Material Safety Data Sheet

OAK KOOL® 8649

METALWORKING FLUID CONCENTRATE

DATE EFFECTIVE: 09-06-2007

1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer:	Oak International, Inc. 1160 White Street Sturgis, MI 49091 United States
Emergency:	Telephone (USA): 1-800-424-9300 (CHEMTREC) Telephone (OUTSIDE USA): 1-703-527-3887 (CHEMTREC)
General Information:	Telephone: 1-269-651-9790
Generic Name:	Water Soluble Metalworking Fluid Concentrate

2 EMERGENCY INFORMATION

Product is alkaline. Product may be a primary skin irritant. Product is a primary eye irritant. Highway spills could result in slippery conditions. No other significant health effects are associated with this material.

3 POTENTIAL HEALTH EFFECTS OF DIRECT EXPOSURE

	Product	**Product at Use Dilution**
Inhalation:	Not Applicable	Extended exposure to mist may cause upper respiratory irritation.
Eye Contact:	Product is a primary eye irritant.	Will cause stinging sensation in the eye.
Skin Contact:	Product may be a primary skin irritant.	Product may be a primary skin irritant.
Ingestion:	Not orally toxic.	Swallowing small quantities may cause diarrhea, nausea or vomiting.

Medical Conditions generally aggravated by exposure

May aggravate existing skin irritation where further defatting or skin penetration could occur.

Mild skin irritation (redness and dryness of hands) may be experienced when the diluted product has been contaminated by certain oils, by dissolved metals, or when mix ratio is too strong. When problems occur, use of water-resistant barrier creams may be a temporary control measure. Contact Oak International, Inc. Technical Services at 1-269-651-9790 for specific recommendations.

When used in applications generating high levels of mist, operator exposure can be minimized by proper ventilation, use of mist collectors or splash guards, as appropriate. If there is doubt about actual mist levels present, monitoring should be conducted. Contact Oak International, Inc. at 1-269-651-9790 for specific recommendations.

Repeated excessive exposures to high amounts of triethanolamine may cause liver and kidney effects.

Carcinogen Listings: NTP: No IARC: No OSHA: No

Signs and symptoms of exposure

Acute

Eye injury may result from contact with product. Skin irritation can result from improper use and handling of product.

4 EMERGENCY AND FIRST AID PROCEDURES

Eyes

In case of eye contact, flush immediately with running water for at least 15 minutes, and get prompt medical attention.

Skin Contact

For skin contact flush with large amounts of water while removing contaminated clothing. Remove contaminated shoes and clothing and launder before reuse. If irritation persists, get medical attention.

Ingestion

If the material is swallowed, get immediate medical attention or advice. DO NOT INDUCE VOMITING. Give two glasses of water or milk. Immediately contact a physician and obtain treatment. Swallowing small quantities of diluted product may cause nausea, diarrhea or abdominal distress.

Inhalation

Inhalation can occur in applications where high mist levels are generated. OSHA has set a PEL of 15 mg/m^3 for any airborne particulate as a nuisance level of exposure. NIOSH has set a REL of 0.5 mg/m^3 for metalworking fluid mist. If symptoms are experienced, remove source of contamination or move victim to fresh air. If symptoms persist, get medical attention.

5 CONTROL MEASURES

Respiratory protection

Product is not volatile.

In applications where time-weighted exposures are 0.5 to 5 mg/m^3, mist reduction through improved ventilation, mist collection or process modification is recommended by NIOSH. Where this is not possible, NIOSH recommends the use of any air purifying, half-mask respirator including a disposable respirator, equipped with any P- or R-series particulate filter. If the average exposure will exceed 5 mg/m^3, NIOSH recommends use of a powered, air-purifying respirator equipped with a hood or helmet and a HEPA filter. If respiratory problems are present when mist levels are < 0.5 mg/m^3, respiratory protection should be based on the individual recommendation of a qualified health care provider.

Caution

The appropriate use and type of respirator is dependent upon use of the product and local operating conditions.

Ventilation

For most applications, normal shop ventilation is adequate. However, when high mist levels are generated or where machines are close together or ventilation is inadequate, operators may experience respiratory irritation. For such applications, use of splash guards or mist collectors is recommended.

Eye protection

Proper metalworking plant eye protection required when handling product concentrate.

Other protective clothing or equipment

Use effective metalworking plant protective clothing as appropriate.

Work / Hygiene Practices

Good personal hygiene should always be followed.

Protective Gloves

Impervious gloves, such as nitrile gloves, are recommended when handling product concentrate.

6 HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

These ingredients may contribute to the acute product hazards listed under the Potential Health Effects section. Other substances, not hazardous under the OSHA Hazard Communication Standard, may be present. Further composition information may be available to health professionals as provided in the Standard.

Component	CAS #	Percent
MONOISOPROPANOLAMINE	78-96-6	5 - 10
TRIETHANOLAMINE	102-71-6	3 - 7
MONOETHANOLAMINE	141-43-5	1 - 5
Citric acid	77-92-9	1 - 5

7 FIRE AND EXPLOSION HAZARD DATA

Extinguishing Media

Not Applicable

Hazardous Combustion Products

Smoke, fumes, oxides of nitrogen, and oxides of carbon

Flash Point: Not Applicable

Lower Explosive Limit: Not Applicable

Upper Explosive Limit: Not Applicable

HMIS RATINGS

Health	1
Flammability Classification	0
Reactivity	0

NFPA RATINGS

Health	1
Flammability Classification	0
Reactivity	0

8 ACCIDENTAL RELEASE MEASURES

Contain the spill, collect on absorbent material, and discard as dictated by Federal, state and local regulations that may apply. Flush area thoroughly with water.

Reportable Quantity: None

9 WASTE DISPOSAL

For Used Product

Disposal procedures must comply with local, county, state and Federal regulations. If pre-treatment is needed, ultrafiltration, emulsion breaking or evaporation may be used. Contact Oak International, Inc. at 1-269-651-9790 for assistance.

For Unused Product

Product is not a hazardous waste as defined under 40 CFR 261. Contact Oak International, Inc. at 1-269-651-9790 for assistance.

Empty Containers

Empty containers will contain a residue which is not considered a hazardous waste under RCRA regulations. Drums can be drained to a "drip dry" condition by inversion and can be offered for recycling or scrap.

10 HANDLING AND STORAGE

Avoid all contact of product with eyes or skin. Wash thoroughly after handling. Do not swallow. Do not store product concentrate in direct sunlight or elevated temperatures. Use only as recommended by Oak International, Inc. . If frozen, product separates. Thaw completely at room temperature and stir thoroughly prior to use.

Other Precautions

Contains amines. Do not add sodium nitrite or other nitrosating agents to this product because suspected cancer-causing nitrosamines may be formed.

11 PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point:	212 °F (100 °C)
Specific Gravity:	1.09
Evaporation Rate:	Like water when diluted
Solubility (H2O):	100 % Miscible
Volatile Organic Content (by ASTM D2369):	8.5 %
pH (Concentrate):	9.9
pH (Mix):	9.1 @ 10%
Appearance/Odor:	Clear/Chemical

12 REACTIVITY

Stability

Stable under normal conditions.

Conditions to avoid

Use as directed.

Materials to avoid

Avoid contact with strong acids or oxidizers to product.

Hazardous Polymerization

Will not occur.

Combustion Products

Smoke, fumes, oxides of nitrogen, and oxides of carbon

13 TRANSPORTATION INFORMATION

BY LAND

Hazardous Materials Description and Proper Shipping Name (49 CFR 172.101)

Not a Hazardous Material

U.S. Harmonized Tariff Code: 3403.99.0000

BY AIR OR VESSEL

Hazardous Materials Description and Proper Shipping Name (49 CFR 172.101)

Not a Hazardous Material

14 REGULATORY INFORMATION

EXPOSURE GUIDELINES

REGULATED MATERIAL	NIOSH REL	OSHA PEL	OSHA STEL	ACGIH TLV	ACGIH STEL
TRIETHANOLAMINE				5 mg/m³	
MONOETHANOLAMINE		3 ppm	6 ppm	3 ppm	6 ppm
METALWORKING FLUID MIST	0.5 mg/m³				

CERCLA

No components of this product are present at levels which require reporting under 40 CFR 302.4.

EPCRA (SARA) TITLE III Extremely Hazardous Substances (302): None

Hazardous Substances (311/312)

Product is a hazardous substance as defined under the OSHA Hazard Communication Standard and may be reportable under the provisions of SARA Sections 311 and 312.

HAZARD CATEGORIES

Acute Health: Yes

Chronic Health: No

Fire: No

Sudden Release of Pressure: No

Reactive: No

RCRA

Product concentrate does not meet the definition of a hazardous waste as defined under 40 CFR 261. It is possible that in use, the product may be contaminated by metals or by chlorinated solvents and the final waste may meet the TCLP definition. Each facility should assess each waste stream to determine if the used fluid should be treated as a hazardous waste.

TSCA

The ingredients of this product are on the TSCA inventory.

State Right to Know

Many states have enacted Community Right-To-Know laws which require information beyond that mandated by federal laws. Since some of these laws are inconsistent with the federal laws, the information in this sheet may not fully meet the requirements of every state.

Toxic Substances (313)

Component	CAS #	Max %	Comments
None		%	

GLOSSARY OF ABBREVIATIONS

ACGIH	American Conference of Governmental Industrial Hygenists
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
COC	Cleveland Open Cup
DOT	Department of Transportation
EPCRA	Emergency Planning and Community Right-to-Know Act (aka SARA)
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
REC	Recommended
REL	Recommended Exposure Limit
SARA	Superfund Amendments and Reauthorization Act
STEL	Short-Term Exposure Limit
TCLP	Toxicity Characteristics Leaching Procedure
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
VOC	Volatile Organic Compounds

Disclaimer

NOTE: The opinions expressed herein are those of qualified experts within Oak International, Inc. and of their suppliers. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and of these opinions and the condition and use of the product are not within the control of Oak International, Inc. , it is the user's obligation to determine the conditions of safe use of the product.