Hazardous decomposition products**

Carbon Monoxide, Carbon Dioxide, NOx, aldehydes 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 may be aggravated by exposure.

**Acute effects:** Direct contact with supplied product (concentrate) causes eye irritation. Mist or heated product can cause eye and respiratory tract irritation. ATE-mix oral: 5328 mg/kg. ATE-mix dermal: 41382 mg/kg. ATE-mix inhalation: 43.7 mg/l (mist).

| Substance | Test | Result |
|---|---|---|
| 2-Pyridinethiol-1-oxide, sodium salt | LD50 oral, rat | 750 mg/kg |
| 2-Pyridinethiol-1-oxide, sodium salt | LD50 dermal, rabbit | 700 mg/kg |
| 2-Pyridinethiol-1-oxide, sodium salt | LC50 inhalation, rat | 1.1 mg/l/4 h |
| Triethanolamine | LD50 oral, rat | > 5000 mg/kg |
| Triethanolamine | LD50 dermal, rabbit | > 2000 mg/kg |
| Potassium hydroxide | LD50 oral, rat | 365 mg/kg |
| 7a-Ethyldihydro-1H, 3H, 5H-oxazolo [3,4-c] oxazole | LC50 inhalation, rat | 3.1 mg/l/4 h |
| 7a-Ethyldihydro-1H, 3H, 5H-oxazolo [3,4-c] oxazole | LD50 oral, rat | > 3600 mg/kg |
| 7a-Ethyldihydro-1H, 3H, 5H-oxazolo [3,4-c] oxazole | LC50 dermal, rabbit | 1948 mg/kg |
| Diethanolamine | LD50 oral, rat | 676 mg/kg |
| Diethanolamine | LC50 dermal, rabbit | 8328 mg/kg |

**Chronic effects:** May cause skin sensitization in susceptible individuals. The hazardous ingredients may be absorbed through the skin, although a single, prolonged exposure of this product is not expected to be toxic (LD 50 [rabbits] >2000 mg/kg).

**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:** None known

## 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.

**12.2. Persistence and degradability**

In soil and water, Triethanolamine and Diethanolamine are expected to biodegrade fairly rapidly following acclimation (half-life on the order of days to weeks). 7a-Ethyldihydro-1H, 3H, 5H-oxazolo [3,4-c] oxazole: OECD 301D (28 Days): 27% Biodegradability.

**12.3. Bioaccumulative potential**

Triethanolamine and Diethanolamine are not expected to bioaccumulate significantly in aquatic organisms. 7a-Ethyldihydro-1H, 3H, 5H-oxazolo [3,4-c] oxazole: low potential for bioaccumulation.

**12.4. Mobility in soil**

Liquid. Soluble in water. In determining environmental mobility, consider the product's physical and chemical properties (see Section 9). Triethanolamine is expected to be extremely mobile in soil and have negligible adsorption to suspended solids and sediments in water.

**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**

The water diluted used product can be primarily treated with an oil separator or settling tank to remove solids or tramp oil. At this point, it is possible that coolant concentration adjustments could be made and the coolant reclaimed for continued use. 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:** 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:** 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 Diethanolamine 111-42-2 5-9%
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** | **1** |
| **FLAMMABILITY** | **0** |
| **PHYSICAL HAZARD** | **1** |
| **Personal Protection** | ***** |

**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:**

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 |
|---|---|
| Eye Irrit. 2, H319 | Calculation method |
| Skin Irrit. 2, H315 | Calculation method |
| Skin Sens. 1, H317 | Bridging principle "Dilution" |
| Aquatic Chronic 3, H412 | Calculation method |

**Relevant H-statements:**
H290: May be corrosive to metals.
H302: Harmful if swallowed.
H312: Harmful in contact with skin.
H314: Causes severe skin burns and eye damage.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H332: Harmful if inhaled.
H373F: May cause damage to the liver, blood and kidneys through prolonged or repeated exposure if swallowed.
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.

**Relevant R-phrases:**
R20: Harmful by inhalation.
R22: Harmful if swallowed.
R35: Causes severe burns.
R36: Irritating to eyes.
R38: Irritating to skin.
R41: Risk of serious damage to eyes.
R43: May cause sensitisation by skin contact.
R48/22: Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R50: Very toxic to aquatic organisms.

**Hazard pictogram names:** Exclamation mark

**Changes to the SDS in this revision:** Sections 2.1, 2.2, 2.3, 3, 4.2, 8.1, 8.2.2, 11, 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.