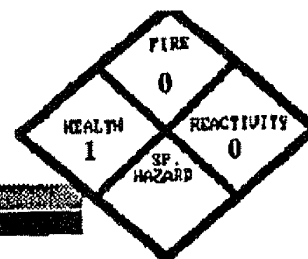

I. Drilling Fluid Specs

3)

4)

5)

**Baroid Environmental, Safety and
Transportation Data Sheet**



IMPERMEX®

I. PRODUCT IDENTIFICATION		
SUPPLIER BAROID DRILLING FLUIDS, INC.	REGULAR TELEPHONE NUMBER 713/987-5900	
	EMERGENCY TELEPHONE NO. 713/987-4000	
ADDRESS P.O. BOX 1675 HOUSTON, TX 77251		
TRADE NAME IMPERMEX		
GENERIC DESCRIPTION PREGELATINIZED CORN STARCH		
II. HAZARDOUS INGREDIENTS		
MATERIAL OR COMPONENT	%	HAZARD DATA
NONE		
III. PHYSICAL DATA		
BOILING POINT (Deg F) NA	MELTING POINT ND	FREEZING POINT NA
SPECIFIC GRAVITY (H2O = 1) 1.5	VAPOR PRESSURE (mm Hg) NA	
VAPOR DENSITY (AIR = 1) NA	SOLUBILITY IN WATER, % BY WT. 70%	
% VOLATILES BY VOLUME NA	EVAPORATION RATE (BUTYL ACETATE = 1) NA	
APPEARANCE AND ODOR OFF WHITE TO YELLOW POWDER, NO ODOR	DENSITY @ 20 Deg C (Uncompacted) ND	
pH ND		

NA = Not Applicable ND = Not Determined

All information, recommendations and suggestions herein concerning our product are based on tests and data believed to be reliable, however, it is the user's responsibility to determine the safety, toxicity, and suitability for his own use of the product described herein. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by Baroid Corporation as to the effects of such use, the results to be obtained, or the safety and toxicity

of the product nor does Baroid Corporation assume any liability arising from the use, by others, of the product referred to herein. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.

BEST Sheet**IMPERMEX®**

Page 2

IV. FIRE AND EXPLOSION DATA

FLASHPOINT: 360 - 575 F
 EXTINGUISHING MEDIA: WATER, DRY CHEMICAL
 UNUSUAL FIRE FIGHTING PROCEDURES: WEAR FULL PROTECTIVE EQUIPMENT INCLUDING
 SELF CONTAINED BREATHING APPARATUS.
 FIRE AND EXPLOSION HAZARDS: DUSTY CONDITIONS. MINIMUM EXPLOSIVE DUST CONCENTRATION
 IS APPROXIMATELY 0.05 CU/FT.

V. HEALTH HAZARD INFORMATION

CARCINOGENICITY - NOT ON NTP, IARC, OR OSHA LISTS

ACUTE ORAL LD50
 ND

ACUTE DERMAL LD50
 ND

AQUATIC TOXICITY LC50
 ND

ROUTES OF EXPOSURE AND EFFECTS

NONTOXIC
 NUISANCE DUST, ALLERGEN TLV 10 mg/m³
 SKIN CONTACT: MILD IRRITATION MAY IRRITATE EYES, NOSE, THROAT AND LUNGS.

EMERGENCY AND FIRST AID PROCEDURES

FLUSH ALL CONTACTED AREAS WITH WATER. IF IRRITATION PERSISTS, CONTACT A
 PHYSICIAN.

BEST Sheet**IMPERMEX®**

Page 3

VI. REACTIVITY DATA
CONDITIONS CONTRIBUTING TO INSTABILITY STABLE, AVOID EXPLOSIVE DUST CONCENTRATIONS
INCOMPATIBILITY STRONG OXIDIZERS
HAZARDOUS DECOMPOSITION PRODUCTS CARBON DIOXIDE, CARBON MONOXIDE
CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION WILL NOT OCCUR
VII. SPILL OR LEAK PROCEDURES
STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED SWEEP OR VACUUM UP. SALVAGE OR HOLD FOR DISPOSAL.
NEUTRALIZING CHEMICALS NA
WASTE DISPOSAL METHOD DISPOSE OF IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
VIII. INDUSTRIAL HYGIENE CONTROL MEASURES
VENTILATION REQUIREMENTS MECHANICAL, GENERAL ROOM VENTILATION
SPECIFIC PERSONAL PROTECTIVE EQUIPMENT
RESPIRATORY IF TLV EXCEEDED USE A NIOSH APPROVED MECHANICAL FILTER RESPIRATOR FOR DUSTS
EYE SAFETY GOGGLES OR SAFETY GLASSES
GLOVES WORK GLOVES
OTHER CLOTHING AND EQUIPMENT EYEWASH

BEST Sheet**IMPERMEX®**

Page 4

IX. SPECIAL PRECAUTIONS**PRECAUTIONARY STATEMENTS**

AVOID INHALATION OF DUST

OTHER HANDLING AND STORAGE REQUIREMENTS

STORE IN SHELTERED AREA OR COVER FOR MOISTURE PROTECTION. USE WITH ADEQUATE VENTILATION. WEAR APPROPRIATE SAFETY EQUIPMENT.
FLAMMABLE DUST WHEN FINELY DIVIDED AND SUSPENDED IN AIR.

X. DEPARTMENT OF TRANSPORTATION INFORMATION

PROPER SHIPPING NAME :
NOT REGULATED AS HAZARDOUS

PLACARDS :
NONE

HAZARD CLASS :
NOT HAZARDOUS

REPORTABLE QUANTITY :
NONE

HAZARDOUS SUBSTANCE :
NONE

ID NUMBER :
NONE

LABEL :
NONE

Prepared by:
Environmental Services

DATE:
February, 1995

BEST Sheet**IMPERMEX®**

Page 5

XI. REGULATORY INFORMATION**STATUS ON SUBSTANCE LISTS**

Comprehensive Environmental Response, Compensation and Liability Act of 1980, (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQs) in 40 CFR 302.4.

Components present in this product which may require notification are:

Chemical	CAS Number
----------	------------

NONE

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on RQs.

Components present in this product at a level which could require reporting under the statute are:

NONE

SARA requires the submission of annual reports of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDS that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are:

NONE

Toxic Substances Control Act (TSCA)

The ingredients of this product are on the TSCA inventory.

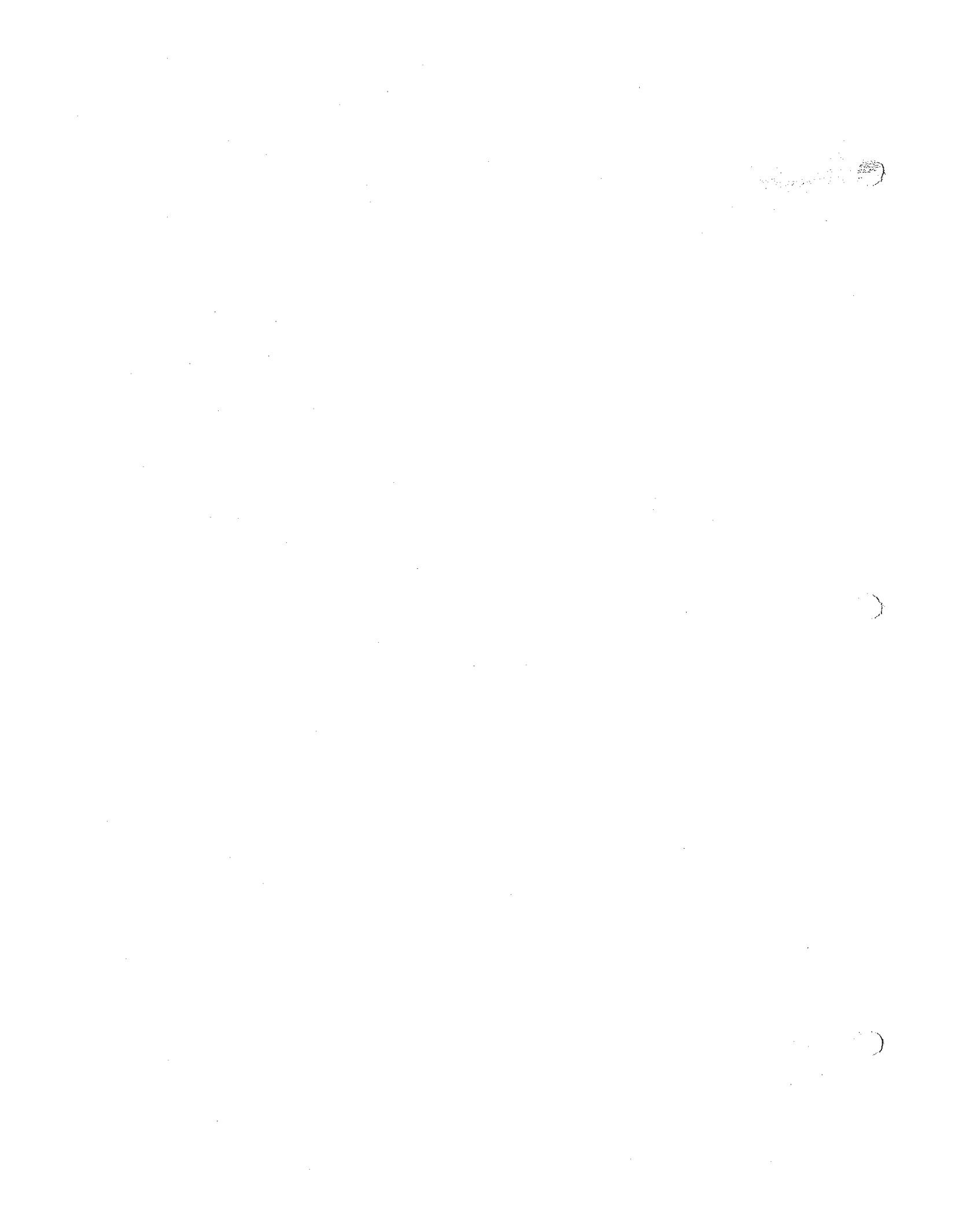
XII. STATE RIGHT TO KNOW

NOT ON ANY STATE LISTS.

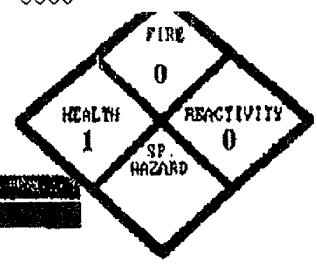
Prepared by:
Environmental Services

DATE:

February, 1995



Baroid Environmental, Safety and Transportation Data Sheet



IDP-135

I. PRODUCT IDENTIFICATION		
SUPPLIER BAROID DRILLING FLUIDS, INC.		REGULAR TELEPHONE NUMBER 713/987-5900 EMERGENCY TELEPHONE NO. 713/987-4000
ADDRESS P.O. BOX 1675 HOUSTON, TX 77251		
TRADE NAME IDP-135		
GENERIC DESCRIPTION EXPERIMENTAL PRODUCT		
II. HAZARDOUS INGREDIENTS		
MATERIAL OR COMPONENT	%	HAZARD DATA
NONE		
III. PHYSICAL DATA		
BOILING POINT (Deg F) NA	MELTING POINT ND	FREEZING POINT ND
SPECIFIC GRAVITY (H₂O = 1) 1.2	VAPOR PRESSURE (mm Hg) NA	
VAPOR DENSITY (AIR = 1) NA	SOLUBILITY IN WATER, % BY WT. @ 70% NA	
% VOLATILES BY VOLUME NA	EVAPORATION RATE (BUTYL ACETATE = 1) NA	
APPEARANCE AND ODOR OFF WHITE TO YELLOW POWDER, NO ODOR	DENSITY @ 20 Deg C (Uncompacted) 42.5 lb/ft ³	
pH 2.8% Sol 4.6		

NA = Not Applicable ND = Not Determined

All information, recommendations and suggestions herein concerning our product are based on tests and data believed to be reliable, however, it is the user's responsibility to determine the safety, toxicity, and suitability for his own use of the product described herein. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by Baroid Corporation as to the effects of such use, the results to be obtained, or the safety and toxicity

of the product nor does Baroid Corporation assume any liability arising from the use, by others, of the product referred to herein. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.

IV. FIRE AND EXPLOSION DATA		
FLASHPOINT: PRODUCT IS NOT FLAMMABLE FIRE EXTINGUISHING MEDIA: DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY FIRE FIGHTING PROCEDURE: WEAR FULL PROTECTIVE EQUIPMENT FIRE AND EXPLOSION HAZARDS: DUSTY CONDITIONS. MINIMUM EXPLOSIVE DUST CONCENTRATION IS APPROXIMATELY 0.05 CU/FT.		
V. HEALTH HAZARD INFORMATION		
CARCINOGENICITY • NOT ON NPT, IARC OR OSHA LISTS		
ACUTE ORAL LD50 ND	ACUTE DERMAL LD50 ND	AQUATIC TOXICITY LC50 ND
ROUTES OF EXPOSURE AND EFFECTS		
NONTOXIC NUISANCE DUST, ALLERGEN TLV 10 mg/m3		
EMERGENCY AND FIRST AID PROCEDURES		
FLUSH ALL CONTACTED AREAS WITH WATER. IF IRRITATION PERSISTS, CONTACT A PHYSICIAN.		

BEST Sheet**IDP-135**

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VI. REACTIVITY DATA
CONDITIONS CONTRIBUTING TO INSTABILITY STABLE, AVOID EXPLOSIVE DUST CONCENTRATIONS
INCOMPATIBILITY NONE
HAZARDOUS DECOMPOSITION PRODUCTS CARBON DIOXIDE, CARBON MONOXIDE
CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION WILL NOT OCCUR
VII. SPILL OR LEAK PROCEDURES
STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED SWEEP UP, SALVAGE OR HOLD FOR DISPOSAL
NEUTRALIZING CHEMICALS NA
WASTE DISPOSAL METHOD DISPOSE OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
VIII. INDUSTRIAL HYGIENE CONTROL MEASURES
VENTILATION REQUIREMENTS MECHANICAL, GENERAL ROOM VENTILATION
SPECIFIC PERSONAL PROTECTIVE EQUIPMENT
RESPIRATORY IF TLV EXCEEDED USE A NIOSH APPROVED DUST MASK
EYE SAFETY GLASSES
GLOVES WORK GLOVES
OTHER CLOTHING AND EQUIPMENT EYEWASH

BEST Sheet

IDP-135

IX. SPECIAL PRECAUTIONS	
PRECAUTIONARY STATEMENTS	
AVOID INHALATION OF DUST.	
OTHER HANDLING AND STORAGE REQUIREMENTS	
STORE IN SHELTERED AREA OR COVER FOR MOISTURE PROTECTION. USE WITH ADEQUATE VENTILATION, WEAR APPROPRIATE SAFETY EQUIPMENT. FLAMMABLE DUST WHEN FINELY DIVIDED AND SUSPENDED IN AIR.	
X. DEPARTMENT OF TRANSPORTATION INFORMATION	
PROPER SHIPPING NAME : NOT REGULATED AS HAZARDOUS	PLACARDS : NONE
HAZARD CLASS : NONE	REPORTABLE QUANTITY : NONE
HAZARDOUS SUBSTANCE : NONE	ID NUMBER : NONE
LABEL : NONE	

Prepared by:
Environmental Services

DATE:

July, 1995

BEST Sheet**IDP-135**

Page 5

XI. REGULATORY INFORMATION**STATUS ON SUBSTANCE LISTS**

Comprehensive Environmental Response, Compensation and Liability Act of 1980, (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQs) in 40 CFR 302.4.

Components present in this product which may require notification are:

Chemical	CAS Number
----------	------------

NONE

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on RQs.

Components present in this product at a level which could require reporting under the statute are:

NONE

SARA requires the submission of annual reports of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDS that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are:

NONE

Toxic Substances Control Act (TSCA)

The ingredients of this product are on the TSCA inventory.

XII. STATE RIGHT TO KNOW

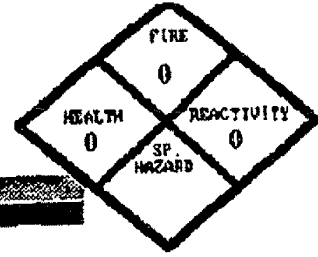
NOT ON ANY STATE LISTS.

Prepared by:
Environmental Services

DATE:

July, 1995

Baroid Environmental, Safety and Transportation Data Sheet



BARAZAN®

I. PRODUCT IDENTIFICATION		
SUPPLIER BAROID DRILLING FLUIDS, INC.	REGULAR TELEPHONE NUMBER 713/987-5900 EMERGENCY TELEPHONE NO. 713/987-4000	
ADDRESS P.O. BOX 1675 HOUSTON, TEXAS 77251		
TRADE NAME BARAZAN		
GENERIC DESCRIPTION KELZAN XC, XANTHUM GUM, XC POLYMER		
II. HAZARDOUS INGREDIENTS		
MATERIAL OR COMPONENT	%	HAZARD DATA
NONE		
III. PHYSICAL DATA		
BOILING POINT (Deg F) NA	MELTING POINT ND	FREEZING POINT 32 DEG F
SPECIFIC GRAVITY (H₂O = 1) 1.6	VAPOR PRESSURE (mm Hg) NA	
VAPOR DENSITY (AIR = 1) NA	SOLUBILITY IN WATER, % BY WT. HIGH	
% VOLATILES BY VOLUME NA	EVAPORATION RATE (BUTYL ACETATE = 1) NA	
APPEARANCE AND ODOR OFF WHITE POWDER, ODORLESS	DENSITY @ 20 Deg C (Uncompacted) BULK	
pH 5.6-1% SOL		

NA - Not Applicable ND - Not Determined

All information, recommendations and suggestions herein concerning our product are based on tests and data believed to be reliable, however, it is the user's responsibility to determine the safety, toxicity, and suitability for his own use of the product described herein. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by Baroid Corporation as to the effects of such use, the results to be obtained, or the safety and toxicity

of the product nor does Baroid Corporation assume any liability arising from the use, by others, of the product referred to herein. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.

BEST Sheet**BARAZAN®**

Page 2

IV. FIRE AND EXPLOSION DATA

BARAZAN IS NOT FLAMMABLE OR EXPLOSIVE.
FIRE EXTINGUISHING MEDIA: DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY.
SPECIAL FIREFIGHTING PROCEDURES: WEAR FULL PROTECTIVE EQUIPMENT.

V. HEALTH HAZARD INFORMATION

CARCINOGENICITY - NOT ON NTP, IARC OR OSHA LISTS

ACUTE ORAL LD50
ND

ACUTE DERMAL LD50
ND

AQUATIC TOXICITY LC50
320-560ppm

ROUTES OF EXPOSURE AND EFFECTS

NONTOXIC FOOD ADDITIVE.
NO ACUTE SYSTEMIC OR CHRONIC LOCAL TOXICITY.

EMERGENCY AND FIRST AID PROCEDURES

NO SPECIAL PROCEDURES.

BEST Sheet**BARAZAN®**

Page 3

VI. REACTIVITY DATA
CONDITIONS CONTRIBUTING TO INSTABILITY STABLE TO 250 DEG F; STABLE TO VARIABLE pH
INCOMPATIBILITY NONE
HAZARDOUS DECOMPOSITION PRODUCTS CO, CO2
CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION WILL NOT OCCUR.
VII. SPILL OR LEAK PROCEDURES
STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED SWEEP UP OR APPLY ABSORBENT MATERIAL. HOLD FOR DISPOSAL.
NEUTRALIZING CHEMICALS NA
WASTE DISPOSAL METHOD DISPOSE OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
VIII. INDUSTRIAL HYGIENE CONTROL MEASURES
VENTILATION REQUIREMENTS NORMAL ROOM VENTILATION.
SPECIFIC PERSONAL PROTECTIVE EQUIPMENT
RESPIRATORY NONE REQUIRED IN NORMAL USE.
EYE SAFETY GLASSES IF DESIRED.
GLOVES WORKING GLOVES IF DESIRED.
OTHER CLOTHING AND EQUIPMENT NONE

BEST Sheet

BARAZAN®

Page 4

IX. SPECIAL PRECAUTIONS

PRECAUTIONARY STATEMENTS

DO NOT USE, STORE, OR DISPOSE WHERE IT MAY SPILL, LEACH OR RUNOFF INTO WATERWAYS.

OTHER HANDLING AND STORAGE REQUIREMENTS

NO SPECIAL REQUIREMENTS

X. DEPARTMENT OF TRANSPORTATION INFORMATION

PROPER SHIPPING NAME :
NONE REQUIRED

PLACARDS :
NONE

HAZARD CLASS :
NOT HAZARDOUS

REPORTABLE QUANTITY :
NONE

HAZARDOUS SUBSTANCE :
NONE

ID NUMBER :
NONE

LABEL :
NONE REQUIRED

Prepared by:
Environmental Services

DATE: August, 1993

BEST Sheet**BARAZAN®**

Page 5

XI. REGULATORY INFORMATION**STATUS ON SUBSTANCE LISTS**

Comprehensive Environmental Response, Compensation and Liability Act of 1980, (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQs) in 40 CFR 302.4.

Components present in this product which may require notification are:

Chemical	CAS Number
----------	------------

NONE

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on RQs.

Components present in this product at a level which could require reporting under the statute are:

NONE

SARA requires the submission of annual reports of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDS that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are:

NONE

Toxic Substances Control Act (TSCA)

The ingredients of this product are on the TSCA inventory.

XII. STATE RIGHT TO KNOW

NOT ON ANY LISTS

Prepared by:
Environmental Services

DATE:

August, 1993