

MATERIAL SAFETY DATA SHEET

(USA)

(Complies with USA OSHA 29 CFR 1910.1200 and ANSI Z 400.1)

Version: 3

Revision date: 14 May 2009

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product code: A264
Product name: Corrosion Inhibitor A264
Company identification: Schlumberger Technology Corporation
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Sugar Land, Texas 77478, USA
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2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER

Main physical hazards: Flammable liquid.
Main health hazards: Causes eye irritation. Causes skin irritation. Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. Contains methanol. Can be fatal or cause blindness if swallowed. Cannot be made non-toxic. May cause Central Nervous System (CNS) depression.
Main environmental hazards: Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
Other hazards: Vapors may cause flash fire or explosion.
Precautions: Keep away from open flames, hot surfaces and sources of ignition. Avoid contact with the skin and the eyes. Do not breathe vapors or spray mist.
HMS classification: Health: **3** Flammability: **3** Physical hazard: **0**

Form: Liquid **Color:** Clear **Odor:** Alcohols
Principle routes of exposure:
Eye contact. Skin contact. Respiratory system.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %- Range
Methanol	67-56-1	15-40
Aliphatic acids	Proprietary	10-30
Prop-2-yn-1-ol	107-19-7	5 - 10
Aliphatic alcohols, ethoxylated #1	Proprietary	10-30

4. FIRST AID MEASURES

Eye contact: Immediately flush eyes with water for 15 minutes while holding eyelids open. Seek medical attention.

Skin contact:	Take off contaminated clothing and shoes immediately. After contact with skin, wash immediately with plenty of soap and water for at least 15 minutes. Seek medical attention.
Ingestion:	DO NOT induce vomiting. Call a physician or Poison Control Center immediately. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, minimize the risk of aspiration by properly positioning the affected person.
Inhalation:	Move to fresh air in case of accidental inhalation of vapors. Call a physician or Poison Control Centre immediately. If breathing has stopped or heart has stopped, trained personnel should immediately administer artificial respiration or CPR, as required.

5. FIRE-FIGHTING MEASURES

Fire hazard:	Flammable liquid.
OSHA Flammability Class:	I B
Flash point:	14 °C / 57 °F
Method:	Tag closed cup
Autoignition temperature:	No data available.
Flammability limits in air:	
Lower:	6.0% (methanol)
Upper:	36.5% (methanol)
Oxidizing properties:	None.

Suitable extinguishing media:
Alcohol Foam, CO₂, Dry Chemical.

Extinguishing media which must not be used for safety reasons:
None known.

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases:
Vapors are heavier than air and may spread along floors. Vapors may cause flash fire or explosion.

Other information:
Vapors are heavier than air and may spread along floors.

Special protective equipment for firefighters:
Wear self contained breathing apparatus for fire fighting if necessary. Wear protective fire fighting clothing and avoid breathing vapors.

NFPA rating:	
Health:	3
Flammability:	3
Instability:	0
Special:	None

6. ACCIDENTAL RELEASE MEASURES

Main physical hazards:	Flammable liquid.
Other hazards:	Vapors may cause flash fire or explosion.
Personal precautions:	Avoid contact with skin and eyes. Do not breathe vapors or spray mist. Wear suitable protective equipment.
Methods for cleaning up:	Contain with dikes. Use explosion proof equipment to recover. Remove all sources of ignition. Soak up residual on inert absorbant (sand). Put in steel or plastic drum approved for flammables.

Environmental precautions: Prevent further leakage or spillage. Keep out of waterways.

7. HANDLING AND STORAGE

Handling:

Precautions: Keep away from open flames, hot surfaces and sources of ignition. Avoid contact with the skin and the eyes. Do not breathe vapors or spray mist.

Safe handling advice: Keep airborne concentrations below exposure limits. Wear suitable protective equipment.

Technical measures/ storage conditions: Store in well ventilated area out of direct sunlight. Keep containers tightly closed in a dry, cool and well-ventilated place.

Packaging requirements: Steel or high density polyethylene (HDPE) container approved for flammables. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

Incompatible products: Oxidizing agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure: Control the source. Enclosure of the process. Ensure adequate ventilation. Other suitable methods.

Hygiene measures: Keep airborne concentrations below exposure limits. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Wear suitable protective equipment.

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment. Use SCBA (self contained breathing apparatus) in confined areas and for emergencies.

Eye protection: Tightly fitting safety goggles.

Hand protection: Impervious gloves. Butyl. Viton.

Skin and body protection: Chemical resistant suit. Chemical resistant boots.

Occupational Exposure Limits

Component	ACGIH - TLVs			OSHA - PELs		
	TWA / Ceiling	STEL	ACGIH - Skin	TWA / C	STEL	Final PELs - Skin
Methanol	200 ppm	250 ppm	Skin Notation	200 ppm TWA 260 mg/m ³ TWA	-	-
Aliphatic acids	-	-	-	-	-	-
Prop-2-yn-1-ol	1 ppm	-	Skin Notation	-	-	-
Aliphatic alcohols, ethoxylated #1	-	-	-	-	-	-

Particles Not Otherwise Regulated/Specified [PNOR or PNOS] (insoluble or poorly soluble):

OSHA PEL's for Inert or Nuisance Dust are covered by PNOR limits: respirable fraction: 5 mg/m³; total dust 15 mg/m³.

ACGIH PNOS Recommendations: airborne concentrations should be kept below 3 mg/m³, respirable particulate, and 10 mg/m³, inhalable particles.

9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical characterization:	Mixture of organic compounds.
Fire hazard:	Flammable liquid.
Form:	Liquid
Color:	Clear
Odor:	Alcohols
Odor threshold:	No information available.
pH:	3.1-4.1
Boiling point/range:	66°C / 152 °F
Flash point:	14 °C / 57 °F
Method:	Tag closed cup.
Flammability limits in air:	
Lower:	6.0% (methanol)
Upper:	36.5% (methanol)
Bulk density:	Not applicable.
Melting point/range:	-6.7 °C / 20 °F
Decomposition temperature:	> 232 °C / 450 °F
Solubility:	
Water solubility:	Dispersible.
Fat solubility:	No information available.
Partition coefficient (n-octanol/water):	No information available.
Relative density:	0.93 (@ 16°C)
Vapor pressure:	23.4 kPa (@ 38°C)
Vapor density:	> 1 (air = 1)
Viscosity:	~ 8 mPa.s (@ 16 °C)
Evaporation rate:	No data available.
% Volatile (VOC):	~42

10. STABILITY AND REACTIVITY**Stability:**

Stable under recommended storage conditions

Conditions to avoid:

Keep away from heat and sources of ignition.

Incompatibility with other substances:

Oxidizers. Aluminum. Acetyl bromide. Alkylaluminum solutions. Beryllium hydride. Boron trichloride. Cyanuric chloride. Diethylzinc. Magnesium. Phosphorus (III) oxide. Potassium tert-butoxide.

Hazardous decomposition products:

When heated strongly or burned, oxides of carbon, sulfur oxides, nitrogen oxides, ammonia and harmful organic fumes are released.

Hazardous polymerization:

Hazardous polymerization does not occur.

Other hazards:

Vapors may cause flash fire or explosion.

11. TOXICOLOGICAL INFORMATION

PRODUCT TOXICOLOGICAL INFORMATION

Information given is based on data on the components and the toxicology of similar products.

Acute Health Hazard

Eye contact:	Severe eye irritation. Causes pain and redness. Prolonged or repeated contact may cause mild burn.
Skin contact:	Severe skin irritation. Toxic: danger of very serious irreversible effects in contact with skin. Substance may be absorbed through the skin which can contribute to damage to the optic nerve resulting in permanent vision changes, loss of vision, or total blindness.
Ingestion:	Contains methanol. Can be fatal or cause blindness. Cannot be made non-toxic. May cause Central Nervous System (CNS) depression.
Inhalation:	Toxic; can cause illness or death. Toxic: danger of very serious irreversible effects through inhalation. May cause Central Nervous System (CNS) depression.
Sensitization - lung:	Not known to cause allergic reaction.
Sensitization - skin:	See COMPONENT TOXICOLOGICAL INFORMATION below.
Toxicologically synergistic products:	None known.
Other information:	May cause headache, narcosis. May cause dizziness, nausea, vomiting, diarrhea.

Chronic Health Hazard

Carcinogenic effects:	None known.
Mutagenic effects:	See COMPONENT TOXICOLOGICAL INFORMATION below.
Teratogenic effects:	Possibly causes birth defects.
Reproductive toxicity:	Not known to adversely affect reproductive functions and organs.
Target organ effects:	See COMPONENT TOXICOLOGICAL INFORMATION below.

COMPONENT TOXICOLOGICAL INFORMATION

Component	Target Organ Effects	LD50 / LC50
Methanol	skin, eyes, CNS, GI tract, respiratory system	= 15800 mg/kg (Dermal LD50; Rabbit) = 5628 mg/kg (Oral LD50; Rat) = 64000 mg/kg (Inhalation LC50; Rat) 4 hr
Aliphatic acids	-	= 7600 mg/kg (Oral LD50; Rat)
Prop-2-yn-1-ol	skin, respiratory system, CNS, liver, kidneys	= 16 mg/kg (Dermal LD50; Rabbit) = 20 mg/kg (Oral LD50; Rat)
Aliphatic alcohols, ethoxylated #1	-	-

Component	IARC Group 1 or 2:	ACGIH - Carcinogens:	OSHA Listed Carcinogens	NTP:
Methanol	-	-	-	-
Aliphatic acids	-	-	-	-
Prop-2-yn-1-ol	-	-	-	-
Aliphatic alcohols, ethoxylated #1	-	-	-	-

Component	OTHER TOXICOLOGICAL INFORMATION

Methanol	Causes eye irritation. Toxic by ingestion and inhalation. Danger of very serious irreversible effects if swallowed. Can be aspirated into lungs during ingestion or vomiting. Aspiration can cause potentially fatal injury to the lungs. Chronic inhalation has shown to cause diminished vision. Acute oral and dermal exposure has shown to cause optic nerve effects, diminished vision and brain effects (necrosis and hemorrhaging). At first, symptoms of severe exposure are nausea, headache, vomiting, dizziness. The latent period is followed by development of metabolic acidosis and severe visual effects. Coma and death are usually due to respiratory failure. Fetotoxic and teratogenic effects observed in controlled animal studies.
Aliphatic acids	Caused skin sensitization in guinea pigs.
Prop-2-yn-1-ol	Caused internal bleeding in animals upon dermal exposure. Caused irritation of the mucous membranes in animals.
Aliphatic alcohols, ethoxylated #1	Harmful if swallowed. Risk of serious damage to eyes.

12. ECOLOGICAL INFORMATION

PRODUCT INFORMATION

Main environmental hazards: Harmful to aquatic organisms
May cause long-term adverse effects in the aquatic environment

COMPONENT INFORMATION

Methanol

Bioaccumulation: log Pow = -0.7
Persistence / degradability: Biodegradable.
Freshwater Fish Species Data = 13 mg/L (LC50; rainbow trout (fingerling))

Aliphatic acids

Freshwater Algae Data >= 1000 mg/L (EC50; Selenastrum capricornutum)

Prop-2-yn-1-ol

Bioaccumulation: log Pow = <3
Persistence / degradability: 15 %. (28d; OECD306).
Fish toxicity: 96h LC50= 12 mg/l (Scophthalmus maximus juvenile)
Freshwater Fish Species Data = 1.44 mg/L (LC50; Pimephales promelas)
Water Flea Data = 7.6 mg/L (EC50; water flea)

Aliphatic alcohols, ethoxylated #1

Bioaccumulation: Does not bioaccumulate log Pow = <3
Persistence / degradability: Readily biodegradable. >60 %. (28d; OECD306).
Algae toxicity (Skeletonema costatum) 72h EC50=<1 mg/l

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:

Treat as hazardous waste. Dispose of by injection or other acceptable method in accordance with local regulations.

Contaminated packaging:

Dispose of in accordance with local regulations. If reusable containers are used, send them back to the product supplier, after the required rinsing.

EPA RCRA Hazardous Waste Code:

D001

14. TRANSPORT INFORMATION

DOT:

UN/NA Number:	UN 1992	
CERCLA RQ:	1962 gals (methanol)	
Packing size:	< 1962 gals	
Hazard class:	3	Subsidiary hazard(s): 6.1
Proper shipping name:	Flammable liquid, toxic, n.o.s (contains methanol and propargyl alcohol), 3, (6.1), UN 1992, PG II	
Label(s):	Flammable Liquid 3, Toxic 6.1	
Packing size:	> 1962 gals	
Hazard class:	3	Subsidiary hazard(s): 6.1
Proper shipping name:	Flammable liquid, toxic, n.o.s (contains methanol and propargyl alcohol), 3, (6.1), UN 1992, PG II, RQ	
Label(s):	Flammable Liquid 3, Toxic 6.1	

IMDG/IMO

Shipping name:	FLAMMABLE LIQUID, TOXIC, N.O.S. (methanol and propargyl alcohol)	
Label(s):	Flammable Liquid 3, Toxic 6.1	
Class or Div.:	3	Subsidiary risk(s): 6.1
UN number:	UN 1992	
Packing group:	II	
EMS:	F-E, S-D	

ICAO/IATA

Shipping name:	Flammable liquid, toxic, n.o.s (contains methanol and propargyl alcohol)	
Label(s):	Flammable Liquid 3, Toxic 6.1	
Class or Div.:	3	Subsidiary risk(s): 6.1
UN number:	UN 1992	
Packing group:	II	
Packing instruction (passenger aircraft):	305	Max Net Qty/Pkg: 1 L
Packing instruction (cargo aircraft):	307	Max Net Qty/Pkg: 60 L

TDG (Canada):

Shipping name:	FLAMMABLE LIQUID, TOXIC, N.O.S. (contains methanol and propargyl alcohol), 3, (6.1), UN 1992, PG II	
Label(s):	Flammable Liquid 3, Toxic 6.1	
PIN:	UN 1992	
Class:	3	Subsidiary hazard(s): 6.1
Packing group:	II	

Note 1:

For the applicable placard selection refer to the appropriate transport regulations; the selection may vary depending on the cargo size and categories of other hazardous materials in the cargo.

15. REGULATORY INFORMATION

International Chemical Inventories

USA, Toxic Substances Control Act inventory (TSCA): This product complies with TSCA requirements.

Canada, Domestic Substance List (DSL): This product complies with DSL requirements.

U.S.A. Regulations

OSHA Hazard Communication Standard:

(Complies with USA OSHA 29 CFR 1910.1200 and ANSI Z 400.1)

EPA RCRA Hazardous Waste Code:

D001

EPA, Sections 311 and 312 - Material Safety Data Sheet Requirements (40 CFR 370):

Immediate (Acute) Health Hazard:	YES
Delayed (Chronic) Health Hazard:	YES
Fire Hazard:	YES
Sudden Release or Pressure Hazard:	None
Reactive Hazard:	None

EPA, Sections 313 - List of Toxic Chemicals (40 CFR 372):

This product contains the following substance(s), which appear(s) on the List of Toxic Chemicals:

Additional Regulatory Information

Methanol

EPA, CERCLA Section 102a/103 Hazardous Substances (40 CFR 302.4): Listed

CERCLA/SARA - Hazardous Substances and their RQs: 2270 kg final RQ
5000 lb final RQ

EPA, SARA TITLE III Section 304, Extremely Hazardous Substances (40 CFR 355.40): None

California Proposition 65: None

Aliphatic acids

EPA, CERCLA Section 102a/103 Hazardous Substances (40 CFR 302.4): None

CERCLA/SARA - Hazardous Substances and their RQs: None

EPA, SARA TITLE III Section 304, Extremely Hazardous Substances (40 CFR 355.40): None

California Proposition 65: None

Prop-2-yn-1-ol

EPA, CERCLA Section 102a/103 Hazardous Substances (40 CFR 302.4): Listed

CERCLA/SARA - Hazardous Substances and their RQs: 1000 lb final RQ
454 kg final RQ

EPA, SARA TITLE III Section 304, Extremely Hazardous Substances (40 CFR 355.40): None

California Proposition 65: None

Aliphatic alcohols, ethoxylated #1

EPA, CERCLA Section 102a/103 Hazardous Substances (40 CFR 302.4): None

CERCLA/SARA - Hazardous Substances and their RQs: None

EPA, SARA TITLE III Section 304, Extremely Hazardous Substances (40 CFR 355.40): None

California Proposition 65: None

International Hazard Class**WHMIS Hazard Class:**

B2 (Flammable Liquids)

D1A (Immediate and Serious Toxic Effects - Very Toxic Material)

D1B (Immediate and Serious Toxic Effects - Toxic Material)

D2A (Other Toxic Effects - Very Toxic Material)

D2B (Other Toxic Effects - Toxic Material)

16. OTHER INFORMATION**Current references:**

1. Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices. *American Conference of Governmental Industrial Hygienists, Cincinnati OH.*
2. IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man. *World Health Organization, International Agency for Research on Cancer. Geneva, Switzerland.*
3. Annual Report on Carcinogens. National Toxicology Program. *U.S. Department of Health and Human Services, Public Health Service.*
4. NIOSH Registry of Toxic Effects of Chemical Substances (RTECS). *National Institute for Occupational Safety and Health. Cincinnati, OH.*
5. LOLI Database.

Explanation of terms:

ACGIH:	American Conference of Governmental Industrial Hygienist
ACGIH-TL:	Threshold Limit Value
DSL:	Domestic Substance List
HMIRC:	Hazardous Materials Information Review Commission
IARC:	International Agency for Research on Cancer
NTP:	National Toxicology Program
NIOSH:	National Institute of Occupational Safety & Health
NIOSH-REL:	Recommended Exposure Limit
OSHA:	Occupational Safety & Health Administration
OSHA-PEL:	Permissible Exposure Limit
TSCA:	Toxic Substance Control Act (Inventory)

Occupational Exposure Limits indicators: TWA - Time Weighted Average; STEL - Short Term Limit; C - Ceiling Limit; units: [mg/m³]

ACGIH Notations:

"Skin" refers to the potential significant contribution to the overall exposure by the cutaneous route, including mucous membranes and the eyes, either by contact with vapors or by direct skin contact with the substance.

"A" notation indicates carcinogenicity as follows:

ACGIH classification: A1 - Confirmed Human Carcinogen; A2 - Suspected Human Carcinogen; A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans; A4 - Not Classifiable as a Human Carcinogen; A5 - Not suspected as a Human Carcinogen.

"SEN" refers to the potential for an agent to product sensitization as confirmed by human and animal data.

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Prepared by: Well Services Safety & Environment (WSSE).

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End of the Material Safety Data Sheet