SECTION 1: Identification of the substance/mixture and of the company/undertaking

**Product Identifier**  
KOCHKLEEN® Formula One

**Product Use Description**  
Cleaning Agent

**Manufacturer/Importer/Supplier/Distributor Information**

**Company Name**  
John R Hess & Company, Inc.

**Address**  
400 Station St  
Cranston, RI 02910  
USA

**Telephone**  
(401) 785-9300  
(800) 556-4377

**Emergency Phone Numbers**  
Chemtrec 1-800-424-9300 (Spill, Leak, Fire, Exposure, Accident)  
+1 (703) 527-3887 (outside USA)

SECTION 2: Hazards identification

Although OSHA has not adopted the environmental portion of the GHS regulations, this document may include information on environmental effects.

**Classification of the substance or mixture**

**HCS 2012 (29 CFR 1910.1200)**

- Serious eye damage, Category 1  
- Skin sensitization, Category 1  
- H318: Causes serious eye damage.  
- H317: May cause an allergic skin reaction.

**Label elements**

**HCS 2012 (29 CFR 1910.1200)**

**Pictogram**

**Signal Word**  
Danger

**Hazard Statements:**

- H317  
  May cause an allergic skin reaction.
- H318  
  Causes serious eye damage.
Precautionary Statements:

Prevention
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear eye protection/ face protection.
P280 Wear protective gloves.

Response
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/ physician.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.

Other hazards which do not result in classification

H402: Harmful to aquatic life.
H412: Harmful to aquatic life with long lasting effects.
Slightly irritating to the skin.

SECTION 3: Composition/information on ingredients

Substance
Synonyms Ethoxylated Thioether

Hazardous Ingredients and Impurities

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Identification number CAS-No.</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethoxylated Dodecyl Mercaptan</td>
<td>9004-83-5</td>
<td>90 - 100</td>
</tr>
</tbody>
</table>

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

Non-Hazardous Ingredients and Impurities

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Identification number CAS-No.</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>4 - 6</td>
</tr>
</tbody>
</table>

Mixture
Not applicable, this product is a substance.

SECTION 4: First aid measures

Description of first-aid measures

General advice
Show this material safety data sheet to the doctor in attendance.
First responder needs to protect himself.

If inhaled
Negligible or unlikely exposure pathways
If inhaled, remove to fresh air.
Consult a physician if necessary.
Skin contact
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation develops and persists. Wash contaminated clothing before re-use.

Eye contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek medical advice.

Ingestion
Do not induce vomiting without medical advice. If victim is conscious:
Rinse with water.
Keep at rest.
Do not give anything to drink.
Do not leave the victim unattended.
Vomiting may occur spontaneously
Risk of product entering the lungs on vomiting after ingestion.
Lay victim on side.
Seek medical advice.

Most important symptoms and effects, both acute and delayed

Risks
Skin contact may aggravate existing skin disease
Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis

Indication of any immediate medical attention and special treatment needed

Notes to physician
All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.
Treat symptomatically.
There is no specific antidote available.

SECTION 5: Firefighting measures

Flash point
> 200 °F (> 93 °C)
closed cup
Flammability class: Will burn

Autoignition temperature
no data available

Flammability / Explosive limit
no data available

Extinguishing media

Suitable extinguishing media
Extinguishing media - small fires
Dry chemical
Carbon dioxide (CO2)

Extinguishing media - large fires
Foam
Water spray

Unsuitable extinguishing media
High volume water jet
(frothing possible)

Special hazards arising from the substance or mixture

Specific hazards during fire-fighting
Under fire conditions:
Will burn
Hazardous decomposition products formed under fire conditions.
On combustion or on thermal decomposition (pyrolysis), releases:
SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions, protective equipment and emergency procedures

Wear suitable protective equipment.
For further information refer to section 8 "Exposure controls / personal protection."
Avoid contact with the skin and the eyes.
Do not allow uncontrolled discharge of product into the environment.
Stop the leak. Turn leaking containers leak-side up to prevent the escape of liquid.

Environmental precautions

Environmental precautions

Do not flush into surface water or sanitary sewer system.
Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.
Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

Methods and materials for containment and cleaning up

Recovery

Soak up with inert absorbent material.
Shovel or sweep up.
Keep in suitable, closed containers for disposal.
Never return spills in original containers for re-use.

Decontamination / cleaning

Clean contaminated surface thoroughly.
Wash nonrecoverable remainder with large amounts of water.
Recover the cleaning water for subsequent disposal.
Decontaminate tools, equipment and personal protective equipment in a segregated area.

Disposal

Dispose of in accordance with local regulations.

Additional advice

Material can create slippery conditions.

Reference to other sections

Reference to other sections

7. HANDLING AND STORAGE
8. EXPOSURE CONTROLS/PERSONAL PROTECTION
13. DISPOSAL CONSIDERATIONS

SECTION 7: Handling and storage

Precautions for safe handling

Technical measures: Ethylene oxide may collect in container head space.
Provide adequate ventilation.

Advice on safe handling and usage: Handle in accordance with good industrial hygiene and safety practice.
Avoid inhalation of vapor or mist.
Avoid contact with skin and eyes.
Hygiene measures

Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:

1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
3) Wash exposed skin promptly to remove accidental splashes or contact with material.

Conditions for safe storage, including any incompatibilities

Technical Measures for storage

Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.

Storage conditions

Recommended

Keep container tightly closed in a dry and well-ventilated place.

To be avoided

Keep away from open flames, hot surfaces and sources of ignition.
Keep away from incompatible materials to be indicated by the manufacturer

Incompatible products

Strong oxidizing agents
Strong reducing agents.

Packaging Measures

Packaging conditions

Steel drums with an inner lining.

Packaging material — Recommended

Coated steels.

Storage stability

Storage temperature

no data available

Other data

Stable under recommended storage conditions.

Specific end uses

no data available

SECTION 8: Exposure controls/personal protection

Introductory Remarks:
These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations.

Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

Control parameters

Contains no substances with occupational exposure limit values.

Exposure controls

Control measures

Engineering measures

Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures:

Effective exhaust ventilation system

Personal protective equipment

Respiratory protection

When respirators are required, select NIOSH/MSHA approved equipment.
based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

**Hand protection**

Recommended preventive skin protection

Gloves

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

**Eye protection**

Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

Eye contact should be prevented through the use of:

Safety glasses with side-shields

**Skin and body protection**

Recommended preventive skin protection

Footwear protecting against chemicals

Impervious clothing

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Hygiene measures**

Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:

1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.

2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.

3) Wash exposed skin promptly to remove accidental splashes or contact with material.

**Protective measures**

Ensure that eyewash stations and safety showers are close to the workstation location. Emergency equipment immediately accessible, with instructions for use. Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards, and/or risks that may occur during use.

The protective equipment must be selected in accordance with current local standards and in cooperation with the supplier of the protective equipment.

---

**SECTION 9: Physical and chemical properties**

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product information phone number in Section 1 for its exact specifications.

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Form: viscous</td>
</tr>
<tr>
<td></td>
<td>Physical state: liquid</td>
</tr>
<tr>
<td></td>
<td>Color: colorless to pale yellow.</td>
</tr>
<tr>
<td>Odor</td>
<td>slight</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>no data available</td>
</tr>
<tr>
<td>pH</td>
<td>5.0 - 8.0 (10 % (m/v)) Aqueous solution</td>
</tr>
</tbody>
</table>
### Melting point/range
ca. 32 °F (0 °C)

### Freezing point
ca. 43 °F (6 °C)

### Flash point
> 200 °F (> 93 °C) closed cup
Flammability class: Will burn

### Evaporation rate (Butylacetate = 1)
no data available

### Flammability (solid, gas)
no data available

### Flammability (liquids)
no data available

### Flammability / Explosive limit
no data available

### Autoignition temperature
no data available

### Vapor pressure
< 1 mmHg  1.33 hPa

### Vapor density
no data available

### Density
ca. 1.05 g/cm³  ( 77 °F (25 °C))

### Solubility
Water solubility :
soluble

Solubility in other solvents:
common organic solvents : soluble

### Partition coefficient: n-octanol/water
no data available

### Thermal decomposition
392 °F (200 °C)

### Viscosity
no data available

### Explosive properties
no data available

### Oxidizing properties
Nonoxidizing material according to EC criteria

### Other information
Volatile by Volume
< 6 %

### SECTION 10: Stability and reactivity

#### Reactivity
no data available

#### Chemical stability
Chemical stability
Stable under normal conditions.

#### Possibility of hazardous reactions
Polymerization
Hazardous polymerization does not occur.

#### Conditions to avoid
Conditions to avoid
Keep away from heat and sources of ignition.

#### Incompatible materials
Materials to avoid
Strong oxidizing agents
Strong reducing agents
Hazardous decomposition products

Decomposition products

On combustion or on thermal decomposition (pyrolysis), releases:
- Sulfur oxides
- Carbon oxides

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Acute oral toxicity

LD50 : > 2,000 mg/kg - Rat
Information given is based on data obtained from similar substances.
Unpublished internal reports
May be harmful if swallowed.

Acute inhalation toxicity

Not classified as hazardous for acute toxicity according to GHS
According to the data on the constituents

Acute dermal toxicity

Not classified as hazardous for acute toxicity according to GHS
According to the data on the constituents

Acute toxicity (other routes of administration) : no data available

Skin corrosion/irritation

Skin irritation

Mild skin irritation
Information given is based on data obtained from similar substances.
Unpublished internal reports

Serious eye damage/eye irritation

Eye irritation

Risk of serious damage to eyes.
Information given is based on data obtained from similar substances.
Unpublished internal reports

Respiratory or skin sensitization

Sensitization

Local lymph node assay - Mouse
May cause sensitization by skin contact.
Unpublished internal reports

Mutagenicity

Genotoxicity in vitro

According to the data on the constituents
Product is not considered to be genotoxic

Genotoxicity in vivo

According to the data on the constituents
Product is not considered to be genotoxic

Carcinogenicity

Carcinogenicity

no data available

This product does not contain any ingredient designated as probable or suspected human carcinogens by:
- NTP
- IARC
- OSHA
- ACGIH

Toxicity for reproduction and development

Toxicity to reproduction / fertility

no data available

Developmental Toxicity/Teratogenicity

no data available

STOT

STOT-single exposure

no data available

STOT-repeated exposure : Toxicology Assessment:
**Aspiration toxicity**

Aspiration toxicity: No aspiration toxicity classification

**SECTION 12: Ecological information**

**Toxicity**

**Aquatic Compartment**

Acute toxicity to fish

Acute toxicity to daphnia and other aquatic invertebrates.

Toxicity to aquatic plants

Toxicity to microorganisms

Chronic toxicity to fish

Chronic toxicity to daphnia and other aquatic invertebrates.

**Sediment compartment**

Toxicity to benthic organisms

**Terrestrial Compartment**

Toxicity to soil dwelling organisms

Toxicity to terrestrial plants

Toxicity to above ground organisms

**Ecotoxicity assessment**

Acute aquatic toxicity

Chronic aquatic toxicity

The product itself has not been tested

Harmful to aquatic life. Information given is based on data obtained from similar substances. Unpublished internal reports

Harmful to aquatic life with long lasting effects. Information given is based on data obtained from similar substances.

**Persistence and degradability**

Biodegradability

Ultimate aerobic biodegradability

Partially biodegradable

Unpublished internal reports

Information given is based on data obtained from similar substances.

Degradability assessment

The product is not considered to be rapidly degradable in the environment

Bioaccumulative potential

No data available

Mobility in soil

Known distribution to environmental compartments

Ultimate destination of the product: Water

Results of PBT and vPvB assessment

No data available

Other Adverse Effects

No data available
SECTION 13: Disposal considerations

Waste treatment methods

Product Disposal
Advice on Disposal
Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

Advice on cleaning and disposal of packaging
Advice on Disposal
Rinse with an appropriate solvent.
Dispose of contents/container in accordance with local regulation.

SECTION 14: Transport information

DOT
not regulated

TDG
not regulated

IMDG
not regulated

IATA
not regulated

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

SECTION 15: Regulatory information

Notification status
United States TSCA Inventory
y (positive listing)
On TSCA Inventory

Canadian Domestic Substances List (DSL)
y (positive listing)
All components of this product are on the Canadian DSL.

Australia Inventory of Chemical Substances (AICS)
y (positive listing)
On the inventory, or in compliance with the inventory

Japan. CSCL - Inventory of Existing and New Chemical Substances
y (positive listing)
On the inventory, or in compliance with the inventory

Korea. Korean Existing Chemicals Inventory (KECI)
y (positive listing)
On the inventory, or in compliance with the inventory
China. Inventory of Existing Chemical Substances in China (IECSC) (positive listing)
On the inventory, or in compliance with the inventory

Federal Regulations

SARA 311/312 Hazards

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Hazard</td>
<td>no</td>
</tr>
<tr>
<td>Reactivity Hazard</td>
<td>no</td>
</tr>
<tr>
<td>Sudden Release of Pressure Hazard</td>
<td>no</td>
</tr>
<tr>
<td>Acute Health Hazard</td>
<td>yes</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>no</td>
</tr>
</tbody>
</table>

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Reportable quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Oxide</td>
<td>75-21-8</td>
<td>10 lb</td>
</tr>
<tr>
<td>1,4-Dioxane</td>
<td>123-91-1</td>
<td>100 lb</td>
</tr>
</tbody>
</table>

SARA 304 Reportable Quantity

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Reportable quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Oxide</td>
<td>75-21-8</td>
<td>10 lb</td>
</tr>
</tbody>
</table>

SARA 302 Reportable Quantity

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No.</th>
<th>Reportable quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene Oxide</td>
<td>75-21-8</td>
<td>10 lb</td>
</tr>
</tbody>
</table>

State Regulations

California Prop 65

WARNING! This product contains a chemical known in the State of California to cause cancer.
Ethylene Oxide
1,4-Dioxane

WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.
Ethylene Oxide

No Significant Risk Levels (NSRLs) have been established for the following:
Ethylene Oxide
Value: 2 micrograms per day

1,4-Dioxane
Value: 30 micrograms per day

SECTION 16: Other information

NFPA-Classification

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>2 moderate</td>
</tr>
<tr>
<td>Flammability</td>
<td>1 slight</td>
</tr>
<tr>
<td>Instability or Reactivity</td>
<td>0 minimal</td>
</tr>
</tbody>
</table>

HMIS-Classification

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>2 moderate</td>
</tr>
</tbody>
</table>
Flammability : 1 slight
Reactivity : 0 minimal

Prepared By: HSE Department
Issue Date: 05/11/2017
Version: 2
Precedes: 05/04/2015

Key or legend to abbreviations and acronyms used in the safety data sheet
ACGIH American Conference of Governmental Industrial Hygienists
OSHA Occupational Safety and Health Administration
WHMIS Workplace Hazardous Materials Information System
NTP National Toxicology Program
IARC International Agency for Research on Cancer
SAEL Solvay Acceptable Exposure Limit
NIOSH National Institute for Occupational Safety and Health
NFPA National Fire Protection Association
HMIS Hazardous Materials Identification System (Paint & Coating)

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