# SAFETY DATA SHEET

## 1. Identification

**Product identifier** **OAK® KLEEN 340**
GENERAL PURPOSE CLEANER

**Other means of identification**

**SDS number** Not applicable

**Product code** B30273

**Recommended use** GENERAL PURPOSE CLEANER

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

**Company name** CIMCOOL® Industrial Products LLC
3000 Disney Street
Cincinnati, Ohio 45209

**Telephone (General Information)** 513-458-8100

**Emergency telephone number** 1-800-424-9300 (CHEMTREC)

**Emergency telephone number (outside USA)** 1-703-527-3887 (CHEMTREC)

**Supplier**

**Company name** Milacron Canada Corp.

**Address** 1175 Appleby Line Road, Unit B-1
Burlington Ontario L7L5H9 Canada

**Telephone (General Information)** 905-319-1919

**Emergency telephone number (outside USA)** 1-703-527-3887 (CHEMTREC)

**Supplier** Not available.

## 2. Hazard(s) identification

| | | |
|---|---|---|
| **Physical hazards** | Corrosive to metals | Category 1 |
| **Health hazards** | Skin corrosion/irritation | Category 2 |
| | Serious eye damage/eye irritation | Category 2 |
| | Sensitization, skin | Category 1 |

**Environmental hazards** Not classified.

**Label elements**

**Signal word** Warning

**Hazard statement** May be corrosive to metals. Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction.

**Precautionary statement**

| | |
|---|---|
| **Prevention** | Keep only in original packaging. Avoid breathing mist or vapor. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear eye protection/face protection. Wear protective gloves. |
| **Response** | IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. Absorb spillage to prevent material-damage. |
| **Storage** | Store in corrosive resistant container with a resistant inner liner. |
| **Disposal** | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| **Other hazards** | None known. |
| **Supplemental information** | None. |

## 3. Composition/information on ingredients

**Mixtures**

| Chemical name | Common name and synonyms | CAS number | % |
|---|---|---|---|
| MONOETHANOLAMINE | | 141-43-5 | ≤10 |
| MONOISOPROPANOLAMINE | | 78-96-6 | ≤10 |
| NONYLPHENOXYPOLYETHOXYETHANOL | | 127087-87-0 | ≤7 |
| TRIETHANOLAMINE | | 102-71-6 | ≤7 |
| HEXAHYDRO-1,3,5-TRIS (2-HYDROXYETHYL)-S- TRIAZINE | | 4719-04-4 | ≤5 |
| Other components below reportable levels | | | ≤80 |

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## 4. First-aid measures

| | |
|---|---|
| **Inhalation** | Move to fresh air. Call a POISON CENTER or doctor/physician if you feel unwell. Under normal conditions of intended use, this material is not expected to be an inhalation hazard. |
| **Skin contact** | Rinse skin with water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. |
| **Eye contact** | Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. |
| **Ingestion** | Rinse mouth thoroughly. Drink 1 or 2 glasses of water. Do not give liquids. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell. |
| **Most important symptoms/effects, acute and delayed** | Direct contact with eyes may cause temporary irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause an allergic skin reaction. |
| **Indication of immediate medical attention and special treatment needed** | Provide general supportive measures and treat symptomatically. Symptoms may be delayed. |
| **General information** | If exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance. |

## 5. Fire-fighting measures

| | |
|---|---|
| **Suitable extinguishing media** | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| **Unsuitable extinguishing media** | Not applicable, non-combustible. |
| **Specific hazards arising from the chemical** | During fire, gases hazardous to health may be formed. |
| **Special protective equipment and precautions for firefighters** | Wear suitable protective equipment. |
| **Fire fighting equipment/instructions** | Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. |

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials. In the event of fire and/or explosion do not breathe fumes.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up** Local authorities should be advised if significant spillages cannot be contained. This product is miscible in water. Prevent entry into waterways, sewer, basements or confined areas. Clean up in accordance with all applicable regulations.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb spillage to prevent material damage. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

**Environmental precautions** Contact local authorities in case of spillage to drain/aquatic environment. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

## 7. Handling and storage

**Precautions for safe handling** Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Do not get in eyes, on skin, or on clothing. Avoid breathing mist or vapor. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities** Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Keep only in the original container. Do not allow material to freeze. Store away from incompatible materials (see Section 10 of the SDS). If frozen, product may separate. Thaw completely at room temperature and stir thoroughly prior to use.

## 8. Exposure controls/personal protection

**Occupational exposure limits**

**US. ACGIH Threshold Limit Values**

| | Type | Value |
|---|---|---|
| MONOETHANOLAMINE (CAS 141-43-5) | STEL | 6 ppm |
| TRIETHANOLAMINE (CAS 102-71-6) | TWA | 5 mg/m3 |
| MONOETHANOLAMINE (CAS 141-43-5) | TWA | 3 ppm |

**Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)**

| | Type | Value |
|---|---|---|
| MONOETHANOLAMINE (CAS 141-43-5) | STEL | 15 mg/m3 |
| | | 6 ppm |
| | TWA | 7.5 mg/m3 |
| TRIETHANOLAMINE (CAS 102-71-6) | TWA | 5 mg/m3 |
| MONOETHANOLAMINE (CAS 141-43-5) | TWA | 3 ppm |

**Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)**

| | Type | Value |
|---|---|---|
| MONOETHANOLAMINE (CAS 141-43-5) | STEL | 6 ppm |
| TRIETHANOLAMINE (CAS 102-71-6) | TWA | 5 mg/m3 |

**Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)**

| | Type | Value |
|---|---|---|
| MONOETHANOLAMINE (CAS 141-43-5) | TWA | 3 ppm |

**Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)**

| | Type | Value |
|---|---|---|
| MONOETHANOLAMINE (CAS 141-43-5) | STEL | 6 ppm |
| TRIETHANOLAMINE (CAS 102-71-6) | TWA | 5 mg/m3 |
| MONOETHANOLAMINE (CAS 141-43-5) | TWA | 3 ppm |

**Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)**

| | Type | Value |
|---|---|---|
| MONOETHANOLAMINE (CAS 141-43-5) | STEL | 6 ppm |
| TRIETHANOLAMINE (CAS 102-71-6) | TWA | 3.1 mg/m3 |
| MONOETHANOLAMINE (CAS 141-43-5) | TWA | 3 ppm |
| TRIETHANOLAMINE (CAS 102-71-6) | TWA | 0.5 ppm |

**Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)**

| | Type | Value |
|---|---|---|
| MONOETHANOLAMINE (CAS 141-43-5) | STEL | 15 mg/m3 |
| | | 6 ppm |
| | TWA | 7.5 mg/m3 |
| TRIETHANOLAMINE (CAS 102-71-6) | TWA | 5 mg/m3 |
| MONOETHANOLAMINE (CAS 141-43-5) | TWA | 3 ppm |

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles). Do not get in eyes. Eye wash fountain is recommended.

**Skin protection**

**Hand protection** Use protective gloves made of: Nitrile.

**Other** Wear suitable protective clothing.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** When using, do not eat, drink or smoke. Do not get in eyes, on skin, on clothing. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

## 9. Physical and chemical properties

**Appearance** CLEAR

**Physical state** Liquid.

**Form** Liquid.

**Color** Not available.

**Odor** CHEMICAL

| | |
|---|---|
| **Odor threshold** | Not available. |
| **pH** | 10.0 |
| **Melting point/freezing point** | < 30 °F (< -1.1 °C) |
| **Initial boiling point and boiling range** | > 212 °F (> 100 °C) |
| **Flash point** | Not Applicable |
| **Evaporation rate** | Like water when diluted |
| **Flammability (solid, gas)** | Not applicable. |
| **Upper/lower flammability or explosive limits** | |
| **Flammability limit - lower (%)** | Not available. |
| **Flammability limit - upper (%)** | Not available. |
| **Explosive limit - lower (%)** | Not available. |
| **Explosive limit - upper (%)** | Not available. |
| **Vapor pressure** | Not available. |
| **Vapor density** | Not available. |
| **Relative density** | Not available. |
| **Solubility(ies)** | |
| **Solubility (water)** | 100 % Water Miscible |
| **Partition coefficient (n-octanol/water)** | Not available. |
| **Auto-ignition temperature** | Not available. |
| **Decomposition temperature** | Not available. |
| **Viscosity** | Not available. |
| **Other information** | |
| **Explosive properties** | Not explosive. |
| **Oxidizing properties** | Not oxidizing. |
| **pH in aqueous solution** | 9.1 @ 1% |
| **Specific gravity** | 1.087 |

## 10. Stability and reactivity

| | |
|---|---|
| **Reactivity** | May be corrosive to metals. |
| **Chemical stability** | Material is stable under normal conditions. |
| **Possibility of hazardous reactions** | No dangerous reaction known under conditions of normal use. |
| **Conditions to avoid** | Heat, flames and sparks. Contact with incompatible materials. |
| **Incompatible materials** | Acids. Aluminum. Oxidizing agents. Do not add sodium nitrite or other nitrosating agents which may form cancer causing nitrosamines. |
| **Hazardous decomposition products** | Smoke, fumes, oxides of nitrogen, and oxides of carbon |

## 11. Toxicological information

**Information on likely routes of exposure**

| | |
|---|---|
| **Inhalation** | Health injuries are not known or expected under normal use. |
| **Skin contact** | Causes skin irritation. May cause an allergic skin reaction. |
| **Eye contact** | Causes eye irritation. |
| **Ingestion** | Expected to be a low ingestion hazard. |
| **Symptoms related to the physical, chemical and toxicological characteristics** | Direct contact with eyes may cause temporary irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause an allergic skin reaction. |

**Information on toxicological effects**

| | |
|---|---|
| **Acute toxicity** | May cause an allergic skin reaction. |

| Components | Species | Test Results |
|---|---|---|
| MONOETHANOLAMINE (CAS 141-43-5) | | |
| **Acute** | | |
| **Dermal** | | |
| LD50 | Rabbit | 1025 mg/kg |
| **Oral** | | |
| LD50 | Guinea pig | 620 mg/kg |
| | Mouse | 700 mg/kg |
| | Rat | 10.2 g/kg |
| MONOISOPROPANOLAMINE (CAS 78-96-6) | | |
| **Acute** | | |
| **Dermal** | | |
| *Liquid* | | |
| LD50 | Rabbit | 1576 mg/kg |
| **Inhalation** | | |
| *Mist* | | |
| LC0 | Rat | 1005 mg/m³, 3 hours |
| **Oral** | | |
| *Liquid* | | |
| LD50 | Rat | 2813 mg/kg |
| NONYLPHENOXYPOLYETHOXYETHANOL (CAS 127087-87-0) | | |
| **Acute** | | |
| **Dermal** | | |
| *Liquid* | | |
| LD50 | Rabbit | 2573 mg/kg |
| **Oral** | | |
| *Liquid* | | |
| LD50 | Rat | 3980 mg/kg |
| TRIETHANOLAMINE (CAS 102-71-6) | | |
| **Acute** | | |
| **Dermal** | | |
| *Liquid* | | |
| LD50 | Rabbit | > 2000 mg/kg |
| **Oral** | | |
| LD50 | Guinea pig | 5300 mg/kg |
| *Liquid* | | |
| LD50 | Rat | 4190 mg/kg |

* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Causes skin irritation.

**Serious eye damage/eye irritation** Causes eye irritation.

**Respiratory or skin sensitization**

**Canada - Alberta OELs: Irritant**

| | |
|---|---|
| MONOETHANOLAMINE (CAS 141-43-5) | Irritant |
| TRIETHANOLAMINE (CAS 102-71-6) | Irritant |

**Canada - Quebec OELs: Sensitizer**

| | |
|---|---|
| TRIETHANOLAMINE (CAS 102-71-6) | Sensitizer. |

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** May cause sensitization by skin contact.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

TRIETHANOLAMINE (CAS 102-71-6) 3 Not classifiable as to carcinogenicity to humans.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not classified.

**Chronic effects** Not classified.

**Further information** Symptoms may be delayed.

## 12. Ecological information

**Ecotoxicity** Contains a substance which causes risk of hazardous effects to the environment.

| Components | | Species | Test Results |
|---|---|---|---|
| MONOETHANOLAMINE (CAS 141-43-5) | | | |
| **Aquatic** | | | |
| Fish | LC50 | Rainbow trout,donaldson trout (Oncorhynchus mykiss) | 114 - 196 mg/l, 96 hours |
| MONOISOPROPANOLAMINE (CAS 78-96-6) | | | |
| **Aquatic** | | | |
| Fish | LC50 | Goldfish (Carassius auratus) | 210 mg/l, 96 hours |
| *Acute* | | | |
| Crustacea | EC50 | Daphnia | 109 mg/l, 48 hours |
| NONYLPHENOXYPOLYETHOXYETHANOL (CAS 127087-87-0) | | | |
| **Aquatic** | | | |
| *Acute* | | | |
| Crustacea | EC50 | Daphnia | 1.6 - 10 mg/l, 48 hours |
| Fish | LC50 | Fathead minnow (Pimephales promelas) | 1.2 - 9.3 mg/l, 96 hours |
| TRIETHANOLAMINE (CAS 102-71-6) | | | |
| **Aquatic** | | | |
| Crustacea | EC50 | Water flea (Ceriodaphnia dubia) | 565.2 - 658.3 mg/l, 48 hours |
| Fish | LC50 | Fathead minnow (Pimephales promelas) | 10610 - 13010 mg/l, 96 hours |

* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential**

| **Partition coefficient n-octanol / water (log Kow)** | |
|---|---|
| MONOETHANOLAMINE | -1.31 |
| MONOISOPROPANOLAMINE | -0.93 |
| TRIETHANOLAMINE | -1 |

**Mobility in soil** This product is miscible in water.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

**TDG**

| | |
|---|---|
| **UN number** | UN3267 |
| **UN proper shipping name** | CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (MONOETHANOLAMINE) |
| **Transport hazard class(es)** | |
| **Class** | 8 |
| **Subsidiary risk** | - |
| **Packing group** | III |
| **Environmental hazards** | D |
| **Special precautions for user** | Read safety instructions, SDS and emergency procedures before handling. |

**IATA**

| | |
|---|---|
| **UN number** | UN3267 |
| **UN proper shipping name** | Corrosive liquid, basic, organic, n.o.s. (MONOETHANOLAMINE) |
| **Transport hazard class(es)** | |
| **Class** | 8 |
| **Subsidiary risk** | - |
| **Packing group** | III |
| **Environmental hazards** | No. |
| **ERG Code** | 8L |
| **Special precautions for user** | Read safety instructions, SDS and emergency procedures before handling. |
| **Other information** | |
| **Passenger and cargo aircraft** | Allowed with restrictions. |
| **Cargo aircraft only** | Allowed with restrictions. |

**IMDG**

| | |
|---|---|
| **UN number** | UN3267 |
| **UN proper shipping name** | CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (MONOETHANOLAMINE) |
| **Transport hazard class(es)** | |
| **Class** | 8 |
| **Subsidiary risk** | - |
| **Packing group** | III |
| **Environmental hazards** | |
| **Marine pollutant** | NO |
| **EmS** | F-A, S-B |
| **Special precautions for user** | Read safety instructions, SDS and emergency procedures before handling. |

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

**IATA; IMDG; TDG**


## 15. Regulatory information

**Canadian regulations**

**Controlled Drugs and Substances Act**

Not regulated.

**Export Control List (CEPA 1999, Schedule 3)**

Not listed.

**Greenhouse Gases**

Not listed.

**Precursor Control Regulations**

Not regulated.

**International regulations**

**Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Kyoto protocol**

Not applicable.

**Montreal Protocol**

Not applicable.

**Basel Convention**

Not applicable.

**International Inventories**

| Country(s) or region | Inventory name | On inventory or exempt (yes/no)* |
|---|---|---|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | No |
| Canada | Non-Domestic Substances List (NDSL) | Yes |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | No |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | No |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

## 16. Other Information

**Issue date** 06-28-2016

**Version #** 01

**Disclaimer** The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**Revision information**

Product and Company Identification: Product and Company Identification
Hazards Identification: US Hazard Categories
Composition / Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties
Transport Information: Proper Shipping Name/Packing Group
Regulatory Information: United States
Material Attributes & Uses; Experimental Data: Experimental Data
HazReg Data: North America
GHS: Classification