

MATERIAL SAFETY DATA SHEET

(USA)

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

Version: 5

Revision date: 25 March 2010

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

Product code: W054
Product name: Non-Emulsifying Agent W54
Company identification: Schlumberger Technology Corporation
110 Schlumberger Drive
Sugar Land, Texas 77478, USA
Telephone: 1-281-285-7873
Emergency telephone number: USA: +1-281-595-3518 (24hr)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER

Main physical hazards: Flammable liquid.
Main health hazards: 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. This product may contain naphthalene as an impurity. Naphthalene is listed by IARC in group 2B and by ACGIH in category A4.
Other Information: Vapors may cause flash fire or explosion.
Precautions: Keep containers tightly closed in a dry, cool and well-ventilated place. Vapors may form explosive mixtures with air. Keep away from open flames, hot surfaces and sources of ignition. Do not breathe vapors or spray mist. Do not get on skin or clothing. Wash thoroughly after handling.
HMIS classification: Health: 3* Flammability: 3 Physical hazard: 0

Form: Liquid

Color: Clear / Yellow

Odor: Aromatic / 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	40 - 70
Oxyalkylated alkyl alcohol (1)	Proprietary	5 - 10
Oxyalkylated alcohol (2)	Proprietary	5 - 10
Quaternary ammonium compound	Proprietary	1 - 5
Heavy aromatic naphtha	64742-94-5	1 - 5
Oxyalkylated alcohol (1)	Proprietary	1 - 5

4. FIRST AID MEASURES

Eye contact:	Immediately flush eyes with water for 15 minutes while holding eyelids open. Consult a physician.
Skin contact:	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. If breathing has stopped, begin artificial respiration. Call a physician or Poison Control Centre immediately.

5. FIRE-FIGHTING MEASURES

Fire hazard:	Flammable liquid.
Flash point:	11 °C / 52 °F
Method:	Setaflash CC
Autoignition temperature:	No data available.
Flammability limits in air:	
Lower:	0.8%
Upper:	36.0%
Oxidizing properties:	None.

Suitable extinguishing media:

Water Fog, Alcohol Foam, CO2, Dry Chemical.

Extinguishing media which must not be used for safety reasons:

High volume water jet.

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases:

Thermal decomposition can lead to release of irritating gases and vapors.

Other information:

Vapors may form explosive mixtures with air.

Special protective equipment for firefighters:

Wear protective fire fighting clothing and avoid breathing vapors. Use self-contained breathing apparatus in closed areas.

NFPA rating:

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

6. ACCIDENTAL RELEASE MEASURES

Main physical hazards:	Flammable liquid.
Other Information:	Vapors may cause flash fire or explosion.
Personal precautions:	Wear suitable protective equipment. Do not breathe vapors or spray mist. Avoid contact with eyes.

Methods for cleaning up: Dam up. Soak up with inert absorbent material. Put into suitable containers for disposal.

Environmental precautions: Prevent further leakage or spillage. Keep out of waterways. Do not allow material to contaminate ground water system.

7. HANDLING AND STORAGE

Handling:

Precautions: Keep containers tightly closed in a dry, cool and well-ventilated place. Vapors may form explosive mixtures with air. Keep away from open flames, hot surfaces and sources of ignition. Do not breathe vapors or spray mist. Do not get on skin or clothing. Wash thoroughly after handling.

Safe handling advice: Keep airborne concentrations below exposure limits.

Technical measures/ storage conditions: Store in well ventilated area out of direct sunlight. Keep away from open flames, hot surfaces and sources of ignition. Keep containers tightly closed in a dry, cool and well-ventilated place.

Packaging requirements: Coated (epoxy phenolic) steel drum or high density polyethylene (HDPE) can. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

Incompatible products: Oxidizing agents. Aluminium.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure: Ensure adequate ventilation

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

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. PVC. Neoprene.

Skin and body protection: Chemical resistant apron.

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	260 mg/m ³ TWA 200 ppm TWA	-	-
Oxyalkylated alkyl alcohol (1)	-	-	-	-	-	-
Oxyalkylated alcohol (2)	-	-	-	-	-	-
Quaternary ammonium compound	-	-	-	-	-	-
Heavy aromatic naphtha	-	-	-	-	-	-
Oxyalkylated alcohol (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:	Organic surfactant blend.
Fire hazard:	Flammable liquid.
Form:	Liquid
Color:	Clear / Yellow
Odor:	Aromatic / Alcohols
Odor threshold:	No information available.
pH:	6 - 7
Boiling point/range:	71°C / 160 °F
Flash point:	11 °C / 52 °F
Method:	Setaflash CC.
Flammability limits in air:	
Lower:	0.8%
Upper:	36.0%
Bulk density:	Not applicable.
Melting point/range:	-45 °C / -50 °F
Decomposition temperature:	No data available.
Solubility:	
Water solubility:	350 g/l (@ 25°C)
Fat solubility:	No information available.
Partition coefficient (n-octanol/water):	No information available.
Relative density:	0.9 (@ 20°C)
Vapor pressure:	25 kPa (@ 38°C)
Vapor density:	> 1 (air = 1)
Viscosity:	6 mPa.s (@ 20 °C)
Evaporation rate:	No data available.
% Volatile (VOC):	~ 60

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.

Hazardous decomposition products:

When heated strongly or burned, oxides of carbon, nitrogen oxides, ammonia and harmful organic chemical fumes are released. Chlorine, chlorine oxides, hydrogen chloride.

Hazardous polymerization:

Hazardous polymerization does not occur.

Other Information:

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:	Irritant. May cause pain, redness, discomfort.
Skin contact:	Toxic: danger of very serious irreversible effects in contact with skin.
Ingestion:	Toxic: danger of very serious irreversible effects if swallowed. Contains methanol. Can be fatal or cause blindness. Cannot be made non-toxic. Harmful if aspirated into lungs during swallowing or vomiting. Aspiration may cause pulmonary edema and pneumonitis.
Inhalation:	Toxic; can cause illness or death. May cause Central Nervous System (CNS) depression. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. See COMPONENT TOXICOLOGICAL INFORMATION below.
Sensitization - lung:	Not known to cause allergic reaction.
Sensitization - skin:	Not known to cause allergic reaction.
Toxicologically synergistic products:	Organic halogenated solvents. Aromatic hydrocarbons.
Other information:	May cause blindness. Methanol should be treated as a cumulative poison over time intervals of a few days.

Chronic Health Hazard

Carcinogenic effects:	Naphthalene is listed by IARC in Group 2B as possibly carcinogenic to humans. Repeated and prolonged exposure increases the risk.
Mutagenic effects:	No information available.
Teratogenic effects:	May cause birth defects in humans after prolonged or repeated contact. See COMPONENT TOXICOLOGICAL INFORMATION below.
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	= 64000 ppm (Inhalation LC50; Rat) 4 h = 5628 mg/kg (Oral LD50; Rat) = 15800 mg/kg (Dermal LD50; Rabbit) = 83.2 mg/L (Inhalation LC50; Rat) 4 h 200 ppm
Oxyalkylated alkyl alcohol (1)	-	-
Oxyalkylated alcohol (2)	-	-
Quaternary ammonium compound	-	-
Heavy aromatic naphtha	-	> 5000 mg/kg (Oral LD50; Rat) > 2000 mg/kg (Dermal LD50; Rabbit) > 590 mg/m ³ (Inhalation LC50; Rat) 4 h
Oxyalkylated alcohol (1)	-	-

Component	IARC Group 1 or 2:	ACGIH - Carcinogens:	OSHA Listed Carcinogens	NTP:
Methanol	-	-	-	-
Oxyalkylated alkyl alcohol (1)	-	-	-	-
Oxyalkylated alcohol (2)	-	-	-	-
Quaternary ammonium compound	-	-	-	-
Heavy aromatic naphtha	-	-	-	-
Oxyalkylated alcohol (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.
Oxyalkylated alkyl alcohol (1)	Based on hazard classification of similar compounds: Causes eye irritation.
Oxyalkylated alcohol (2)	Based on hazard classification of similar compounds: Causes eye irritation.
Quaternary ammonium compound	Based on hazard classification of similar compounds: Causes eye irritation.
Heavy aromatic naphtha	Can be aspirated into lungs during ingestion or vomiting. Aspiration can cause potentially fatal injury to the lungs.
Oxyalkylated alcohol (1)	Based on hazard classification of similar compounds: Causes eye irritation.

12. ECOLOGICAL INFORMATION

PRODUCT INFORMATION

Aquatic toxicity: Toxic to aquatic organisms.

COMPONENT INFORMATION

Methanol

Bioaccumulation: log Pow = -0.7
Persistence / degradability: Biodegradable.
Freshwater Fish Species Data = 13 mg/L (LC50; rainbow trout (fingerling))
Other information: Listed on PLONOR list of OSPAR

Heavy aromatic naphtha

Bioaccumulation: log Pow = 5
Persistence / degradability: Readily biodegradable.
Algae toxicity: 72h EC50=165 mg/l (Skeletonema costatum)
Freshwater Algae Data: EC50 72 h (Skeletonema costatum) = 2.5 mg/L
Freshwater Fish Species Data LC50 96 h (Pimephales promelas) = 19 mg/L
 LC50 96 h (Oncorhynchus mykiss) = 2.34 mg/L
 LC50 96 h (Lepomis macrochirus) = 1740 mg/L
Water Flea Data: EC50 48 h (Daphnia magna) = 0.95 mg/L

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:

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:	1200 gallons (methanol)	
Packing size:	< 1200 gals	
Hazard class:	3	Subsidiary hazard(s): 6.1
Proper shipping name:	Flammable liquid, toxic, n.o.s (contains methanol, heavy aromatic naphtha), 3, (6.1), UN 1992, PG II, Marine Pollutant	
Label(s):	Flammable Liquid 3, Toxic 6.1, Marine Pollutant	
Packing size:	> 1200 gals	
Hazard class:	3	Subsidiary hazard(s): 6.1
Proper shipping name:	Flammable liquid, toxic, n.o.s (contains methanol, heavy aromatic naphtha), 3, (6.1), UN 1992, PG II, Marine Pollutant, RQ	
Label(s):	Flammable Liquid 3, Toxic 6.1, Marine Pollutant	

IMDG/IMO

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

ICAO/IATA

Shipping name:	Flammable liquid, toxic, n.o.s (contains methanol)	
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), 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.

IMPORTS, USA: No import volume restrictions.

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

IMPORTS, Canada: No import volume restrictions.

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

Oxyalkylated alkyl alcohol (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

Oxyalkylated alcohol (2)

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

Quaternary ammonium compound

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

Heavy aromatic naphtha

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

Oxyalkylated alcohol (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)
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.

Section(s) revised: 4, 14

Prepared by: Chemical Regulatory Compliance (CRC)

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End of the Material Safety Data Sheet