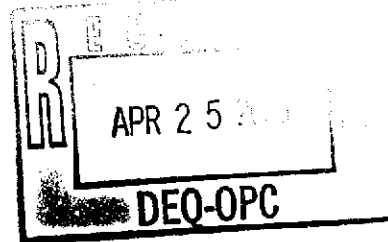


ENVIROSAV, L.L.C.
Phase I & Phase II Environmental Audits

Rec.
4/25/2000
[Signature]

April 20, 2000

FILE COPY



Mr. Al Thomas
Kuhlman Electric Corporation
101 Kuhlman Drive
Crystal Springs, MS 39059

RE: Submittal of results of environmental samples collected at Kuhlman Electric Corporation on April 14, 2000

Dear Mr. Thomas:

Attached are sample results and Material Safety Data Sheets (MSDS's) from samples collected at Kuhlman Electric Corporation's Crystal Springs, Mississippi facility on April 14, 2000.

Sample results indicate contamination is present at the Kuhlman site in Crystal Springs, Copiah County Mississippi.

Aroclor 1268 (PCB's) was detected in both samples collected on 4/14/2000 at your Crystal Springs facility. Concentrations ranged from 2400 parts per million (ppm) to 11,000 ppm.

The following benzene derivatives, trichlorobenzene, tetrachlorobenzene, pentachlorobenzene, and hexachlorobenzene, were also detected in the samples.

Air samples were collected on April 20, 2000, but results were not available to be included in this report.

ENVIROSAV, LLC recommends that Kuhlman Electric Corporation or their designee contact the Mississippi Department of Environmental Quality (MDEQ) about the contamination. Mr. Jerry Banks is the Chief of the MDEQ's Hazardous Waste Branch (601) 961-5221.

We further recommend that parties involved meet to discuss sample results, Mississippi Department of Environmental Quality (MDEQ) notification, additional sampling plans, and potential remediation plans. Our engineer, Mr. Scott Armstrong, is plotting potential sample points around the building. He will forward this information to Mr. Al Thomas.

Warren Guider
105 Montaign Drive
Vicksburg, MS 39180


gwg@magnolia.net

(601) 638-7575
Mobile (601) 529-2464
Fax (601) 638-6763

ENVIROSAV, L.L.C.
Phase I & Phase II Environmental Audits

If you have any questions, please contact me, Ms. Tennie White (601) 982-1920, or Mr. Scott Armstrong (601) 932-2009.

Sincerely,



Warren Guider
ENVIROSAV, LLC

cc: File

Warren Guider
105 Montaign Drive
Vicksburg, MS 39180

gwg@magnolia.net

(601) 638-7575
Mobile (601) 529-2464
Fax (601) 638-6763



MISSISSIPPI
ENVIRONMENTAL
ANALYTICAL LABORATORY, INC.

500 EAST WOODROW WILSON BLVD.

BUILDING E-NORTH

JACKSON, MS 39216

BUSINESS

FAX

1-601-982-1920

1-601-982-1980

ENVIROSAV, LLC PROJECT LOCATION CRYSTAL SPRINGS

PROJECT NAME 000414 PROJECT CONTACT MR AL THOMAS

PROJECT NO. 601 638 7575 / 601 638 6713

PROJECT TELEPHONE/FAX WARREN GUIDER / WILLARD PUSHING

PROJECT MANAGER/SUPERVISOR

ITEM	SAMPLE	DATE	TIME	COMP	GRAB	DESCRIPTION	# CONTAIN	ANALYSIS REQUESTED	REMARKS
1	000414-01	4/14/00	0945	✓	Soil	48183.1 / 48182	1	Full TCLP	DIRT pile
2	000414-02	4/14/00	1000	✓	Soil	48184.1 / 48183	1		E of DIRT pile
3									
4									
5									
6									
7									
8									
9									
10									

TRANSFERS RELINQUISHED BY: TRANSFERS ACCEPTED BY: DATE/TIME/INIT.

1 Warren Guider Warren L. White 4/14/00 11:00am
 2
 3
 4
 Warren Guider
 SAMPLER'S NAME (PRINT)
 Warren Guider
 SAMPLER'S SIGNATURE

SPECIAL INSTRUCTIONS

Run samples ASAP
 Client will pay premium for
 QUICKER RESULTS

4/19/00		ppm	ppm
		ES-1	ES-2
Compound CAS Registry No. IUPAC #			
Aroclor 1016	12674-11-2 -Aroclor		
1221	11104-28-2 -Aroclor		
1232	11141-16-5 -Aroclor		
1242	53469-21-9 -Aroclor		
1248	12672-29-6 -Aroclor		
1254	11097-69-1 -Aroclor		
1260	11096-82-5 -2-Aroclor		
1268	Aroclor	2437	11394
Chlorobiphenyl 2051-60-7 1			
2,3-Dichlorobiphenyl 16605-91-7 5			
2,2',5-Trichlorobiphenyl 37680-65-2 18			
2,4',5-Trichlorobiphenyl 16606-02-3 31			
2,2',3,5'-Tetrachlorobiphenyl 41464-39-5 44			
2,2',5,5'-Tetrachlorobiphenyl 35693-99-3 52			
2,3',4,4'-Tetrachlorobiphenyl 32598-10-0 66			
2,2',3,4,5'-Pentachlorobiphenyl 38380-02-8 87			
2,2',4,5,5'-Pentachlorobiphenyl 37680-73-2 101			
2,3,3',4',6-Pentachlorobiphenyl 38380-03-9 110			
2,2',3,4,4',5'-Hexachlorobiphenyl 35065-28-2 138			
2,2',3,4,5,5'-Hexachlorobiphenyl 52712-04-6 141			
2,2',3,5,5',6-Hexachlorobiphenyl 52663-63-5 151			
2,2',4,4',5,5'-Hexachlorobiphenyl 35065-27-1 153			
2,2',3,3',4,4',5-Heptachlorobiphenyl 35065-30-6 170			
2,2',3,4,4',5,5'-Heptachlorobiphenyl 35065-29-3 180			
2,2',3,4,4',5',6-Heptachlorobiphenyl 52663-69-1 183			
2,2',3,4',5,5',6-Heptachlorobiphenyl 52663-68-0 187			
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl 40186-72-9 206			
1,2,4-Trichlorobenzene		2284	515
1,2,3-Trichlorobenzene		939	249
1,3,5-Trichlorobenzene		88	88
1,2,3,5 Tetrachlorobenzene		2398	1869
1,2,3,4-Tetrachlorobenzene		149	88
1,2,4,5-Tetrachlorobenzene		132	45
Pentachlorobenzene		518	541
Hexachlorobenzene		2247	2963

~1 (c?)

527/527

23.5/613
62.6/1030

0.4/1.65 (c)

MAXIMUM CONCENTRATION OF CONTAMINANTS FOR THE TOXICITY CHARACTERISTIC				
		ES-1	ES-2	
METALS				LIMIT
	ARSENIC	0.021	0.024	5
	BARIUM	12	10	100
	CADMIUM	0.015	0.015	1
	CHROMIUM	0.008	0.029	5
	LEAD	0.14	0.15	5
	MERCURY	0.008	0.007	0.2
	SELENIUM	0.012	0.013	1
	SILVER	0.01	0.01	5
VOLATILES				LIMITS
	BENZENE	<0.001	<0.001	0.5
	CARBON TETRACHLORIDE	<0.001	<0.001	0.5
	CHLOROBENZENE	<0.001	<0.001	100
	CHLOROFORM	<0.001	<0.001	6
	1,4-DICHLOROBENZENE	<0.001	<0.001	7.5
	1,2-DICHLOROETHANE	<0.001	<0.001	0.5
	1,1-DICHLOROETHYLENE	<0.001	<0.001	0.7
	MEHTYL EHTYL KETONE	<0.005	<0.005	200
	TETRACHLOROETHYLENE	<0.001	<0.001	0.7
	TRICHLOROETHYLENE	<0.001	<0.001	0.5
	VINYL CHLORIDE	<0.001	<0.001	0.2
PESTICIDES				
	CHLORDANE	<0.1	<0.1	0.03
	ENDRIN	<0.01	<0.01	0.02
	HEPTACHLOR	<0.005	<0.005	0.008
	HEPTACHLOR EPOXIDE	<0.005	<0.005	0.008
	HEXACHLOROBENZENE	1247	1316	0.13
	LINDANE	<0.005	<0.005	0.4
	METHOXYCHLOR	<0.01	<0.01	10
	TOXAPHENE	<0.1	<0.1	0.5
HERBICIDES				
	2,4-D	<0.01	<0.01	10
	2,4,5-TP(SILVEX)	<0.01	<0.01	1
SEMIVOLATILES				
	O-CRESOL	<0.01	<0.01	200
	M-CRESOL	<0.01	<0.01	200
	P-CRESOL	<0.01	<0.01	200
	CRESOL	<0.01	<0.01	200
	2,4-DINITROTOLUENE	<0.01	<0.01	0.13
	HEXACHOROBUTADIENE	<0.01	<0.01	0.5
	HEXACHLOROETHANE	<0.01	<0.01	3
	NITROBENZENE	<0.01	<0.01	2
	PENTACHLOROPHENOL	<0.01	<0.01	100
	PYRIDINE	<0.01	<0.01	5
	2,4,5-TRICHLOROPHENOL	<0.01	<0.01	400
	2,4,6-TRICHLOROPHENOL	<0.01	<0.01	2
REACITVE CYANIDE		<0.02	<0.02	500
REACTIVE SULFIDE		<0.02	<0.02	500
PH		6.13	5.2	<4.5 or >9.5
IGNITABILITY		170	210	<140

Quality Control / Quality Assurance Summary

Mississippi Environmental Analytical Laboratory, Inc.
 500 East Woodrow Wilson, Building E
 Jackson, MS 39216
 601/982-1920 Office
 601/982-1980 Fax

Lab Mgr: *Ami C. White*
 Q/A Q/C : *Angela Williams*
 Facil ID: KULHMAN CORP.
 Report #: 104994
 Date: 04/19/2000
 Page #: 1

Acct #: 1288
 Client: ENVIROSAV, LLC
 Address: 105 MONTAIGN DRIVE
 City: VICKSBURG, MS 39180
 Contact: WARREN GUIDER
 Phone: 601/638-7575 Fax: 601/638-6763
 Contract Descrip: CRYSTAL SPRINGS-KULHMAN CORP
 Project Location: CRYSTAL SPRINGS, MS
 Contract Number : 000414
 Contract PO: 000414
 Expiration Date: 04/14/2001

Analyte	Method	Holding Time	Surrogate Recovery	Mtx Spk Recovery	Blank	Batch Number
PESTICIDES, TCLP	SW846 METHOD 8080	A	A	A	A	22139
HERBICIDES, TCLP	SW846 METHOD 8150	A	A	A	A	22140
TCLP VOLATILES BY GC/MS	SW846 METHOD 8260	A	A	A	A	22142
SEMIVOLATILES, TCLP	SW846 METHOD 8270	A	A	A	A	22143
IGNITABILITY	SW846 METHOD 1010	A	N/A	A	A	22136
PH	SW846 METHOD 9045	A	N/A	N/A	N/A	22135
REACTIVITY, CYANIDE	SW846 METHOD SEC. 7.3.3.2	A	N/A	A	A	22137
REACTIVITY, SULFIDE	SW846 METHOD SEC. 7.3.4.1	A	N/A	A	A	22138
TCLP-METALS	SW846 METHOD 1311	A	N/A	A	A	22144

Note: Note Description
 A Requirements set by method were met. N/A Not Applicable

Analytical Report

Mississippi Environmental Analytical Laboratory, Inc.
 500 East Woodrow Wilson, Building E
 Jackson, MS 39216
 Lab Mgr: T WHITE
 Q/A Q/C : T WHITE SR
 Facil ID: KULHMAN CORP.

Report #: 104994
 Date: 04/19/2000
 Page #: 2
 Sample Collected by: WARREN GUIDER
 Receipt Date: 04/14/2000
 Coll. Ending Date: 04/14/2000
 Sample Type: GRAB
 Coll. Ending Time: 09:45
 Sample Matrix: SOIL

Lab #: 48182.00 Client Ref #:
 Sample Description
 SOIL SAMPLE 000414-01 4/14/2000 09:45-DIRT PILE

Analyte	Units	Amount	Lmt of Hold Ana- Detect Time lyst	Prep Date	{---Test---} Time	Batch Number	Lab Note Analyst's Note
PESTICIDES, TCLP	ppm	screen	screen A	TKW 04/14/00	04/16/00 08:00	22139	
Surr: TETRACHLORO-n-XYLENE		96% A					
Surr: DECACHLOROBIPHENYL		99% A					
Cmpd: CHLORDANE	ND	0.03					
Cmpd: EMDRIN	ND	0.001					
Cmpd: HEPTACHLOR	ND	0.001					
Cmpd: HEPTACHLOR EPOXIDE	ND	0.001					
Cmpd: LINDANE	ND	0.001					
Cmpd: METHOXYCHLOR	ND	0.005					
Cmpd: TOXAPHENE	ND	0.1					

HERBICIDES, TCLP	ppm	screen	screen A	TKW 04/14/00	04/16/00 13:00	22140	
Surr: DIBUTYLCHLORODATE		94% A					
Cmpd: 2,4-DICHLOROPHENOXYACETIC ACID	ND	0.01					
Cmpd: 2-(2,4,5-TRICHLOROPHENOXY)-PROPANOIC ACID	ND	0.01					

TCLP VOLATILES BY GC/MS	ppm	screen	screen A	TKW 04/14/00	04/16/00 08:00	22142	
Surr: 4-BROMOFLUOROBENZENE		99% A					
Surr: 1,2-DICHLOROETHANE-d4		99% A					
Surr: TOLUENE-D8		101% A					
Cmpd: 1,1-DICHLOROETHENE	ND	0.005					
Cmpd: 1,2-DICHLOROETHANE	ND	0.005					
Cmpd: 1,4-DICHLOROETHENE	ND	0.005					
Cmpd: BENZENE	ND	0.005					
Cmpd: CARBON TETRACHLORIDE	ND	0.005					
Cmpd: CHLOROBENZENE	ND	0.005					

Note: Note Description
 A Requirements set by method were met. ND NOT DETECTED

Analytical Report

Mississippi Environmental Analytical Laboratory, Inc.		Report #: 104994	
500 East Woodrow Wilson, Building E		Date: 04/19/2000	
Jackson, MS 39216		Page #: 3	
601/982-1920 Office		Lab Mgr: T WHITE	
601/982-1980 Fax		Q/A Q/C : T WHITE SR	
		Facil ID: KULHMAN CORP.	
Lab #: 48182.00 Client Ref #:		Receipt Date: 04/14/2000	
Sample Description		Sample Type: GRAB	
SOIL SAMPLE 000414-01 4/14/2000 09:45-DIRT PILE		Sample Matrix: SOIL	

Analyte	Units	Amount	Lmt of Hold Ana-	Prep	Date	Batch	Lab
			Detect Time	{---Test---	Date	Number	Note
			lyst				Analyst's
							Note
Cmpd: CHLOROFORM		ND		screen	04/14/00	04/16/00	09:00 22143
Cmpd: METHYL ETHYL KETONE		ND		94% A			
Cmpd: TETRACHLOROETHYLENE		ND		99% A			
Cmpd: TRICHLOROETHYLENE		ND		97% A			
Cmpd: VINYL CHLORIDE		ND					
SEMIVOLATILES, TCLP							
Suit: NITROBENZENE-d5	ppm	screen		screen	04/14/00	04/16/00	09:00 22143
Surr: 2-FLUOROBIIPHENYL		94% A					
Suit: 2,4,6-TRIBROMOPHENOL		99% A					
Cmpd: 2,4,5-TRICHLOROPHENOL		97% A					
Cmpd: 2,4,6-TRICHLOROPHENOL		ND					
Cmpd: 2,4-DINITROTOLUENE		ND					
Cmpd: HEXACHLOROBENZENE		1247					
Cmpd: HEXACHLOROBUTADIENE		ND					
Cmpd: HEXACHLOROETHANE		ND					
Cmpd: m-CRESOL		ND					
Cmpd: NITROBENZENE		ND					
Cmpd: o-CRESOL		ND					
Cmpd: p-CRESOL		ND					
Cmpd: PENTACHLOROPHENOL		ND					
Cmpd: PYRIDINE		ND					
IGNITABILITY							
	deg F	170			04/19/00	04/19/00	09:00 22136
PH	s.u.	6.13					
Note: Note Description							
A							ND NOT DETECTED

Requirements set by method were met.

Analytical Report

Mississippi Environmental Analytical Laboratory, Inc. 500 East Woodrow Wilson, Building E Jackson, MS 39216		Lab Mgr: T WHITE Q/A Q/C : T WHITE SR Facil ID: KULHMAN CORP.	
Lab #: 48182.00 Client Ref #:		Report #: 104994	
Sample Description SOIL SAMPLE 000414-01 4/14/2000 09:45-DIRT PILE		Date: 04/19/2000 Page #: 4	
Sample Collected by: WARREN GUIDER Coll. Ending Date: 04/14/2000 Coll. Ending Time: 09:45		Receipt Date: 04/14/2000 Sample Type: GRAB Sample Matrix: SOIL	

Analyte	Units	Amount	Lmt of Hold Ana- Detect Time	Prep l yst	Date	Date	Time	Batch Number	Lab	Note	Analyst's Note
REACTIVITY, CYANIDE	ppm	ND	0.02	A	TKW	04/15/00	04/15/00	13:00	22137		
REACTIVITY, SULFIDE	ppm	ND	0.02	A	TKW	04/15/00	04/15/00	11:00	22138		
TCLP-METALS	ppm	screen	screen	A	TKW	04/14/00	04/18/00	19:00	22144		
Cmpd: ARSENIC		0.021	0.005								
Cmpd: BARIUM		12	1								
Cmpd: CADMIUM		0.015	0.01								
Cmpd: CHROMIUM		0.008	0.01								
Cmpd: LEAD		0.14	0.01								
Cmpd: MERCURY		0.008	0.005								
Cmpd: SELENIUM		0.012	0.005								
Cmpd: SILVER		0.01	0.01								

Note: Requirements set by method were met.	Note: Description ND NOT DETECTED
--	---

Analytical Report

Mississippi Environmental Analytical Laboratory, Inc. 500 East Woodrow Wilson, Building E Jackson, MS 39216		Lab Mgr: T WHITE Q/A Q/C : T WHITE SR Facil ID: KULHMAN CORP.					
Lab #: 48183.00 Client Ref #:		Report #: 104994 Date: 04/19/2000 Page #: 5					
Sample Description SOIL SAMPLE 000414-02 4/14/2000 10:00 EAST OF DIRT		Sample Collected by: WARREN GUIDER Coll. Ending Date: 04/14/2000 Coll. Ending Time: 10:00 Receipt Date: 04/14/2000 Sample Type: GRAB Sample Matrix: SOIL					
Analyte	Units	Amount	Lmt of Hold Ana- Detect Time lyst	Prep Date	{---Test---} Date	Batch Number	Lab Note Analyst's Note
PESTICIDES, TCLP							
Surr: TETRACHLORO-m-XYLENE	ppm	screen 98% A	screen A	TKW	04/14/00	04/16/00	08:00 22139
Surr: DECACHLOROBIPHENYL		98% A					
Cmpd: CHLORDANE		ND					0.03
Cmpd: ENDRIN		ND					0.001
Cmpd: HEPTACHLOR		ND					0.001
Cmpd: HEPTACHLOR EPOXIDE		ND					0.001
Cmpd: LINDANE		ND					0.001
Cmpd: METHOXYCHLOR		ND					0.005
Cmpd: TOKAPHENE		ND					0.1
HERBICIDES, TCLP							
Surr: DIBUTYLCHLORODATE	ppm	screen 93% A	screen A	TKW	04/14/00	04/16/00	13:00 22140
Cmpd: 2,4-DICHLOROPHENOXYACETIC ACID		ND					0.01
Cmpd: 2-(2,4,5-TRICHLOROPHENOXY)-PROPANOIC ACID		ND					0.01
TCLP VOLATILES BY GC/MS							
Surr: 4-BROMOFLUOROBENZENE	ppm	screen 98% A	screen A	TKW	04/14/00	04/16/00	08:00 22142
Surr: 1,2-DICHLOROETHANE-d4		98% A					
Surr: TOLUENE-D8		99% A					
Cmpd: 1,1-DICHLOROETHENE		ND					0.005
Cmpd: 1,2-DICHLOROETHANE		ND					0.005
Cmpd: 1,4-DICHLOROETHENE		ND					0.005
Cmpd: BENZENE		ND					0.005
Cmpd: CARBON TETRACHLORIDE		ND					0.005
Cmpd: CHLOROBENZENE		ND					0.005

Note—Note Description
 A Requirements set by method were met. ND NOT DETECTED

Analytical Report

Mississippi Environmental Analytical Laboratory, Inc. 500 East Woodrow Wilson, Building E Jackson, MS 39216	Lab Mgr: T WHITE Q/A Q/C :T WHITE SR Facil ID: KULHMAN CORP.
Report #: 104994 Date: 04/19/2000 Page #: 6	

Lab #: 48183.00 Client Ref #: Sample Description SOIL SAMPLE 000414-02 4/14/2000 10:00 EAST OF DIRT	Sample Collected by: WARREN GUIDER Coll. Ending Date: 04/14/2000 Coll. Ending Time: 10:00
	Receipt Date: 04/14/2000 Sample Type: GRAB Sample Matrix: SOIL

Analyte	Units	Amount	Lmt of Hold Ana- Detect Time lyst	Prep Date	{---Test---} Date	Batch Time	Lab Number	Note Analyst's Note
Cmpd: CHLOROFORM		ND	0.005					
Cmpd: METHYL ETHYL KETONE		ND	0.005					
Cmpd: TETRACHLOROETHYLENE		ND	0.005					
Cmpd: TRICHLOROETHYLENE		ND	0.005					
Cmpd: VINYL CHLORIDE		ND	0.005					
SEMIVOLATILES, TCLP	ppm	screen	screen A	TKW	04/14/00	04/16/00	09:00	22143
Surr: NITROBENZENE-d5		96% A						
Surr: 2-FLUOROBIPHENYL		94% A						
Surr: 2,4,6-TRIBROMOPHENOL		90% A						
Cmpd: 2,4,5-TRICHLOROPHENOL		ND	0.01					
Cmpd: 2,4,6-TRICHLOROPHENOL		ND	0.01					
Cmpd: 2,4-DINITROTOLUENE		ND	0.01					
Cmpd: HEXACHLOROBENZENE		1316	10					
Cmpd: HEXACHLOROBUTADIENE		ND	0.01					
Cmpd: HEXACHLOROETHANE		ND	0.01					
Cmpd: m-CRESOL		ND	0.01					
Cmpd: NITROBENZENE		ND	0.01					
Cmpd: o-CRESOL		ND	0.01					
Cmpd: p-CRESOL		ND	0.01					
Cmpd: PENTACHLOROPHENOL		ND	0.01					
Cmpd: PYRIDINE		ND	0.1					
IGNITABILITY	deg F	210	1	A	TKW	04/19/00	04/19/00	09:00
PH	s.u.	5.2	N/A	A	TKW	04/14/00	04/14/00	13:00

Note: Note Description A Requirements set by method were met.	Note: Note Description ND NOT DETECTED
--	---

Analytical Report

Mississippi Environmental Analytical Laboratory, Inc.
 500 East Woodrow Wilson, Building E
 Jackson, MS 39216
 Lab Mgr: T WHITE
 Q/A Q/C :T WHITE SR
 Facil ID: KULHMAN CORP.

Report #: 104994
 Date: 04/19/2000
 Page #: 7
 Client Ref #: 48183.00
 Sample Description: SOIL SAMPLE 000414-02 4/14/2000 10:00 EAST OF DIRT
 Sample Collected by: WARREN GUIDER
 Coll. Ending Date: 04/14/2000
 Coll. Ending Time: 10:00
 Receipt Date: 04/14/2000
 Sample Type: GRAB
 Sample Matrix: SOIL

Analyte	Units	Amount	Int of Hold Ana- Detect Time lyst	Prep Date	{---Test---} Date	Batch Time Number	Lab Note Analyst's Note
---------	-------	--------	--------------------------------------	--------------	----------------------	----------------------	----------------------------

REACTIVITY, CYANIDE	ppm	ND	0.02	A	TKW	04/15/00 13:00	22137
---------------------	-----	----	------	---	-----	----------------	-------

REACTIVITY, SULFIDE	ppm	ND	0.02	A	TKW	04/15/00 11:00	22138
---------------------	-----	----	------	---	-----	----------------	-------

TCLP-METALS	ppm	screen	screen	A	TKW	04/14/00 19:00	22144
-------------	-----	--------	--------	---	-----	----------------	-------

Cmpd: ARSENIC	0.024	0.005					
---------------	-------	-------	--	--	--	--	--

Cmpd: BARIUM	10	1					
--------------	----	---	--	--	--	--	--

Cmpd: CADMIUM	0.015	0.01					
---------------	-------	------	--	--	--	--	--

Cmpd: CHROMIUM	0.029	0.01					
----------------	-------	------	--	--	--	--	--

Cmpd: LEAD	0.15	0.01					
------------	------	------	--	--	--	--	--

Cmpd: MERCURY	0.007	0.005					
---------------	-------	-------	--	--	--	--	--

Cmpd: SELENIUM	0.013	0.005					
----------------	-------	-------	--	--	--	--	--

Cmpd: SILVER	0.01	0.01					
--------------	------	------	--	--	--	--	--

Note: Note Description

A Requirements set by method were met.

ND NOT DETECTED

Quality Control / Quality Assurance Report

Mississippi Environmental Analytical Laboratory, Inc. Lab Mgr: T WHITE Report #: 104994
 500 East Woodrow Wilson, Building E Q/A Q/C :T WHITE SR Date: 04/19/2000
 Jackson, MS 39216 601/982-1920 Office Facil ID: KULHMAN CORP. Page #: 8
 601/982-1980 Fax

Analyte: PH Preparation Date: 04/14/2000 Batch Number: 22135
 Units: s.u. Test Began Date & Time: 04/14/2000 12:00 Book/Page: 15/101
 Analyst: TENNIE WHITE Test Ended Date & Time: 04/14/2000 13:00

Sample		Replicate		Matrix Spike		Mtx & Recovery		Blank	
Amount	LOD	Amount	LOD	Amount	LOD	Amount	LOD	Amount	LOD
48182		48182		N/A		N/A		N/A	
SOIL		SOIL		N/A		N/A		N/A	
GRAB		GRAB		N/A		N/A		N/A	
6.13		6.10		N/A		N/A		N/A	

Log Number:
 Sample Matrix:
 Sample Type:
 Amount/Limit of Detection:
 Quality Control Summary Notes:

Note: Note Description Note: Note Description
 N/A Not Applicable

Quality Control / Quality Assurance Report

Mississippi Environmental Analytical Laboratory, Inc.

500 East Woodrow Wilson, Building E
 Jackson, MS 39216

601/982-1920 Office
 601/982-1980 Fax

Lab Mgr: T WHITE
 Q/A Q/C :T WHITE SR
 Facil ID: KULHMAN CORP.

Report #: 104994
 Date: 04/19/2000
 Page #: 9

Analyte: IGNITABILITY

Units: deg F

Analyst: TENNIE WHITE

Preparation Date: 04/19/2000

Test Began Date & Time: 04/19/2000 07:00

Test Ended Date & Time: 04/19/2000 09:00

Batch Number: 22136

Book/Page: 15/103

	{---Sample---	{---Replicate---	{---Matrix Spike---	{-Mtx & Recovery-}	{---Blank---	
	Amount	LOD	Amount	LOD	Amount	LOD
Log Number:	48182		48182	48182		BLANK
Sample Matrix:	SOIL		SOIL	SOIL		WATER
Sample Type:	GRAB		GRAB	GRAB		GRAB
Amount/Limit of Detection:	170	1	170	100%		>230
Quality Control Summary Notes:			88	100%		A

Note Description

A Requirements set by method were met.

Quality Control / Quality Assurance Report

Mississippi Environmental Analytical Laboratory, Inc. Lab Mgr: T WHITE Report #: 104994
 500 East Woodrow Wilson, Building E Q/A Q/C :T WHITE SR Date: 04/19/2000
 Jackson, MS 39216 601/982-1920 Office Facil ID: KULHMAN CORP. Page #: 10
 601/982-1980 Fax

Analyte: REACTIVITY, CYANIDE Preparation Date: 04/15/2000 Batch Number: 22137
 Units: ppm Test Began Date & Time: 04/15/2000 07:00 Book/Page: 15/66
 Analyst: TENNIE WHITE Test Ended Date & Time: 04/15/2000 13:00

	({---Sample---})		({---Replicate---})		({---Matrix Spike---})		({---Mtx % Recovery---})		({---Blank---})	
	Amount	LOD	Amount	LOD	Amount	LOD	Amount	LOD	Amount	LOD
Log Number:	48183		48183		48183		48183			
Sample Matrix:	SOIL		SOIL		SOIL		SOIL		BLANK	
Sample Type:	GRAB		GRAB		GRAB		GRAB		WATER	
Amount/Limit of Detection:	ND	0.02	ND	0.02	ND	0.20	96%	0.02	ND	0.02
Quality Control Summary Notes:							A			A

Note: Note Description: A Requirements set by method were met. ND Note Description: ND NOT DETECTED

Quality Control / Quality Assurance Report

Mississippi Environmental Analytical Laboratory, Inc.
 500 East Woodrow Wilson, Building E
 Jackson, MS 39216

Lab Mgr: T WHITE
 Q/A Q/C : T WHITE SR
 Facil ID: KULHMAN CORP.

Report #: 104994
 Date: 04/19/2000
 Page #: 11

Analyte: REACTIVITY, SULFIDE
 Units: ppm
 Analyst: TENNIE WHITE

Preparation Date: 04/15/2000
 Test Began Date & Time: 04/15/2000 07:10
 Test Ended Date & Time: 04/15/2000 11:00

Batch Number: 22138
 Book/Page: 15/66

	{---Sample---	{---Replicate---	{---Matrix Spike---	{-Mtx % Recovery-	{---Blank---
	Amount	LOD	Amount	LOD	Amount
Log Number:	48182		48182	48182	
Sample Matrix:	SOIL	SOIL	SOIL	SOIL	BLANK
Sample Type:	GRAB	GRAB	GRAB	GRAB	WATER
Amount/Limit of Detection:	ND	0.02	ND	99%	ND
Quality Control Summary Notes:				A	A

Note: Note Description
 A Requirements set by method were met. ND NOT DETECTED

Quality Control / Quality Assurance Report

Mississippi Environmental Analytical Laboratory, Inc.
 500 East Woodrow Wilson, Building E
 Jackson, MS 39216
 601/982-1920 Office
 601/982-1980 Fax

Lab Mgr: T WHITE
 Q/A Q/C : T WHITE SR
 Facil ID: KULHMAN CORP.

Report #: 104994
 Date: 04/19/2000
 Page #: 12

Analyte: PESTICIDES, TCLP
Units: ppm
Analyst: TENNIE WHITE

Preparation Date: 04/14/2000
 Test Began Date & Time: 04/15/2000 16:30
 Test Ended Date & Time: 04/16/2000 08:00

Batch Number: 22139
 Book/Page: 15/110

	Sample		Replicate		Matrix Spike		Mtx % Recovery		Blank	
	Amount	LOD	Amount	LOD	Amount	LOD	Amount	LOD	Amount	LOD
Log Number:	48182		48182		48182		48182		48182	
Sample Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
Sample Type:	GRAB		GRAB		GRAB		GRAB		GRAB	
Screen Compound Amount/Limit of Detection:	96%		97%		0.500		97%		100%	
Surr: TETRACHLORO-m-XYLENE	99%		99%		0.500		97%		100%	
Surr: DECACHLOROBIPHENYL	ND	0.03	ND	0.03	0		0%		ND	0.1
Cmpd: CHLORDANE	ND	0.001	ND	0.001	0.50		99%		ND	0.001
Cmpd: ENDRIN	ND	0.001	ND	0.001	0.50		97%		ND	0.001
Cmpd: HEPTACHLOR	ND	0.001	ND	0.001	0.50		99%		ND	0.001
Cmpd: HEPTACHLOR EPOXIDE	ND	0.001	ND	0.001	0.50		101%		ND	0.001
Cmpd: LINDANE	ND	0.001	ND	0.001	0.50		98%		ND	0.005
Cmpd: METHOXYCHLOR	ND	0.005	ND	0.005	0		0%		ND	0.1
Cmpd: TOXAPHENE	ND	0.1	ND	0.1			A		ND	0.1

Quality Control Summary Notes:

Note: Note Description
 A Requirements set by method were met. ND NOT DETECTED

Quality Control / Quality Assurance Report

Mississippi Environmental Analytical Laboratory, Inc.
 500 East Woodrow Wilson, Building E
 Jackson, MS 39216

Lab Mgr: T WHITE
 Q/A Q/C :T WHITE SR
 Facil ID: KULHMAN CORP.

Report #: 104994
 Date: 04/19/2000
 Page #: 13

Analyte: HERBICIDES, TCLP
 Units: ppm
 Analyst: TENNIE WHITE

Preparation Date: 04/14/2000
 Test Began Date & Time: 04/15/2000 11:00
 Test Ended Date & Time: 04/16/2000 13:00

Batch Number: 22140
 Book/Page: 15/111

	{---Sample---	{---Replicate---	{---Matrix Spike---	{-Mtx % Recovery-}	{---Blank---
	Amount	LOD	Amount	LOD	Amount
Log Number:	48182		48182		48182
Sample Matrix:	SOIL		SOIL		SOIL
Sample Type:	GRAB		GRAB		GRAB
Screen Compound Amount/Limit of Detection:	94%		96%		100%
Surr: DIBUTYLCHLORODATE	ND	0.01	ND	0.01	ND
Compd: 2,4-DICHLOROPHENOXYACETIC ACID	ND	0.01	ND	0.01	ND
Compd: 2-(2,4,5-TRICHLOROPHENOXY)-PROPANOIC ACID	ND	0.01	ND	0.01	ND
Quality Control Summary Notes:			A		A

Note: Note Description: A Requirements set by method were met. ND NOT DETECTED

Quality Control / Quality Assurance Report

Mississippi Environmental Analytical Laboratory, Inc.
 500 East Woodrow Wilson, Building E
 Jackson, MS 39216

Lab Mgr: T WHITE
 Q/A Q/C : T WHITE SR
 Facil ID: KULHMAN CORP.

Report #: 104994
 Date: 04/19/2000
 Page #: 14

Analyte: TCLP VOLATILES BY GC/MS

Preparation Date: 04/14/2000

Batch Number: 22142

Units: ppm

Test Began Date & Time: 04/15/2000 18:00

Book/Page: 15/111

Analyst: TENNIE WHITE

Test Ended Date & Time: 04/16/2000 08:00

	Sample		Replicate		Matrix Spike		Mtx % Recovery		Blank	
	Amount	LOD	Amount	LOD	Amount	LOD	Amount	LOD	Amount	LOD
Log Number:	48182		48182		48182		48182			
Sample Matrix:	SOIL		SOIL		SOIL		SOIL		BLANK	
Sample Type:	GRAB		GRAB		GRAB		GRAB		WATER	
Screen Compound Amount/Limit of Detection:										
Surf: 4-BROMOFLUOROBENZENE	99%		98%		0.100		97%		1.00%	
Surf: 1,2-DICHLOROETHANE-d4	99%		99%		0.100		99%		1.00%	
Surf: TOLUENE-D8	101%		99%		0.100		99%		1.00%	
Cmpd: 1,1-DICHLOROETHENE	ND	0.005	ND	0.005	0.100		99%		ND	0.005
Cmpd: 1,2-DICHLOROETHANE	ND	0.005	ND	0.005	0.100		97%		ND	0.005
Cmpd: 1,4-DICHLOROETHENE	ND	0.005	ND	0.005	0.100		99%		ND	0.005
Cmpd: BENZENE	ND	0.005	ND	0.005	0.100		100%		ND	0.005
Cmpd: CARBON TETRACHLORIDE	ND	0.005	ND	0.005	0.100		100%		ND	0.005
Cmpd: CHLOROBENZENE	ND	0.005	ND	0.005	0.100		100%		ND	0.005
Cmpd: CHLOROFORM	ND	0.005	ND	0.005	0.100		100%		ND	0.005
Cmpd: METHYL ETHYL KETONE	ND	0.005	ND	0.005	0.100		96%		ND	0.005
Cmpd: TETRACHLOROETHYLENE	ND	0.005	ND	0.005	0.100		100%		ND	0.005
Cmpd: TRICHLOROETHYLENE	ND	0.005	ND	0.005	0.100		100%		ND	0.005
Cmpd: VINYL CHLORIDE	ND	0.005	ND	0.005	0.100		90%		ND	0.005

Quality Control Summary Notes:

Note: Note Description

A Requirements set by method were met.

ND NOT DETECTED

A

Quality Control / Quality Assurance Report

Mississippi Environmental Analytical Laboratory, Inc.

500 East Woodrow Wilson, Building E
Jackson, MS 39216

Lab Mgr: T WHITE
Q/A Q/C :T WHITE SR
Facil ID: KULHMAN CORP.

Report #: 104994
Date: 04/19/2000
Page #: 15

Analyte: SEMIVOLATILES, TCLP

Units: ppm

Analyst: TENNIE WHITE

Preparation Date: 04/14/2000

Batch Number: 22143

Test Began Date & Time: 04/15/2000 18:00

Book/Page: 15/111

Test Ended Date & Time: 04/16/2000 09:00

	Sample		Replicate		Matrix Spike		Mtx & Recovery		Blank	
	Amount	LOD	Amount	LOD	Amount	LOD	Amount	LOD	Amount	LOD
Log Number:	48182		48182		48182		48182		BLANK	
Sample Matrix:	SOIL		SOIL		SOIL		SOIL		WATER	
Sample Type:	GRAB		GRAB		GRAB		GRAB		GRAB	
Screen Compound Amount/Limit of Detection:										
Surr: NITROBENZENE-d5	94%		96%		0.500		98%		100%	
Surr: 2-FLUOROBIPHENYL	99%		97%		0.500		97%		100%	
Surr: 2,4,6-TRIBROMOPHENOL	97%		91%		0.500		94%		100%	
Cmpd: 2,4,5-TRICHLOROPHENOL	ND	0.01	ND	0.01	0.50		99%		ND	0.01
Cmpd: 2,4,6-TRICHLOROPHENOL	ND	0.01	ND	0.01	0.50		101%		ND	0.01
Cmpd: 2,4-DINITROTOLUENE	ND	0.01	ND	0.01	0.50		100%		ND	0.01
Cmpd: HEXACHLOROBENZENE	1247	10	947	10	0.50		204*%		ND	0.01
Cmpd: HEXACHLOROBUTADIENE	ND	0.01	ND	0.01	0.50		98%		ND	0.01
Cmpd: HEXACHLOROETHANE	ND	0.01	ND	0.01	0.50		99%		ND	0.01
Cmpd: m-CRESOL	ND	0.01	ND	0.01	0.50		99%		ND	0.01
Cmpd: NITROBENZENE	ND	0.01	ND	0.01	0.50		97%		ND	0.01
Cmpd: o-CRESOL	ND	0.01	ND	0.01	0.50		99%		ND	0.01
Cmpd: p-CRESOL	ND	0.01	ND	0.01	0.50		96%		ND	0.01
Cmpd: PENTACHLOROPHENOL	ND	0.01	ND	0.01	0.50		97%		ND	0.01
Cmpd: PYRIDINE	ND	0.1	ND	0.1	0.50		90%		ND	0.1

Quality Control Summary Notes:

Note: Note Description
A Requirements set by method were met. ND NOT DETECTED

Quality Control / Quality Assurance Report

Mississippi Environmental Analytical Laboratory, Inc.
 500 East Woodrow Wilson, Building E
 Jackson, MS 39216
 Lab Mgr: T WHITE
 Q/A Q/C :T WHITE SR
 Facil ID: KULLHMAN CORP.

Report #: 104994
 Date: 04/19/2000
 Page #: 16

Analyte: TCLP-METALS
 Units: ppm
 Analyst: TENNIE WHITE
 Preparation Date: 04/14/2000
 Test Began Date & Time: 04/15/2000 14:18
 Test Ended Date & Time: 04/18/2000 19:00
 Batch Number: 22144
 Book/Page: 15/116

Log Number:	Sample Matrix:	Sample Type:	{---Sample---			{---Replicate---			{---Matrix Spike---			{---MtX & Recovery---			{---Blank---		
			Amount	LOD	Amount	LOD	Amount	LOD	Amount	LOD	Amount	LOD	Amount	LOD			
48182	SOIL	GRAB	0.021	0.005	0.022	0.005	0.050	48182	SOIL	GRAB	48182	SOIL	GRAB	ND	0.005	ND	0.005
12	ARSENIC		11	1	11	1	10	48182	SOIL	GRAB	48182	SOIL	GRAB	ND	0.005	ND	0.005
0.015	CADMIUM		0.01	0.01	0.015	0.01	0.050	48182	SOIL	GRAB	48182	SOIL	GRAB	ND	0.005	ND	0.005
0.008	CHROMIUM		0.01	0.01	0.008	0.01	0.100	48182	SOIL	GRAB	48182	SOIL	GRAB	ND	0.005	ND	0.005
0.14	LEAD		0.01	0.01	0.14	0.01	0.10	48182	SOIL	GRAB	48182	SOIL	GRAB	ND	0.005	ND	0.005
0.008	MERCURY		0.005	0.005	0.008	0.005	0.050	48182	SOIL	GRAB	48182	SOIL	GRAB	ND	0.005	ND	0.005
0.012	SELENIUM		0.005	0.005	0.012	0.005	0.050	48182	SOIL	GRAB	48182	SOIL	GRAB	ND	0.005	ND	0.005
0.01	SILVER		0.01	0.01	0.01	0.01	0.30	48182	SOIL	GRAB	48182	SOIL	GRAB	ND	0.005	ND	0.005

Quality Control Summary Notes:

Note: Note Description
 A Requirements set by method were met.

ND

NOT DETECTED

Quality Control / Quality Assurance Summary

Mississippi Environmental Analytical Laboratory, Inc.
 500 East Woodrow Wilson, Building E
 Jackson, MS 39216

601/982-1920 Office
 601/982-1980 Fax

Lab Mgr: *Jerry F. White*
 Q/A Q/C : *Jerry F. White*
 Facil ID: KULHMAN CORP.

Report #: 104995
 Date: 04/19/2000
 Page #: 1

Acct #: 1288
 Client: ENVIROSAV, LLC
 Address: 105 MONTAIGN DRIVE
 City: VICKSBURG, MS 39180
 Contact: WARREN GUIDER
 Phone: 601/638-7575 Fax: 601/638-6763

Contract Descrip: CRYSTAL SPRINGS-KULHMAN CORP
 Project Location: CRYSTAL SPRINGS, MS
 Contract Number : 000414
 Contract PO: 000414
 Expiration Date: 04/14/2001

Analyte	Method	Holding Time	Surrogate Recovery	Mtx Spk Recovery	Blank	Batch Number
SEMIVOLATILE ORGANIC COMPOUNDS GC/MS	SW846-METHOD 8270C	A	A	A	A	22132

Note: Note Description

A Requirements set by method were met.

Analytical Report

Mississippi Environmental Analytical Laboratory, Inc.
 500 East Woodrow Wilson, Building E
 Jackson, MS 39216
 Lab Mgr: T WHITE
 Q/A Q/C : T WHITE SR
 Facil ID: KULHMAN CORP.

Report #: 104995
 Date: 04/19/2000
 Page #: 2
 Sample Collected by: WARREN GUIDER
 Coll. Ending Date: 04/14/2000
 Coll. Ending Time: 10:00
 Receipt Date: 04/14/2000
 Sample Type: GRAB
 Sample Matrix: SOIL

Lab #: 48183.10 Client Ref #:
 Sample Description
 SOIL SAMPLE 000414-02 4/14/2000 10:00 EAST OF DIRT

Analyte	Units	Amount	Lmt of Hold Ana-	Prep	Date	Batch	Lab
			Detect Time	Time	Number	Note	Analyst's Note
SEMIVOLATILE ORGANIC COMPOUNDS GC/MS	ppm	screen	TKW	04/14/00	04/17/00	09:00	22132
Surr: 2,4,6-TRIBROMOPHENOL		97% A					
Surr: DECACHLOROBIPHENYL		97% A					
Surr: 2-FLUOROBIPHENYL		91% A					
Cmpd: 1,2,3,4-Tetrachlorobenzene		149					
Cmpd: 1,2,3,5-Tetrachlorobenzene		2398					
Cmpd: 1,2,3-Trichlorobenzene		939					
Cmpd: 1,2,4,5-Tetrachlorobenzene		132					
Cmpd: 1,2,4-Trichlorobenzene		2284					
Cmpd: 1,3,5-Trichlorobenzene		88					
Cmpd: AROCLOR 1268		2437					
Cmpd: Hexachlorobenzene		2247					
Cmpd: Pentachlorobenzene		518					

Note: Note Description
 A Requirements set by method were met.

Analytical Report

Mississippi Environmental Analytical Laboratory, Inc.
 500 East Woodrow Wilson, Building E
 Jackson, MS 39216
 Lab #: 48184.10 Client Ref #:

Lab Mgr: T WHITE
 Q/A Q/C : T WHITE SR
 Facil ID: KULHMAN CORP.

601/982-1920 Office
 601/982-1980 Fax

Report #: 104995
 Date: 04/19/2000
 Page #: 3

Sample Description
 SOIL SAMPLE 000414-01 4/14/2000 09:45 DIRT PILE

Sample Collected by: WARREN GUIDER
 Coll. Ending Date: 04/14/2000
 Coll. Ending Time: 09:45

Receipt Date: 04/14/2000
 Sample Type: GRAB
 Sample Matrix: SOIL

Analyte	Units	Amount	Lmt of Hold Ana- Detect Time lyst	Prep Date	Test Date	Batch Time	Lab Number	Note	Analyst's Note
SEMIVOLATILE ORGANIC COMPOUNDS GC/MS	ppm	screen							
Surr: 2,4,6-TRIBROMOPHENOL		97% A							
Surr: DECACHLOROBIPHENYL		97% A							
Surr: 2-FLUOROBIPHENYL		93% A							
Cmpd: 1,2,3,4-Tetrachlorobenzene		88							
Cmpd: 1,2,3,5-Tetrachlorobenzene		1869							
Cmpd: 1,2,3-Trichlorobenzene		249							
Cmpd: 1,2,4,5-Tetrachlorobenzene		45							
Cmpd: 1,2,4-Trichlorobenzene		515							
Cmpd: 1,3,5-Trichlorobenzene		88							
Cmpd: AROCLOR 1268		11394							
Cmpd: Hexachlorobenzene		2963							
Cmpd: Pentachlorobenzene		541							

Note: Note Description
 A Requirements set by method were met.

Quality Control / Quality Assurance Report

Mississippi Environmental Analytical Laboratory, Inc.
 500 East Woodrow Wilson, Building E
 Jackson, MS 39216
 Lab Mgr: T WHITE
 Q/A Q/C : T WHITE SR
 Facil ID: KULHMAN CORP.

Report #: 104995
 Date: 04/19/2000
 Page #: 4

Analyte: SEMIVOLATILE ORGANIC COMPOUNDS GC/MS
 Units: ppm
 Analyst: TENNIE WHITE
 Preparation Date: 04/14/2000
 Test Began Date & Time: 04/16/2000 08:00
 Test Ended Date & Time: 04/17/2000 09:00
 Batch Number: 22132
 Book/Page: 15/99

	Sample		Replicate		Matrix Spike		Mtx & Recovery		Blank	
	Amount	LOD	Amount	LOD	Amount	LOD	Amount	LOD	Amount	LOD
Log Number:	48183.1		48183.1		48183.1		48183.1			
Sample Matrix:	SOIL		SOIL		SOIL		SOIL		BLANK	
Sample Type:	GRAB		GRAB		GRAB		GRAB		WATER	
Screen Compound Amount/Limit of Detection:									GRAB	
Surr: 2,4,6-TRIBROMOPHENOL	97%		96%		1.000		97%		100%	
Surr: DECAChLOROBIPIHENYL	97%		97%		1.000		97%		100%	
Surr: 2-FLUOROBIPIHENYL	91%		91%		1.000		93%		100%	
Cmpd: 1,2,3,4-Tetrachlorobenzene	149	10	132	10	5.00		99%		ND	0.005
Cmpd: 1,2,3,5-Tetrachlorobenzene	2398	10	2218	10	5.00		115%		ND	0.005
Cmpd: 1,2,3-Trichlorobenzene	939	10	951	10	5.00		108%		ND	0.005
Cmpd: 1,2,4,5-Tetrachlorobenzene	132	10	108	10	5.00		99%		ND	0.005
Cmpd: 1,2,4-Trichlorobenzene	2284	10	2311	10	5.00		116%		ND	0.005
Cmpd: 1,3,5-Trichlorobenzene	88	10	71	10	5.00		99%		ND	0.005
Cmpd: AROCLOR 1268	2437	10	2104	10	0		0%		ND	0.1
Cmpd: Hexachlorobenzene	2247	10	2199	10	5.00		108%		ND	0.005
Cmpd: Pentachlorobenzene	518	10	490	10	5.00		104%		ND	0.005
Quality Control Summary Notes:							A		A	

Note: Note Description
 A Requirements set by method were met. ND NOT DETECTED

Product Number: 171050
Product Name: Hexachlorobenzene, 99%
Molecular Formula: C₆Cl₆
Molecular Weight: 284.78
CAS: 118-74-1

Assay: 99%

Comments: Melting Point (°C): 227 to 229

Boiling Point (°C): 323 to 326 / 760

ELINCS/EINECS Number: 204-273-9

Merck Index: 12,4714 Beilstein Index: 5,205

171050HEXACHLOROBENZENE+99%>

Miscellaneous: This chemical is in the EPA inventory under TSCA. **Label Precautions:** Cancer suspect agent Mutagen Target organ: liver Irritant Photosensitizer **Hazard:** Toxic by Ingestion

Use: Organic Synthesis, fungicide for seeds, wood preservative.

Product Number: 171050

Product Name: Hexachlorobenzene, 99%

Valid 02/2000 - 04/2000 Aldrich Chemical Co., Inc. 1001 West St.
Paul Milwaukee, WI 53233 USA Tel: 414-273-3850 M A T E R I A
L S A F E T Y D A T A S H E E T SECTION 1. - - - - -
CHEMICAL IDENTIFICATION- - - - - CATALOG #: 171050
NAME: HEXACHLOROBENZENE, 99% SECTION 2. - - - - -
COMPOSITION/INFORMATION ON INGREDIENTS - - - - - CAS #: 118-74-1
MF: C6CL6 EC NO: 204-273-9 SYNONYMS AMATIN * ANTICARIE * BUNT-CURE
* BUNT-NO-MORE * CEKU C.B. * CO-OP HEXA * ESACLOROBENZENE (ITALIAN) *
GRANOX NM * HCB * HEXA C.B. * HEXACHLOROBENZOL (GERMAN) * HEXACHLOROBENZENE
(ACGIH) * JULIN'S CARBON CHLORIDE * NO BUNT * NO BUNT 40 * NO BUNT 80 * NO
BUNT LIQUID * PENTACHLOROPHENYL CHLORIDE * PERCHLOROBENZENE * PHENYL
PERCHLORYL * RCRA WASTE NUMBER U127 * SAATBEIZFUNGIZID (GERMAN) * SANOCID
* SANOCIDE * SMUT-GO * SNIECIOTOX * SECTION 3. - - - - - HAZARDS
IDENTIFICATION - - - - - LABEL PRECAUTIONARY STATEMENTS TOXIC
MAY CAUSE CANCER. HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF
SWALLOWED. MAY CAUSE SENSITIZATION BY INHALATION AND SKIN CONTACT.
CALIF. PROP. 65 REPRODUCTIVE HAZARD. PHOTSENSITIZER. TARGET ORGAN(S):
LIVER IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE
IMMEDIATELY (SHOW THE LABEL WHERE POSSIBLE). IN CASE OF CONTACT WITH EYES,
RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE. WEAR
SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION. SECTION 4. -
- - - - - FIRST-AID MEASURES- - - - - IN CASE OF
CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH COPIOUS AMOUNTS OF WATER FOR
AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. IF

INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL
 RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. SECTION 5. - - - - -
 - - FIRE FIGHTING MEASURES - - - - - EXTINGUISHING MEDIA
 CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM. SPECIAL
 FIREFIGHTING PROCEDURES WEAR SELF-CONTAINED BREATHING APPARATUS AND
 PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES. UNUSUAL FIRE
 AND EXPLOSIONS HAZARDS EMITS TOXIC FUMES UNDER FIRE CONDITIONS. SECTION 6.
 - - - - - ACCIDENTAL RELEASE MEASURES- - - - - EVACUATE
 AREA. WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY
 RUBBER GLOVES. WEAR DISPOSABLE COVERALLS AND DISCARD THEM AFTER USE.
 SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL. SECTION 7. - - - - -
 - - - HANDLING AND STORAGE- - - - - REFER TO SECTION 8.
 SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL PROTECTION- - - - -
 WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT
 GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING. SAFETY SHOWER AND EYE
 BATH. USE ONLY IN A CHEMICAL FUME HOOD. DO NOT BREATHE DUST. AVOID
 ALL CONTACT. WASH THOROUGHLY AFTER HANDLING. DISCARD CONTAMINATED
 CLOTHING AND SHOES. IRRITANT. PHOTSENSITIZER. KEEP TIGHTLY
 CLOSED. STORE IN A COOL DRY PLACE. SECTION 9. - - - - - PHYSICAL AND
 CHEMICAL PROPERTIES - - - - - APPEARANCE AND ODOR WHITE POWDER
 PHYSICAL PROPERTIES BOILING POINT: 323 C TO 326 C MELTING
 POINT: 227 C TO 229 C SECTION 10. - - - - - -STABILITY AND
 REACTIVITY - - - - - INCOMPATIBILITIES STRONG OXIDIZING AGENTS
 HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS CARBON MONOXIDE, CARBON
 DIOXIDE SECTION 11. - - - - - TOXICOLOGICAL INFORMATION - - - - -
 - ACUTE EFFECTS MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER
 RESPIRATORY TRACT. HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH
 SKIN. CAUSES EYE AND SKIN IRRITATION. CAUSES PHOTSENSITIVITY.
 EXPOSURE TO LIGHT CAN RESULT IN ALLERGIC REACTIONS RESULTING IN
 DERMATOLOGIC LESIONS, WHICH CAN VARY FROM SUNBURNLIKE RESPONSES TO
 EDEMATOUS, VESICULATED LESIONS OR BULLAE. CHRONIC EFFECTS CARCINOGEN.
 TARGET ORGAN(S): LIVER RTECS #: DA2975000 BENZENE, HEXACHLORO-
 TOXICITY DATA UNR-MAN LD50:220 MG/KG 85DCAI
 2,73,1970 ORL-RAT LD50:10 GM/KG FMCHA2 -,C163,1991
 IHL-RAT LC50:3600 MG/M3 85GMAT -,72,1982 ORL-MUS
 LD50:4 GM/KG 85GMAT -,72,1982 IHL-MUS LC50:4
 GM/M3 85GMAT -,72,1982 ORL-CAT LD50:1700 MG/KG
 85GMAT -,72,1982 IHL-CAT LC50:1600 MG/M3
 85GMAT -,72,1982 ORL-RBT LD50:2600 MG/KG 85GMAT
 -,72,1982 IHL-RBT LC50:1800 MG/M3 85GMAT -,72,1982
 ORL-GPG LD50:>3 GM/KG PEMNDP 9,469,1991 ORL-QAL
 LD50:>6400 MG/KG MFLRA3 38,709,1973 ORL-MAM LD50:>5
 GM/KG NTIS** PB288-416 TARGET ORGAN DATA LIVER
 (TUMORS) ENDOCRINE (THYROID TUMORS) MATERNAL EFFECTS (OVARIES,
 FALLOPIAN TUBES) SPECIFIC DEVELOPMENTAL ABNORMALITIES (CRANIOFACIAL)
 SPECIFIC DEVELOPMENTAL ABNORMALITIES (MUSCULOSKELETAL SYSTEM) SPECIFIC
 DEVELOPMENTAL ABNORMALITIES (UROGENITAL SYSTEM) EFFECTS ON NEWBORN (LIVE
 BIRTH INDEX) EFFECTS ON NEWBORN (VIABILITY INDEX) EFFECTS ON NEWBORN
 (WEANING OR LACTATION INDEX) EFFECTS ON NEWBORN (GROWTH STATISTICS)
 EFFECTS ON NEWBORN (BIOCHEMICAL AND METABOLIC) TUMORIGENIC (CARCINOGENIC
 BY RTECS CRITERIA) TUMORIGENIC (NEOPLASTIC BY RTECS CRITERIA)
 BIOCHEMICAL EFFECTS (PORPHYRIN INCLUDING BILE PIGMENTS) ONLY SELECTED
 REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS) DATA IS PRESENTED
 HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION. SECTION 12. - -

- - - - - ECOLOGICAL INFORMATION - - - - - DATA NOT YET
 AVAILABLE. SECTION 13. - - - - - DISPOSAL CONSIDERATIONS - - - - -
 - - DATA NOT AVAILABLE SECTION 14. - - - - - TRANSPORT
 INFORMATION - - - - - CONTACT ALDRICH CHEMICAL COMPANY FOR
 TRANSPORTATION INFORMATION. SECTION 15. - - - - - REGULATORY
 INFORMATION - - - - - EUROPEAN INFORMATION EC INDEX NO:
 602-065-00-6 TOXIC R 45 MAY CAUSE CANCER. R 48/25 TOXIC:
 DANGER OF SERIOUS DAMAGE TO HEALTH BY PROLONGED EXPOSURE IF SWALLOWED.
 R 50/53 VERY TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE
 EFFECTS IN THE AQUATIC ENVIRONMENT. S 53 AVOID EXPOSURE - OBTAIN
 SPECIAL INSTRUCTIONS BEFORE USE. S 45 IN CASE OF ACCIDENT OR IF YOU
 FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW THE LABEL WHERE
 POSSIBLE). S 60 THIS MATERIAL AND ITS CONTAINER MUST BE DISPOSED OF AS
 HAZARDOUS WASTE. S 61 AVOID RELEASE TO THE ENVIRONMENT. REFER TO
 SPECIAL INSTRUCTIONS/ SAFETY DATA SHEETS. REVIEWS, STANDARDS, AND
 REGULATIONS OEL=MAK ACGIH TLV-ANIMAL CARCINOGEN
 DTLVS* TLV/BEI,1997 ACGIH TLV-TWA 0.002 MG/M3 (SKIN) DTLVS*
 TLV/BEI,1997 IARC CANCER REVIEW:ANIMAL SUFFICIENT EVIDENCE IMEMDT
 20,155,1979 IARC CANCER REVIEW:HUMAN INADEQUATE EVIDENCE IMSUDL
 7,219,1987 IARC CANCER REVIEW:GROUP 2B IMSUDL 7,219,1987
 OEL-RUSSIA:STEL 0.9 MG/M3;SKIN JAN 1993 OEL-POLAND: MAC(TWA) 0.5 MG/M3,
 JAN1999 NOES 1983: HZD A1753; NIS 2; TNF 10; NOS 12; TNE 1038; TFE 26
 EPA GENETOX PROGRAM 1988, POSITIVE: CARCINOGENICITY-MOUSE/RAT EPA GENETOX
 PROGRAM 1988, NEGATIVE: RODENT DOMINANT LETHAL EPA TSCA SECTION 8(B)
 CHEMICAL INVENTORY EPA TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES
 ON EPA IRIS DATABASE EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE,
 SEPTEMBER 1999 NTP 8TH ANNUAL REPORT ON CARCINOGENS, 1998:REASONABLY
 ANTICIPATED TO BE HUMAN CARCINOGEN NTP CARCINOGENESIS STUDIES;
 SELECTED, SEPTEMBER 1999 U.S. INFORMATION THIS PRODUCT IS SUBJECT TO
 SARA SECTION 313 REPORTING REQUIREMENTS. THIS PRODUCT IS OR CONTAINS
 CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE DEVELOPMENTAL
 TOXICITY. CALIFORNIA PROPOSITION 65: SECTION 16. - - - - - OTHER
 INFORMATION- - - - - THE ABOVE INFORMATION IS BELIEVED TO BE
 CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS
 A GUIDE. SIGMA, ALDRICH, FLUKA SHALL NOT BE HELD LIABLE FOR ANY DAMAGE
 RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. SEE
 REVERSE SIDE OF INVOICE OR PACKING SLIP FOR ADDITIONAL TERMS AND
 CONDITIONS OF SALE. COPYRIGHT 1999 SIGMA-ALDRICH CO. LICENSE GRANTED
 TO MAKE UNLIMITED PAPER COPIES FOR
 INTERNAL USE ONLY

Product Number: 131326 Product Name: Pentachlorobenzene, 98%

131326PENTACHLOROBENZENE+98%>

Molecular Formula: C₆H₁Cl₅

Molecular Weight: 250.34

CAS: 608-93-5

Assay: 98%

Density: 1.609

Comments: Melting Point (°C): 84 to 87 Boiling Point (°C): 275 to 277 / 760

ELINCS/EINECS Number: 210-172-0

Beilstein Index: 5,205

Miscellaneous: *This chemical is in the EPA inventory under TSCA.* Label Precautions: Harmful solid Irritant Target organ: liver, kidneys Target organ: blood Target organ: thyroid

Product Number: 131326

Product Name: Pentachlorobenzene, 98%

Valid 02/2000 - 04/2000 Aldrich Chemical Co., Inc. 1001 West St.
 Paul Milwaukee, WI 53233 USA Tel: 414-273-3850 M A T E R I A
 L S A F E T Y D A T A S H E E T SECTION 1. - - - - -
 CHEMICAL IDENTIFICATION- - - - - CATALOG #: 131326
 NAME: PENTACHLOROBENZENE, 98% SECTION 2. - - - - -
 COMPOSITION/INFORMATION ON INGREDIENTS - - - - - CAS #: 608-93-5
 MF: C6HCL5 EC NO: 210-172-0 SYNONYMS PCB * PENTACHLOROBENZENE *
 1,2,3,4,5-PENTACHLOROBENZENE * QCB * RCRA WASTE NUMBER U183 * SECTION 3. -
 - - - - - HAZARDS IDENTIFICATION - - - - - LABEL
 PRECAUTIONARY STATEMENTS HARMFUL HARMFUL BY INHALATION, IN CONTACT
 WITH SKIN AND IF SWALLOWED. IRRITATING TO EYES, RESPIRATORY SYSTEM AND
 SKIN. TARGET ORGAN(S): BLOOD THYROID IN CASE OF CONTACT WITH
 EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
 WEAR SUITABLE GLOVES AND EYE/FACE PROTECTION. SECTION 4. - - - - -
 FIRST-AID MEASURES- - - - - IN CASE OF CONTACT, IMMEDIATELY
 FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. IN
 CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS AMOUNTS OF
 WATER. IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL
 RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. IF SWALLOWED, WASH

OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN.
 DISCARD CONTAMINATED CLOTHING AND SHOES. SECTION 5. - - - - - FIRE
 FIGHTING MEASURES - - - - - EXTINGUISHING MEDIA WATER SPRAY.
 CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM. SPECIAL
 FIREFIGHTING PROCEDURES WEAR SELF-CONTAINED BREATHING APPARATUS AND
 PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES. UNUSUAL FIRE
 AND EXPLOSIONS HAZARDS EMITS TOXIC FUMES UNDER FIRE CONDITIONS. SECTION 6.
 - - - - - ACCIDENTAL RELEASE MEASURES- - - - - WEAR
 RESPIRATOR, CHEMICAL SAFETY GOGGLES, RUBBER BOOTS AND HEAVY RUBBER GLOVES.
 SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL. AVOID RAISING
 DUST. VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS
 COMPLETE. SECTION 7. - - - - - HANDLING AND STORAGE- - - - -
 - - - - - REFER TO SECTION 8. SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL
 PROTECTION- - - - - WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR,
 CHEMICAL-RESISTANT GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.
 SAFETY SHOWER AND EYE BATH. MECHANICAL EXHAUST REQUIRED. DO NOT
 BREATHE DUST. AVOID CONTACT WITH EYES, SKIN AND CLOTHING. WASH
 THOROUGHLY AFTER HANDLING. IRRITANT. HARMFUL SOLID. STORE IN A
 COOL DRY PLACE. SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - -
 - - - - - APPEARANCE AND ODOR OFF-WHITE POWDER WITH CHUNKS PHYSICAL
 PROPERTIES BOILING POINT: 275 C TO 277 C MELTING POINT: 84
 C TO 87 C SPECIFIC GRAVITY: 1.609 SECTION 10. - - - - -
 STABILITY AND REACTIVITY - - - - - INCOMPATIBILITIES STRONG
 OXIDIZING AGENTS HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS TOXIC
 FUMES OF: CARBON MONOXIDE, CARBON DIOXIDE HYDROGEN CHLORIDE GAS
 SECTION 11. - - - - - TOXICOLOGICAL INFORMATION - - - - -
 ACUTE EFFECTS HARMFUL IF SWALLOWED. MAY BE HARMFUL IF INHALED. MAY
 BE HARMFUL IF ABSORBED THROUGH THE SKIN. CAUSES EYE AND SKIN IRRITATION.
 MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.
 TARGET ORGAN(S): LIVER, KIDNEYS BLOOD THYROID RTECS #:
 DA6640000 BENZENE, PENTACHLORO- TOXICITY DATA ORL-RAT LD50:1080
 MG/KG JEPTDQ 4(5-6),183,1980 SKN-RAT LD50:>2500
 MG/KG JEPTDQ 4(5-6),183,1980 ORL-MUS LD50:1175
 MG/KG JEPTDQ 4(5-6),183,1980 TARGET ORGAN DATA
 BEHAVIORAL (GENERAL ANESTHETIC) BEHAVIORAL (TREMOR) PATERNAL EFFECTS
 (SPERMATOGENESIS) SPECIFIC DEVELOPMENTAL ABNORMALITIES (MUSCULOSKELETAL
 SYSTEM) ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES
 (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE
 INFORMATION. SECTION 12. - - - - - ECOLOGICAL INFORMATION - - - - -
 - - - - - DATA NOT YET AVAILABLE. SECTION 13. - - - - - DISPOSAL
 CONSIDERATIONS - - - - - DISSOLVE OR MIX THE MATERIAL WITH A
 COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN
 AFTERBURNER AND SCRUBBER. OBSERVE ALL FEDERAL, STATE AND LOCAL
 ENVIRONMENTAL REGULATIONS. SECTION 14. - - - - - TRANSPORT
 INFORMATION - - - - - CONTACT ALDRICH CHEMICAL COMPANY FOR
 TRANSPORTATION INFORMATION. SECTION 15. - - - - - REGULATORY
 INFORMATION - - - - - EUROPEAN INFORMATION EC INDEX NO:
 602-074-00-0 HARMFUL R 11 HIGHLY FLAMMABLE. R 22 HARMFUL
 IF SWALLOWED. R 50/53 VERY TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-
 TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT. S 41 IN CASE OF
 FIRE AND/OR EXPLOSION DO NOT BREATHE FUMES. S 46 IF SWALLOWED, SEEK
 MEDICAL ADVICE IMMEDIATELY AND SHOW THIS CONTAINER OR LABEL. S 60
 THIS MATERIAL AND ITS CONTAINER MUST BE DISPOSED OF AS HAZARDOUS WASTE.
 S 61 AVOID RELEASE TO THE ENVIRONMENT. REFER TO SPECIAL INSTRUCTIONS/

SAFETY DATA SHEETS. REVIEWS, STANDARDS, AND REGULATIONS OEL=MAK EPA
TSCA SECTION 8(B) CHEMICAL INVENTORY EPA TSCA 8(A) PRELIMINARY ASSESSMENT
INFORMATION, FINAL RULE FEREAC 47,26992,82 EPA TSCA SECTION 8(D)
UNPUBLISHED HEALTH/SAFETY STUDIES ON EPA IRIS DATABASE EPA TSCA TEST
SUBMISSION (TSCATS) DATA BASE, SEPTEMBER 1999 NIOSH ANALYTICAL METHOD,
1994: POLYCHLOROBENZENES, 5517 NTP TOXICITY STUDIES, RPT# TOX-06,
SEPTEMBER 1999 SECTION 16. - - - - - OTHER INFORMATION- - - - -

- - - - - THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT
PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. SIGMA,
ALDRICH, FLUKA SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM
HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. SEE REVERSE SIDE OF
INVOICE OR PACKING SLIP FOR ADDITIONAL TERMS AND CONDITIONS OF SALE.
COPYRIGHT 1999 SIGMA-ALDRICH CO. LICENSE GRANTED TO MAKE UNLIMITED PAPER
COPIES FOR INTERNAL USE ONLY

Product Number: T54402

Product Name: 1,2,3-Trichlorobenzene, 99%

Molecular Formula: C₆H₃Cl₃

Molecular Weight: 181.45

CAS: 87-61-6

Assay: 99%

Comments: Melting Point (°C): 53 to 55 Boiling Point (°C): 218 to 219 / 760

Flash Point (°F): 260

ELINCS/EINECS Number: 201-757-1

Merck Index: 12,9759

Beilstein Index: 5,203

1Aldrich^T544021,2,3-TRICHLOROENZENE+99%>

Literature References: Aldrich FT-IR Library (Vapor Phase): 3,923A Aldrich NMR Library (60 MHz): 2(1),800C

Miscellaneous: *This chemical is in the EPA inventory under TSCA. Hazard: Toxic by ingestion and inhalation. Use: organic intermediate* Label Precautions: Harmful solid Irritant

Product Number: T54402

Product Name: 1,2,3-Trichlorobenzene, 99%

Valid 02/2000 - 04/2000 Aldrich Chemical Co., Inc. 1001 West St. Paul
Milwaukee, WI 53233 USA Tel: 414-273-3850 M A T E R I A L S
A F E T Y D A T A S H E E T SECTION 1. - - - - -
CHEMICAL IDENTIFICATION- - - - - CATALOG #: T54402
NAME: 1,2,3-TRICHLOROENZENE, 99% SECTION 2. - - - - -
COMPOSITION/INFORMATION ON INGREDIENTS - - - - - CAS #: 87-61-6
MF: C6H3CL3 EC NO: 201-757-1 SYNONYMS VIC-TRICHLOROENZENE * 1,2,3-
TRICHLOROENZENE * 1,2,6- TRICHLOROENZENE * SECTION 3. - - - - -
- HAZARDS IDENTIFICATION - - - - - LABEL PRECAUTIONARY STATEMENTS
HARMFUL HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN. IN CASE OF CONTACT WITH
EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
WEAR SUITABLE GLOVES AND EYE/FACE PROTECTION. SECTION 4. - - - - -
FIRST-AID MEASURES- - - - - IN CASE OF CONTACT, IMMEDIATELY
FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. IN
CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS AMOUNTS OF
WATER. IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL
RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. IF SWALLOWED, WASH

OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN.

SECTION 5. - - - - - FIRE FIGHTING MEASURES - - - - -

EXTINGUISHING MEDIA WATER SPRAY. CARBON DIOXIDE, DRY CHEMICAL POWDER
OR APPROPRIATE FOAM. SPECIAL FIREFIGHTING PROCEDURES WEAR SELF-CONTAINED
BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN
AND EYES. UNUSUAL FIRE AND EXPLOSIONS HAZARDS EMITS TOXIC FUMES UNDER
FIRE CONDITIONS. SECTION 6. - - - - - ACCIDENTAL RELEASE MEASURES- - - - -

- - - - - WEAR RESPIRATOR, CHEMICAL SAFETY GOGGLES, RUBBER BOOTS AND HEAVY
RUBBER GLOVES. SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.
AVOID RAISING DUST. VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL
PICKUP IS COMPLETE. SECTION 7. - - - - - HANDLING AND STORAGE- - - - -

- - - - - REFER TO SECTION 8. SECTION 8. - - - - - EXPOSURE
CONTROLS/PERSONAL PROTECTION- - - - - WEAR APPROPRIATE NIOSH/MSHA-
APPROVED RESPIRATOR, CHEMICAL-RESISTANT GLOVES, SAFETY GOGGLES, OTHER
PROTECTIVE CLOTHING. SAFETY SHOWER AND EYE BATH. MECHANICAL EXHAUST
REQUIRED. DO NOT BREATHE DUST. AVOID CONTACT WITH EYES, SKIN AND
CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE. WASH THOROUGHLY AFTER
HANDLING. IRRITANT. HARMFUL SOLID OR LIQUID (PHYSICAL STATE IS
TEMPERATURE DEPENDENT). KEEP CONTAINER CLOSED. STORE IN A COOL DRY
PLACE. SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -

APPEARANCE AND ODOR WHITE CRYSTALLINE SOLID PHYSICAL PROPERTIES
BOILING POINT: 218 C TO 219 C MELTING POINT: 53 C TO 55 C
FLASHPOINT 260F 126.66C
EXPLOSION LIMITS IN AIR: UPPER 6.6%
LOWER 1059 F 569C VAPOR PRESSURE: 0.07MM 25 C VAPOR
DENSITY: 6.25 SECTION 10. - - - - - STABILITY AND REACTIVITY - - - - -

- - - - - INCOMPATIBILITIES STRONG OXIDIZING AGENTS HAZARDOUS
COMBUSTION OR DECOMPOSITION PRODUCTS TOXIC FUMES OF: CARBON MONOXIDE,
CARBON DIOXIDE HYDROGEN CHLORIDE GAS SECTION 11. - - - - -

TOXICOLOGICAL INFORMATION - - - - - ACUTE EFFECTS HARMFUL IF
SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN. CAUSES EYE AND SKIN
IRRITATION. MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER
RESPIRATORY TRACT. TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL,
AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.
RTECS #: DC2095000 BENZENE, 1,2,3-TRICHLORO- TOXICITY DATA ORL-RAT
LD50:1830 MG/KG DCTODJ 11,11,1988 IPR-MUS LD50:1390
MG/KG MUTAEX 2,111,1987 ONLY SELECTED REGISTRY OF
TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS) DATA IS PRESENTED HERE. SEE
ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION. SECTION 12. - - - - -

- - - - - ECOLOGICAL INFORMATION - - - - - DATA NOT YET AVAILABLE.
SECTION 13. - - - - - DISPOSAL CONSIDERATIONS - - - - -

DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A
CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER. OBSERVE
ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS. SECTION 14. - - - - -

- - - - - TRANSPORT INFORMATION - - - - - CONTACT ALDRICH CHEMICAL
COMPANY FOR TRANSPORTATION INFORMATION. SECTION 15. - - - - -

REGULATORY INFORMATION - - - - - EUROPEAN INFORMATION HARMFUL
R 20/21/22 HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
R 36/37/38 IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN. S 26
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND
SEEK MEDICAL ADVICE. S 37/39 WEAR SUITABLE GLOVES AND EYE/FACE
PROTECTION. REVIEWS, STANDARDS, AND REGULATIONS OEL=MAK OEL-AUSTRIA:
MAK 5 PPM (40 MG/M3), JAN1999 NOES 1983: HZD X9450; NIS 1; TNF 38; NOS 2;

TNE 691 EPA TSCA SECTION 8(B) CHEMICAL INVENTORY EPA TSCA SECTION 8(D)
UNPUBLISHED HEALTH/SAFETY STUDIES EPA TSCA TEST SUBMISSION (TSCATS) DATA
BASE, SEPTEMBER 1999 SECTION 16. - - - - - OTHER INFORMATION- - - -

- - - - - THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES
NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. SIGMA,
ALDRICH, FLUKA SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM
HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. SEE REVERSE SIDE OF
INVOICE OR PACKING SLIP FOR ADDITIONAL TERMS AND CONDITIONS OF SALE.
COPYRIGHT 1999 SIGMA-ALDRICH CO. LICENSE GRANTED TO MAKE UNLIMITED PAPER
COPIES FOR INTERNAL USE ONLY

Product Number: 132047

Product Name: 1,2,4-Trichlorobenzene, 99+%

Molecular Formula: C₆H₃Cl₃

Molecular Weight: 181.45

CAS: 120-82-1

Assay: 99+%

Density: 1.454

Comments: Melting Point (°C): 16 Boiling Point (°C): 214 / 760 Refractive Index: 1.5710 Flash Point (°F): >230

ELINCS/EINECS Number: 204-428-0 Merck Index: 12,9760 Beilstein Index: 5,204

1320471,2,4-TRICHLOROENZENE+99+%>

Miscellaneous: *This chemical is in the EPA inventory under TSCA.* Hazard: Toxic by ingestion and inhalation. Use: Solvent in chemical manufacturing, dyes and intermediates, dielectric fluid, synthetic transformer oils, lubricants, heat transfer medium, insecticides. **Label Precautions:** Toxic Irritant Target organ: liver, kidneys

Product Number: 132047

Product Name: 1,2,4-Trichlorobenzene, 99+%

Valid 02/2000 - 04/2000 Aldrich Chemical Co., Inc. 1001 West St.
Paul Milwaukee, WI 53233 USA Tel: 414-273-3850 M A T E R I A
L S A F E T Y D A T A S H E E T SECTION 1. - - - - -
CHEMICAL IDENTIFICATION- - - - - CATALOG #: 132047
NAME: 1,2,4-TRICHLOROENZENE, 99+% SECTION 2. - - - - -
COMPOSITION/INFORMATION ON INGREDIENTS - - - - - CAS #: 120-82-1
MF: C6H3CL3 EC NO: 204-428-0 SYNONYMS HOSTETEX L-PEC * UNSYM-

TRICHLOROBENZENE * 1,2,4-TRICHLOROBENZENE * 1, 2,5-TRICHLOROBENZENE *
 1,3,4-TRICHLOROBENZENE * 1,2,4- TRICHLOROBENZENE (ACGIH) * 1,2,4-
 TRICHLOROBENZOL * TROJCHLOROBENZEN (POLISH) * SECTION 3. - - - - -
 - HAZARDS IDENTIFICATION - - - - - LABEL PRECAUTIONARY STATEMENTS
 TOXIC (USA) HARMFUL (EU) HARMFUL BY INHALATION, IN CONTACT WITH SKIN
 AND IF SWALLOWED. IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN.
 TARGET ORGAN(S): LIVER, KIDNEYS IN CASE OF CONTACT WITH EYES, RINSE
 IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE. WEAR
 SUITABLE PROTECTIVE CLOTHING. SECTION 4. - - - - - FIRST-AID
 MEASURES- - - - - IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES
 OR SKIN WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE
 REMOVING CONTAMINATED CLOTHING AND SHOES. IF SWALLOWED, WASH OUT MOUTH
 WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN. IF INHALED,
 REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF
 BREATHING IS DIFFICULT, GIVE OXYGEN. SECTION 5. - - - - - FIRE
 FIGHTING MEASURES - - - - - EXTINGUISHING MEDIA WATER SPRAY.
 CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM. SPECIAL
 FIREFIGHTING PROCEDURES WEAR SELF-CONTAINED BREATHING APPARATUS AND
 PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES. UNUSUAL FIRE
 AND EXPLOSIONS HAZARDS EMITS TOXIC FUMES UNDER FIRE CONDITIONS. SECTION 6.
 - - - - - ACCIDENTAL RELEASE MEASURES- - - - - EVACUATE
 AREA. WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY
 RUBBER GLOVES. ABSORB ON SAND OR VERMICULITE AND PLACE IN CLOSED
 CONTAINERS FOR DISPOSAL. VENTILATE AREA AND WASH SPILL SITE AFTER
 MATERIAL PICKUP IS COMPLETE. SECTION 7. - - - - - HANDLING AND
 STORAGE- - - - - REFER TO SECTION 8. SECTION 8. - - - - -
 EXPOSURE CONTROLS/PERSONAL PROTECTION- - - - - WEAR APPROPRIATE
 NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT GLOVES, SAFETY GOGGLES,
 OTHER PROTECTIVE CLOTHING. SAFETY SHOWER AND EYE BATH. USE ONLY IN A
 CHEMICAL FUME HOOD. DO NOT BREATHE VAPOR. DO NOT GET IN EYES, ON SKIN,
 ON CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE. WASH THOROUGHLY
 AFTER HANDLING. WASH CONTAMINATED CLOTHING BEFORE REUSE. TOXIC.
 IRRITANT. HARMFUL LIQUID AND FUMES. KEEP TIGHTLY CLOSED. STORE IN
 A COOL DRY PLACE. SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES -
 - - - - - PHYSICAL PROPERTIES BOILING POINT: 214 C MELTING
 POINT: 16 C FLASHPOINT >230
 109C EXPLOSION LIMITS IN AIR: UPPER
 6.6% 150 C LOWER 2.5%
 AUTOIGNITION TEMPERATURE: 1060 F 570C VAPOR PRESSURE:
 1MM 40 C SPECIFIC GRAVITY: 1.454 VAPOR DENSITY: >6 SECTION 10.
 - - - - - -STABILITY AND REACTIVITY - - - - -
 INCOMPATIBILITIES STRONG OXIDIZING AGENTS HAZARDOUS COMBUSTION OR
 DECOMPOSITION PRODUCTS CARBON MONOXIDE, CARBON DIOXIDE HYDROGEN
 CHLORIDE GAS SECTION 11. - - - - - TOXICOLOGICAL INFORMATION - - - - -
 - - - ACUTE EFFECTS NAUSEA, DIZZINESS AND HEADACHE GASTROINTESTINAL
 DISTURBANCES DAMAGE TO THE LIVER DAMAGE TO THE KIDNEYS CAUSES SKIN
 IRRITATION. HARMFUL IF SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN.
 VAPOR OR MIST IS IRRITATING TO THE EYES, MUCOUS MEMBRANES AND UPPER
 RESPIRATORY TRACT. CHRONIC EFFECTS TARGET ORGAN(S): DAMAGE TO THE
 LIVER DAMAGE TO THE KIDNEYS RTECS #: DC2100000 BENZENE, 1,2,4-
 TRICHLORO- IRRITATION DATA SKN-RBT 1950 MG/13W-I MOD
 AEHLAU 30,165,1975 TOXICITY DATA ORL-RAT LD50:756 MG/KG
 AOHYA3 12,209,1969 SKN-RAT LD50:6139 MG/KG
 AOHYA3 12,209,1969 ORL-MUS LD50:300 MG/KG NAIZAM

29,569,1978 IPR-MUS LD50:1223 MG/KG MUTAEX
 2,111,1987 TARGET ORGAN DATA BEHAVIORAL (ALTERED SLEEP TIME)
 BEHAVIORAL (SOMNOLENCE) BEHAVIORAL (CONVULSIONS OR EFFECT ON SEIZURE
 THRESHOLD) BEHAVIORAL (ATAXIA) MATERNAL EFFECTS (UTERUS, CERVIX,
 VAGINA) EFFECTS ON EMBRYO OR FETUS (CYTOLOGICAL CHANGES) EFFECTS ON
 EMBRYO OR FETUS (FETOTOXICITY) EFFECTS ON EMBRYO OR FETUS (FETAL DEATH)
 ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS)
 DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE
 INFORMATION. SECTION 12. - - - - - ECOLOGICAL INFORMATION - - - - -
 - - - - - DATA NOT YET AVAILABLE. SECTION 13. - - - - - DISPOSAL
 CONSIDERATIONS - - - - - DISSOLVE OR MIX THE MATERIAL WITH A
 COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN
 AFTERBURNER AND SCRUBBER. OBSERVE ALL FEDERAL, STATE AND LOCAL
 ENVIRONMENTAL REGULATIONS. SECTION 14. - - - - - TRANSPORT
 INFORMATION - - - - - CONTACT ALDRICH CHEMICAL COMPANY FOR
 TRANSPORTATION INFORMATION. SECTION 15. - - - - - REGULATORY
 INFORMATION - - - - - EUROPEAN INFORMATION HARMFUL R
 20/21/22 HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
 R 36/37/38 IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN. S 26
 IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND
 SEEK MEDICAL ADVICE. S 36 WEAR SUITABLE PROTECTIVE CLOTHING.
 REVIEWS, STANDARDS, AND REGULATIONS OEL=MAK ACGIH TLV-CL 37 MG/M3 (5
 PPM) DTLVS* TLV/BEI,1997 OEL-AUSTRALIA:TWA 5 PPM (40
 MG/M3) JAN 1993 OEL-AUSTRIA: MAK 5 PPM (40 MG/M3), JAN1999 OEL-
 BELGIUM:STEL 5 PPM (37 MG/M3) JAN 1993 OEL-DENMARK: TWA 5 PPM (40 MG/M3),
 JAN1999 OEL-FINLAND:TWA 5 PPM (40 MG/M3);STEL 10 PPM (74 MG/M3);SKIN JAN
 1993 OEL-GERMANY:TWA 5 PPM (40 MG/M3) JAN 1993 OEL-THE NETHERLANDS:TWA
 5 PPM (40 MG/M3) JAN 1993 OEL-SWITZERLAND:TWA 5 PPM (40 MG/M3) JAN 1993
 OEL-UNITED KINGDOM:TWA 5 PPM (40 MG/M3);STEL 5 PPM (40 MG/M3) JAN 1993
 OEL-POLAND: MAC(TWA) 10 MG/M3, MAC(C) 40 MG/M3, JAN1999 OEL IN BULGARIA,
 COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE,
 VIETNAM CHECK ACGIH TLV NIOSH REL TO 1,2,4-TRICHLOROBENZENE-AIR:CL 5 PPM
 NIOSH* DHHS #92-100,1992 NOHS 1974: HZD 83334; NIS 4; TNF 74; NOS 8; TNE
 1687 NOES 1983: HZD 83334; NIS 6; TNF 78; NOS 14; TNE 4033; TFE 1463
 EPA TSCA SECTION 8(B) CHEMICAL INVENTORY EPA TSCA 8(A) PRELIMINARY
 ASSESSMENT INFORMATION, FINAL RULE FEREAC 47,26992,82 EPA TSCA
 SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES ON EPA IRIS DATABASE
 EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, SEPTEMBER 1999 NIOSH
 ANALYTICAL METHOD, 1994: POLYCHLOROBENZENES, 5517 U.S. INFORMATION THIS
 PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS. SECTION 16. - -
 - - - - - OTHER INFORMATION- - - - - THE ABOVE
 INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL
 INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. SIGMA, ALDRICH, FLUKA SHALL
 NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT
 WITH THE ABOVE PRODUCT. SEE REVERSE SIDE OF INVOICE OR PACKING SLIP FOR
 ADDITIONAL TERMS AND CONDITIONS OF SALE. COPYRIGHT 1999 SIGMA-ALDRICH CO.
 LICENSE GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY

Product Number: T54607

Product Name: 1,3,5-Trichlorobenzene, 99%

Molecular Formula: C₆H₃Cl₃

Molecular Weight: 181.45

CAS: 108-70-3

Assay: 99%

Comments: Melting Point (°C): 63 to 65 Boiling Point (°C): 208 / 760 Flash

Point (°F): 260

ELINCS/EINECS Number: 203-608-6 Merck Index: 12,9761

Bellstein Index: 5,204

1Aldrich^T546071,3,5-TRICHLOROENZENE+99%>

Miscellaneous: This chemical is in the EPA inventory under TSCA. Label Precautions: Harmful solid Irritant

Product Number: T54607

Product Name: 1,3,5-Trichlorobenzene, 99%

Valid 02/2000 - 04/2000 Aldrich Chemical Co., Inc. 1001 West St.
Paul Milwaukee, WI 53233 USA Tel: 414-273-3850 M A T E R I A
L S A F E T Y D A T A S H E E T SECTION 1. - - - - -
CHEMICAL IDENTIFICATION- - - - - CATALOG #: T54607
NAME: 1,3,5-TRICHLOROENZENE, 99% SECTION 2. - - - - -
COMPOSITION/INFORMATION ON INGREDIENTS - - - - - CAS #: 108-70-3
MF: C6H3CL3 EC NO: 203-608-6 SYNONYMS S-TRICHLOROENZENE * SYM-
TRICHLOROENZENE * 1,3,5-TRICHLOROENZENE * SECTION 3. - - - - -

HAZARDS IDENTIFICATION - - - - - LABEL PRECAUTIONARY STATEMENTS
HARMFUL HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN. TARGET ORGAN(S):
LIVER, KIDNEYS THYROID IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY
WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE. WEAR SUITABLE GLOVES AND
EYE/FACE PROTECTION. SECTION 4. - - - - - FIRST-AID MEASURES- - - - -
- - - - - IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS
CONSCIOUS. CALL A PHYSICIAN. IF INHALED, REMOVE TO FRESH AIR. IF NOT
BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE
OXYGEN. IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS
AMOUNTS OF WATER. IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH COPIOUS
AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. SECTION 5. - - - - -
FIRE FIGHTING MEASURES - - - - - EXTINGUISHING MEDIA WATER
SPRAY. CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM. SPECIAL
FIREFIGHTING PROCEDURES WEAR SELF-CONTAINED BREATHING APPARATUS AND
PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES. UNUSUAL FIRE
AND EXPLOSIONS HAZARDS EMITS TOXIC FUMES UNDER FIRE CONDITIONS. SECTION 6.
- - - - - ACCIDENTAL RELEASE MEASURES- - - - - WEAR
RESPIRATOR, CHEMICAL SAFETY GOGGLES, RUBBER BOOTS AND HEAVY RUBBER GLOVES.
SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL. AVOID RAISING
DUST. VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS
COMPLETE. SECTION 7. - - - - - HANDLING AND STORAGE- - - - -
- - - - - REFER TO SECTION 8. SECTION 8. - - - - - EXPOSURE CONTROLS/PERSONAL
PROTECTION- - - - - WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR,
CHEMICAL-RESISTANT GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.
SAFETY SHOWER AND EYE BATH. MECHANICAL EXHAUST REQUIRED. DO NOT
BREATHE DUST. AVOID CONTACT WITH EYES, SKIN AND CLOTHING. WASH
THOROUGHLY AFTER HANDLING. IRRITANT. HARMFUL SOLID. KEEP CONTAINER
CLOSED. STORE IN A COOL DRY PLACE. SECTION 9. - - - - - PHYSICAL AND
CHEMICAL PROPERTIES - - - - - PHYSICAL PROPERTIES BOILING POINT:
208 C MELTING POINT: 62 C FLASHPOINT 224.6 F
107 C SECTION 10. - - - - - -STABILITY AND
REACTIVITY - - - - - INCOMPATIBILITIES STRONG OXIDIZING AGENTS
ACIDS HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS CARBON MONOXIDE,
CARBON DIOXIDE HYDROGEN CHLORIDE GAS SECTION 11. - - - - -
TOXICOLOGICAL INFORMATION - - - - - ACUTE EFFECTS MATERIAL IS
IRRITATING TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT. HARMFUL IF
SWALLOWED, INHALED, OR ABSORBED THROUGH SKIN. CAUSES EYE AND SKIN
IRRITATION. TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND
TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED. CHRONIC
EFFECTS TARGET ORGAN(S): LIVER KIDNEYS THYROID RTECS #:
DC2100100 BENZENE, 1,3,5-TRICHLORO- IRRITATION DATA SKN-RBT 500
MG/24H MLD NTIS** OTS0537049 EYE-RBT 100 MG MLD
NTIS** OTS0537049 TOXICITY DATA ORL-RAT LD50:800
MG/KG 48RKAL -,389,1981 ORL-MUS LD50:3350 MG/KG
NTIS** UCRL-13701 IPR-MUS LD50:2260 MG/KG
MUTAEX 2,111,1987 ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL
SUBSTANCES (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR
COMPLETE INFORMATION. SECTION 12. - - - - - ECOLOGICAL INFORMATION -
- - - - - DATA NOT YET AVAILABLE. SECTION 13. - - - - -
DISPOSAL CONSIDERATIONS - - - - - DISSOLVE OR MIX THE MATERIAL
WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED
WITH AN AFTERBURNER AND SCRUBBER. OBSERVE ALL FEDERAL, STATE AND LOCAL
ENVIRONMENTAL REGULATIONS. SECTION 14. - - - - - TRANSPORT

INFORMATION - - - - - CONTACT ALDRICH CHEMICAL COMPANY FOR
TRANSPORTATION INFORMATION. SECTION 15. - - - - - REGULATORY
INFORMATION - - - - - EUROPEAN INFORMATION HARMFUL R
20/21/22 HARMFUL BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.
R 36/37/38 IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN. S 26
IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND
SEEK MEDICAL ADVICE. S 37/39 WEAR SUITABLE GLOVES AND EYE/FACE
PROTECTION. REVIEWS, STANDARDS, AND REGULATIONS OEL=MAK OEL-AUSTRIA:
MAK 5 PPM (40 MG/M3), JAN1999 NOHS 1974: HZD M2497; NIS 3; TNF 60; NOS 8;
TNE 1673 EPA GENETOX PROGRAM 1988, NEGATIVE: TRP REVERSION EPA GENETOX
PROGRAM 1988, INCONCLUSIVE: B SUBTILIS REC ASSAY; E COLI POLA WITHOUT S9
EPA TSCA SECTION 8(B) CHEMICAL INVENTORY EPA TSCA 8(A) PRELIMINARY
ASSESSMENT INFORMATION, FINAL RULE FEREAC 47,26992,82 EPA TSCA
SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES EPA TSCA TEST SUBMISSION
(TSCATS) DATA BASE, SEPTEMBER 1999 SECTION 16. - - - - - OTHER
INFORMATION- - - - - THE ABOVE INFORMATION IS BELIEVED TO BE
CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS
A GUIDE. SIGMA, ALDRICH, FLUKA SHALL NOT BE HELD LIABLE FOR ANY DAMAGE
RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. SEE
REVERSE SIDE OF INVOICE OR PACKING SLIP FOR ADDITIONAL TERMS AND
CONDITIONS OF SALE. COPYRIGHT 1999 SIGMA-ALDRICH CO. LICENSE GRANTED
TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY

Product Number: 131849

Product Name: 1,2,3,4-Tetrachlorobenzene, 98%

Molecular Formula: C₆H₂Cl₄

Molecular Weight: 215.89

CAS: 634-66-2

Assay: 98%

Comments: Melting Point (°C): 46 to 47 Boiling Point (°C): 254 / 761 Flash Point (°F): >230

ELINCS/EINECS Number: 211-214-0

Beilstein Index: 5,204

1318491,2,3,4-

TETRACHLOROBENZENE+98%>

Literature References: Aldrich FT-IR Library (Vapor Phase): 3,938C Aldrich NMR Library (60 MHz): 2(1),809A

Miscellaneous: This chemical is in the EPA inventory under TSCA. Use: component of dielectric fluids, synthesis. Label Precautions: Irritant Harmful solid

Product Number: 131849

Product Name: 1,2,3,4-Tetrachlorobenzene, 98%

Valid 02/2000 - 04/2000 Aldrich Chemical Co., Inc. 1001 West St. Paul
Milwaukee, WI 53233 USA Tel: 414-273-3850 MATERIALS
A F E T Y D A T A S H E E T SECTION 1. - - - - -
CHEMICAL IDENTIFICATION- - - - - CATALOG #: 131849
NAME: 1,2,3,4-TETRACHLOROBENZENE, 98% SECTION 2. - - - - -
COMPOSITION/INFORMATION ON INGREDIENTS - - - - - CAS #: 634-66-2
MF: C6H2CL4 EC NO: 211-214-0 SYNONYMS 1,2,3,4-TETRACHLOROBENZENE *
SECTION 3. - - - - - HAZARDS IDENTIFICATION - - - - -
LABEL PRECAUTIONARY STATEMENTS HARMFUL HARMFUL IF SWALLOWED.
IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN. IN CASE OF CONTACT WITH
EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.

WEAR SUITABLE GLOVES AND EYE/FACE PROTECTION. SECTION 4. - - - - -
FIRST-AID MEASURES- - - - - IF SWALLOWED, WASH OUT MOUTH WITH
WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN. IF INHALED,
REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF
BREATHING IS DIFFICULT, GIVE OXYGEN. IN CASE OF CONTACT, IMMEDIATELY WASH
SKIN WITH SOAP AND COPIOUS AMOUNTS OF WATER. IN CASE OF CONTACT,
IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15
MINUTES. SECTION 5. - - - - - FIRE FIGHTING MEASURES - - - - -
- EXTINGUISHING MEDIA WATER SPRAY. CARBON DIOXIDE, DRY CHEMICAL
POWDER OR APPROPRIATE FOAM. SPECIAL FIREFIGHTING PROCEDURES WEAR SELF-
CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT
WITH SKIN AND EYES. UNUSUAL FIRE AND EXPLOSIONS HAZARDS EMITS TOXIC
FUMES UNDER FIRE CONDITIONS. SECTION 6. - - - - - ACCIDENTAL RELEASE
MEASURES- - - - - WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER
BOOTS AND HEAVY RUBBER GLOVES. SWEEP UP, PLACE IN A BAG AND HOLD FOR
WASTE DISPOSAL. AVOID RAISING DUST. VENTILATE AREA AND WASH SPILL SITE
AFTER MATERIAL PICKUP IS COMPLETE. SECTION 7. - - - - - HANDLING AND
STORAGE- - - - - REFER TO SECTION 8. SECTION 8. - - - - -
EXPOSURE CONTROLS/PERSONAL PROTECTION- - - - - WASH CONTAMINATED
CLOTHING BEFORE REUSE. WASH THOROUGHLY AFTER HANDLING. NIOSH/MSHA-
APPROVED RESPIRATOR. RUBBER GLOVES. CHEMICAL SAFETY GOGGLES.
SAFETY SHOWER AND EYE BATH. MECHANICAL EXHAUST REQUIRED. AVOID CONTACT
AND INHALATION. DO NOT GET IN EYES, ON SKIN, ON CLOTHING. HARMFUL
SOLID. IRRITANT. KEEP TIGHTLY CLOSED. STORE IN A COOL DRY PLACE.
SECTION 9. - - - - - PHYSICAL AND CHEMICAL PROPERTIES - - - - -
APPEARANCE AND ODOR WHITE TO LIGHT-TAN CRYSTALLINE POWDER AND/OR CHUNKS
PHYSICAL PROPERTIES BOILING POINT: 254 C/761MM. MELTING POINT:
46 C TO 47 C FLASHPOINT >230
109C SECTION 10. - - - - - STABILITY AND REACTIVITY - - - - -
INCOMPATIBILITIES STRONG OXIDIZING AGENTS STRONG BASES HAZARDOUS
COMBUSTION OR DECOMPOSITION PRODUCTS CARBON MONOXIDE, CARBON DIOXIDE
HYDROGEN CHLORIDE GAS SECTION 11. - - - - - TOXICOLOGICAL INFORMATION
- - - - - ACUTE EFFECTS MAY BE HARMFUL IF ABSORBED THROUGH THE
SKIN. MAY BE HARMFUL IF INHALED. MATERIAL IS IRRITATING TO MUCOUS
MEMBRANES AND UPPER RESPIRATORY TRACT. HARMFUL IF SWALLOWED.
CAUSES EYE AND SKIN IRRITATION. TO THE BEST OF OUR KNOWLEDGE, THE
CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY
INVESTIGATED. RTECS #: DB9440000 BENZENE, 1,2,3,4-TETRACHLORO-
TOXICITY DATA ORL-RAT LD50:1167 MG/KG JTEHD6
11,663,1983 TARGET ORGAN DATA BEHAVIORAL (SOMNOLENCE)
GASTROINTESTINAL (HYPERMOTILITY, DIARRHEA) EFFECTS ON FERTILITY (LITTER
SIZE) EFFECTS ON EMBRYO OR FETUS (EXTRA EMBRYONIC STRUCTURES) EFFECTS
ON EMBRYO OR FETUS (FETOTOXICITY) NUTRITIONAL AND GROSS METABOLIC (BODY
TEMPERATURE DECREASE) ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL
SUBSTANCES (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR
COMPLETE INFORMATION. SECTION 12. - - - - - ECOLOGICAL INFORMATION -
- - - - - DATA NOT YET AVAILABLE. SECTION 13. - - - - -
DISPOSAL CONSIDERATIONS - - - - - DISSOLVE OR MIX THE MATERIAL
WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED
WITH AN AFTERBURNER AND SCRUBBER. OBSERVE ALL FEDERAL, STATE AND LOCAL
ENVIRONMENTAL REGULATIONS. SECTION 14. - - - - - TRANSPORT
INFORMATION - - - - - CONTACT ALDRICH CHEMICAL COMPANY FOR
TRANSPORTATION INFORMATION. SECTION 15. - - - - - REGULATORY
INFORMATION - - - - - EUROPEAN INFORMATION HARMFUL R 22

HARMFUL IF SWALLOWED. R 36/37/38 IRRITATING TO EYES, RESPIRATORY
SYSTEM AND SKIN. S 26 IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY
WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE. S 37/39 WEAR
SUITABLE GLOVES AND EYE/FACE PROTECTION. REVIEWS, STANDARDS, AND REGULATIONS
OEL=MAK EPA TSCA SECTION 8(B) CHEMICAL INVENTORY EPA TSCA 8(A)
PRELIMINARY ASSESSMENT INFORMATION, FINAL RULE FEREAC 47,26992,82 EPA
TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES EPA TSCA TEST
SUBMISSION (TSCATS) DATA BASE, SEPTEMBER 1999 SECTION 16. - - - - -
OTHER INFORMATION- - - - - THE ABOVE INFORMATION IS BELIEVED
TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED
ONLY AS A GUIDE. SIGMA, ALDRICH, FLUKA SHALL NOT BE HELD LIABLE FOR ANY
DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. SEE
REVERSE SIDE OF INVOICE OR PACKING SLIP FOR ADDITIONAL TERMS AND
CONDITIONS OF SALE. COPYRIGHT 1999 SIGMA-ALDRICH CO. LICENSE GRANTED
TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY

Product Number: 442219

Product Name: 1,2,4,5-Tetrachlorobenzene

Valid 10/1999 - 12/1999 Supelco Inc. Supelco Park Bellefonte, PA 16823-0048
USA Tel: 814-359-3441 MATERIAL SAFETY DATA SHEET

SECTION I - - - - - GENERAL INFORMATION CATALOG NO 442219 (REORDER PRODUCT BY THIS NO.)

PRODUCT NAME 1,2,4,5-TETRACHLORO BENZENE, 1000MG, NEAT DATA SHEET NO R472015
1,2,4,5-TETRACHLORO BENZENE CHEMICAL NAME

TETRACHLORO BENZENE, 1,2,4,5- FORMULA C6H2CL4
FORMULA WEIGHT 214 CAS 95-94-3 NRTECS DB9450000 SYNONYM

MANUFACTURER SUPELCO INC. PHONE 814-359-3441 ADDRESS SUPELCO PARK, BELLEFONTE, PA 16823-0048 SECTION II - - - - - HAZARDOUS

INGREDIENTS OF MIXTURES CHEMICAL NAME
COMMON NAME - PERCENTAGE - CAS # (FORMULA) -
PEL(UNITS) - TLV(UNITS) LD50 VALUE - CONDITIONS

N/A SECTION III - - - - -
- - - PHYSICAL DATA BOILING POINT 240 C MELTING POINT 138 C

VAPOR PRESSURE N/A VAPOR DENSITY N/A SPECIFIC GRAVITY N/A
PERCENT VOLATILE BY VOLUME 0

WATER SOLUBILITY 0 EVAPORATION RATE N/A APPEARANCE WHITE SOLID

SECTION IV - - - - - FIRE AND EXPLOSION HAZARD DATA FLASH POINT >230 F
FLAMMABLE LIMITS LEL N/A UEL N/A

EXTINGUISHING MEDIA C02 DRY CHEMICAL ALCOHOL FOAM. SPECIAL FIRE FIGHTING PROCEDURES
WEAR SELF CONTAINED BREATHING APPARATUS WHEN FIGHTING A CHEMICAL FIRE.

UNUSUAL FIRE AND EXPLOSION HAZARDS THE FOLLOWING TOXIC VAPORS ARE FORMED WHEN THIS MATERIAL IS HEATED TO DECOMPOSITION.

HYDROGEN CHLORIDE SECTION V - - - - - HEALTH HAZARD DATA LD50 1500 MG/KG ORAL RAT

TLV N/A PEL N/A EMERGENCY AND FIRST AID PROCEDURES EYES FLUSH EYES WITH WATER FOR 15 MINUTES.

SKIN FLUSH SKIN WITH LARGE VOLUMES OF WATER. INHALATION IMMEDIATELY MOVE TO FRESH AIR. GIVE OXYGEN IF BREATHING IS LABORED

IF BREATHING STOPS, GIVE ARTIFICIAL RESPIRATION INGESTION NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON
NEVER TRY TO MAKE AN UNCONSCIOUS PERSON VOMIT CONTACT A PHYSICIAN.

EFFECTS OF OVEREXPOSURE IRRITATES EYES IRRITATES SKIN IRRITATES NOSE AND THROAT SECTION VI - - - - - REACTIVITY DATA

STABILITY STABLE. CONDITIONS TO AVOID N/A INCOMPATIBILITY STRONG BASES
OXIDIZING AGENTS HAZARDOUS DECOMPOSITION PRODUCTS

HYDROGEN CHLORIDE HAZARDOUS POLYMERIZATION WILL NOT OCCUR. CONDITIONS TO AVOID
N/A SECTION VII - - - - - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED SWEEP UP MATERIAL.
AVOID GENERATING DUST. WASTE DISPOSAL METHOD

COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR LOCAL REGULATIONS SECTION VIII - - - - -
- - - - -SPECIAL PROTECTION INFORMATION RESPIRATORY PROTECTION (SPECIFIC TYPE)

N/A PROTECTIVE GLOVES WEAR RUBBER GLOVES. EYE PROTECTION WEAR GOGGLES. VENTILATION USE ONLY IN WELL

VENTILATED AREA. SPECIAL N/A OTHER PROTECTIVE EQUIPMENT

N/A SECTION IX - - - - - SPECIAL PRECAUTIONS STORAGE AND
HANDLING STORE IN SEALED CONTAINER IN COOL, DRY LOCATION. KEEP AWAY
FROM ACIDS. KEEP AWAY FROM BASES. AVOID GENERATING DUST. OTHER
PRECAUTIONS AVOID EYE OR SKIN CONTACT. WHILE THE INFORMATION AND
RECOMMENDATIONS SET FORTH HEREIN ARE BELIEVED TO BE ACCURATE AS OF THE DATE
HEREOF, SUPELCO, INC. MAKES NO WARRANTY WITH RESPECT THERETO AND DISCLAIMS
ALL LIABILITY FROM RELIANCE THEREON. LAST REVISED 1/01/99 COPYRIGHT
1999 SUPELCO, INC. SUPELCO PARK BELLEFONTE, PA 16823-0048 3311 ALL
RIGHTS RESERVED

Product Number: 131857

Product Name: 1,2,4,5-Tetrachlorobenzene, 98%

Molecular Formula: C₆H₂Cl₄

Molecular Weight: 215.89

CAS: 95-94-3

Assay: 98%

Comments: Melting Point (°C): 139 to 142 Boiling Point (°C): 240 to 246 / 760

Flash Point (°F): >230 Use: Intermediate for herbicides and defoliants, insecticide, impregnant for moisture resistance, electrical insulation.

Product Number: 442216U

Product Name: 1,2,3,5-Tetrachlorobenzene

Valid 10/1999 - 12/1999 Supelco Inc. Supelco Park Bellefonte, PA 16823-0048 USA Tel: 814-359-3441

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION I - - - - - GENERAL INFORMATION CATALOG NO 442216-U (REORDER PRODUCT BY THIS NO.)

PRODUCT NAME 1,2,3,5-TETRACHLOROBENZENE, 100MG, NEAT DATA SHEET NO R300620

1,2,3,5-TETRACHLOROBENZENE CHEMICAL NAME

1,2,3,5-TETRACHLOROBENZENE FORMULA C₆H₂Cl₄

FORMULA WEIGHT 215.88 CAS 634-90-2 NRTECS DB9445000 SYNONYM

MANUFACTURER SUPELCO INC. PHONE 814-359-3441 ADDRESS SUPELCO PARK, BELLEFONTE, PA 16823-0048

SECTION II - - - - - HAZARDOUS INGREDIENTS OF MIXTURES

CHEMICAL NAME

COMMON NAME - PERCENTAGE - CAS # (FORMULA) - PEL(UNITS) - TLV(UNITS) LD50 VALUE - CONDITIONS

N/A SECTION III - - - - -

- - - PHYSICAL DATA BOILING POINT 246 C MELTING POINT 54 C

VAPOR PRESSURE N/A VAPOR DENSITY (AIR=1) >1 SPECIFIC GRAVITY N/A PERCENT VOLATILE BY VOLUME 0

WATER SOLUBILITY 0 EVAPORATION RATE N/A APPEARANCE WHITE CRYSTALS

SECTION IV - - - - - FIRE AND EXPLOSION HAZARD DATA FLASH POINT 230 F FLAMMABLE LIMITS LEL N/A UEL N/A

EXTINGUISHING MEDIA CO₂ DRY CHEMICAL ALCOHOL FOAM. SPECIAL FIRE FIGHTING PROCEDURES WEAR SELF CONTAINED BREATHING APPARATUS WHEN FIGHTING A CHEMICAL FIRE. UNUSUAL FIRE AND EXPLOSION HAZARDS THE FOLLOWING TOXIC VAPORS ARE FORMED WHEN THIS MATERIAL IS HEATED TO

DECOMPOSITION. HYDROGEN CHLORIDE SECTION V - - - - -
 HEALTH HAZARD DATA LD50 1727 MG/KG ORAL RAT
 TLV N/A PEL N/A EMERGENCY AND FIRST AID PROCEDURES EYES FLUSH
 EYES WITH WATER FOR 15 MINUTES. SKIN FLUSH SKIN WITH LARGE VOLUMES OF
 WATER. INHALATION IMMEDIATELY MOVE TO FRESH AIR. INGESTION
 NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON NEVER TRY TO MAKE
 AN UNCONSCIOUS PERSON VOMIT CONTACT A PHYSICIAN. EFFECTS OF
 OVEREXPOSURE IRRITATES EYES IRRITATES SKIN IRRITATES NOSE AND
 THROAT GASTROINTESTINAL DISTURBANCES SECTION VI - - - - -
 - - - REACTIVITY DATA STABILITY STABLE. CONDITIONS TO AVOID N/A
 INCOMPATIBILITY STRONG BASES OXIDIZING AGENTS HAZARDOUS
 DECOMPOSITION PRODUCTS HYDROGEN CHLORIDE HAZARDOUS POLYMERIZATION
 WILL NOT OCCUR. CONDITIONS TO AVOID N/A SECTION VII - - - - -
 - - - - SPILL OR LEAK PROCEDURES STEPS TO BE TAKEN IN CASE MATERIAL IS
 RELEASED OR SPILLED SWEEP UP MATERIAL. AVOID GENERATING DUST.
 WASTE DISPOSAL METHOD COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR LOCAL
 REGULATIONS SECTION VIII - - - - - -SPECIAL PROTECTION INFORMATION
 RESPIRATORY PROTECTION (SPECIFIC TYPE) N/A PROTECTIVE GLOVES
 WEAR GLOVES. EYE PROTECTION WEAR PROTECTIVE GLASSES. VENTILATION
 USE ONLY IN WELL VENTILATED AREA. SPECIAL N/A OTHER PROTECTIVE
 EQUIPMENT N/A SECTION IX -
 PRECAUTIONS STORAGE AND HANDLING STORE IN SEALED CONTAINER IN COOL,
 DRY LOCATION. KEEP AWAY FROM OXIDIZERS. KEEP AWAY FROM BASES.
 AVOID GENERATING DUST. OTHER PRECAUTIONS AVOID EYE OR SKIN CONTACT.
 WHILE THE INFORMATION AND RECOMMENDATIONS SET FORTH HEREIN ARE BELIEVED TO BE
 ACCURATE AS OF THE DATE HEREOF, SUPELCO, INC. MAKES NO WARRANTY WITH RESPECT
 THERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON. LAST REVISED
 1/01/99 COPYRIGHT 1999 SUPELCO, INC. SUPELCO PARK BELLEFONTE, PA 16823-
 0048 3303 ALL RIGHTS RESERVED

1318571,2,4,5-TETRACHLOROBENZENE+98%>

Literature References: Aldrich FT-IR Library (Vapor Phase): 3,941D Aldrich
 NMR Library (60 MHz): 2(1),810D

Miscellaneous: *This chemical is in the EPA inventory under TSCA.* **Label Precautions:** Harmful solid
 Irritant Target organ: liver, kidneys Target organ: blood Target organ: thyroid

Product Number: 131857

Product Name: 1,2,4,5-Tetrachlorobenzene, 98%

Valid 02/2000 - 04/2000 Aldrich Chemical Co., Inc. 1001 West St. Paul
Milwaukee, WI 53233 USA Tel: 414-273-3850 M A T E R I A L S
A F E T Y D A T A S H E E T SECTION 1. - - - - -
CHEMICAL IDENTIFICATION- - - - - CATALOG #: 131857
NAME: 1,2,4,5-TETRACHLORO BENZENE, 98% SECTION 2. - - - - -
COMPOSITION/INFORMATION ON INGREDIENTS - - - - - CAS #: 95-94-3
MF: C6H2CL4 EC NO: 202-466-2 SYNONYMS BENZENE TETRACHLORIDE * RCRA
WASTE NUMBER U207 * 1,2,4,5- TETRACHLOR BENZOL (RUSSIAN) * S-
TETRACHLORO BENZENE * 1,2,4,5- TETRACHLORO BENZENE * SECTION 3. - - - - -
- - - - - HAZARDS IDENTIFICATION - - - - - LABEL PRECAUTIONARY
STATEMENTS HARMFUL HARMFUL IF SWALLOWED. IRRITATING TO EYES,
RESPIRATORY SYSTEM AND SKIN. TARGET ORGAN(S): LIVER, KIDNEYS IN
CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK
MEDICAL ADVICE. WEAR SUITABLE GLOVES AND EYE/FACE PROTECTION. SECTION 4. -
- - - - - FIRST-AID MEASURES- - - - - IN CASE OF
CONTACT, IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST
15 MINUTES. IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND
COPIOUS AMOUNTS OF WATER. IF INHALED, REMOVE TO FRESH AIR. IF NOT
BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE
OXYGEN. IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS
CONSCIOUS. CALL A PHYSICIAN. WASH CONTAMINATED CLOTHING BEFORE REUSE.
SECTION 5. - - - - - FIRE FIGHTING MEASURES - - - - -
EXTINGUISHING MEDIA WATER SPRAY. CARBON DIOXIDE, DRY CHEMICAL POWDER
OR APPROPRIATE FOAM. SPECIAL FIRE FIGHTING PROCEDURES WEAR SELF-CONTAINED
BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN
AND EYES. UNUSUAL FIRE AND EXPLOSIONS HAZARDS EMITS TOXIC FUMES UNDER
FIRE CONDITIONS. SECTION 6. - - - - - ACCIDENTAL RELEASE MEASURES- - - - -
- - - - - WEAR SELF-CONTAINED BREATHING APPARATUS, RUBBER BOOTS AND HEAVY
RUBBER GLOVES. SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.
AVOID RAISING DUST. VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL
PICKUP IS COMPLETE. SECTION 7. - - - - - HANDLING AND STORAGE- - - - -
- - - - - REFER TO SECTION 8. SECTION 8. - - - - - EXPOSURE
CONTROLS/PERSONAL PROTECTION- - - - - CHEMICAL SAFETY GOGGLES.
RUBBER GLOVES. NIOSH/MSHA-APPROVED RESPIRATOR. SAFETY SHOWER AND EYE
BATH. MECHANICAL EXHAUST REQUIRED. AVOID INHALATION. DO NOT GET IN
EYES, ON SKIN, ON CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE. WASH
THOROUGHLY AFTER HANDLING. HARMFUL SOLID. IRRITANT. KEEP TIGHTLY
CLOSED. STORE IN A COOL DRY PLACE. SECTION 9. - - - - - PHYSICAL AND
CHEMICAL PROPERTIES - - - - - APPEARANCE AND ODOR WHITE CHIPS
PHYSICAL PROPERTIES BOILING POINT: 240 C TO 246 C MELTING
POINT: 139 C TO 142 C FLASHPOINT >230
109C SECTION 10. - - - - - -STABILITY AND REACTIVITY - - - - -
- - - - - INCOMPATIBILITIES STRONG OXIDIZING AGENTS STRONG BASES
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS TOXIC FUMES OF: CARBON
MONOXIDE, CARBON DIOXIDE HYDROGEN CHLORIDE GAS SECTION 11. - - - - -

- TOXICOLOGICAL INFORMATION - - - - - ACUTE EFFECTS HARMFUL IF
 SWALLOWED. MAY BE HARMFUL IF INHALED. MAY BE HARMFUL IF ABSORBED
 THROUGH THE SKIN. CAUSES EYE AND SKIN IRRITATION. MATERIAL IS
 IRRITATING TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT. TARGET
 ORGAN(S): LIVER, KIDNEYS BLOOD THYROID RTECS #: DB9450000
 BENZENE, 1,2,4,5-TETRACHLORO- TOXICITY DATA ORL-RAT LD50:1500 MG/KG
 HYSAAV 30(1-3),8,1965 ORL-MUS LD50:1035 MG/KG
 HYSAAV 30(1-3),8,1965 ORL-RBT LD50:1500 MG/KG
 GISAAA 30(1),9,1965 TARGET ORGAN DATA BEHAVIORAL (GENERAL ANESTHETIC)
 BEHAVIORAL (SOMNOLENCE) BEHAVIORAL (CONVULSIONS OR EFFECT ON SEIZURE
 THRESHOLD) BEHAVIORAL (CHANGE IN MOTOR ACTIVITY) BEHAVIORAL (MUSCLE
 WEAKNESS) ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES
 (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE
 INFORMATION. SECTION 12. - - - - - ECOLOGICAL INFORMATION - - - - -
 - - - - - DATA NOT YET AVAILABLE. SECTION 13. - - - - - DISPOSAL
 CONSIDERATIONS - - - - - DISSOLVE OR MIX THE MATERIAL WITH A
 COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN
 AFTERBURNER AND SCRUBBER. OBSERVE ALL FEDERAL, STATE AND LOCAL
 ENVIRONMENTAL REGULATIONS. SECTION 14. - - - - - TRANSPORT
 INFORMATION - - - - - CONTACT ALDRICH CHEMICAL COMPANY FOR
 TRANSPORTATION INFORMATION. SECTION 15. - - - - - REGULATORY
 INFORMATION - - - - - EUROPEAN INFORMATION HARMFUL R 22
 HARMFUL IF SWALLOWED. R 36/37/38 IRRITATING TO EYES, RESPIRATORY
 SYSTEM AND SKIN. S 26 IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY
 WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE. S 37/39 WEAR
 SUITABLE GLOVES AND EYE/FACE PROTECTION. REVIEWS, STANDARDS, AND REGULATIONS
 OEL=MAK EPA TSCA SECTION 8(B) CHEMICAL INVENTORY EPA TSCA 8(A)
 PRELIMINARY ASSESSMENT INFORMATION, FINAL RULE FEREAC 47,26992,82 EPA
 TSCA SECTION 8(D) UNPUBLISHED HEALTH/SAFETY STUDIES ON EPA IRIS DATABASE
 EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, SEPTEMBER 1999 NIOSH
 ANALYTICAL METHOD, 1994: POLYCHLOROBENZENES, 5517 NTP TOXICITY STUDIES,
 RPT# TOX-07, SEPTEMBER 1999 SECTION 16. - - - - - OTHER INFORMATION-
 - - - - - THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT
 DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE.
 SIGMA, ALDRICH, FLUKA SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING
 FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. SEE REVERSE SIDE OF
 INVOICE OR PACKING SLIP FOR ADDITIONAL TERMS AND CONDITIONS OF SALE.
 COPYRIGHT 1999 SIGMA-ALDRICH CO. LICENSE GRANTED TO MAKE UNLIMITED PAPER
 COPIES FOR INTERNAL USE ONLY

Product Number: 442216U

Product Name: 1,2,3,5-Tetrachlorobenzene

Valid 10/1999 - 12/1999 Supelco Inc. Supelco Park Bellefonte, S A F E T Y
 D A T A S H E E T SECTION I - - - - - GENERAL
 INFORMATION CATALOG NO 442216-U (REORDER PRODUCT BY THIS NO.)
 PRODUCT NAME 1,2,3,5-TETRACHLORO BENZENE, 100MG, NEAT DATA SHEET NO
 R300620 1,2,3,5-TETRACHLORO BENZENE CHEMICAL NAME
 1,2,3,5-TETRACHLORO BENZENE FORMULA C6H2CL4
 FORMULA WEIGHT 215.88 CAS 634-90-2 NRTECS DB9445000 SYNONYM
 MANUFACTURER SUPELCO INC. PHONE 814-359-3441 ADDRESS SUPELCO
 PARK, BELLEFONTE, PA 16823-0048 SECTION II - - - - - HAZARDOUS
 INGREDIENTS OF MIXTURES CHEMICAL NAME
 COMMON NAME - PERCENTAGE - CAS # (FORMULA) -
 PEL(UNITS) - TLV(UNITS) LD50 VALUE - CONDITIONS
 N/A SECTION III - - - - -
 - - - PHYSICAL DATA BOILING POINT 246 C MELTING POINT 54 C
 VAPOR PRESSURE N/A VAPOR DENSITY (AIR=1) >1 SPECIFIC
 GRAVITY N/A PERCENT VOLATILE BY VOLUME 0
 WATER SOLUBILITY 0 EVAPORATION RATE N/A APPEARANCE WHITE CRYSTALS
 SECTION IV - - - - - FIRE AND EXPLOSION HAZARD DATA FLASH
 POINT 230 F FLAMMABLE LIMITS LEL N/A UEL N/A
 EXTINGUISHING MEDIA C02 DRY CHEMICAL ALCOHOL FOAM. SPECIAL
 FIRE FIGHTING PROCEDURES WEAR SELF CONTAINED BREATHING APPARATUS WHEN
 FIGHTING A CHEMICAL FIRE. UNUSUAL FIRE AND EXPLOSION HAZARDS THE
 FOLLOWING TOXIC VAPORS ARE FORMED WHEN THIS MATERIAL IS HEATED TO
 DECOMPOSITION. HYDROGEN CHLORIDE SECTION V - - - - -
 HEALTH HAZARD DATA LD50 1727 MG/KG ORAL RAT
 TLV N/A PEL N/A EMERGENCY AND FIRST AID PROCEDURES EYES FLUSH
 EYES WITH WATER FOR 15 MINUTES. SKIN FLUSH SKIN WITH LARGE VOLUMES OF
 WATER. INHALATION IMMEDIATELY MOVE TO FRESH AIR. INGESTION
 NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON NEVER TRY TO MAKE
 AN UNCONSCIOUS PERSON VOMIT CONTACT A PHYSICIAN. EFFECTS OF
 OVEREXPOSURE IRRITATES EYES IRRITATES SKIN IRRITATES NOSE AND
 THROAT GASTROINTESTINAL DISTURBANCES SECTION VI - - - - -
 - - - REACTIVITY DATA STABILITY STABLE. CONDITIONS TO AVOID N/A
 INCOMPATIBILITY STRONG BASES OXIDIZING AGENTS HAZARDOUS
 DECOMPOSITION PRODUCTS HYDROGEN CHLORIDE HAZARDOUS POLYMERIZATION
 WILL NOT OCCUR. CONDITIONS TO AVOID N/A SECTION VII - - - - -
 - - - - SPILL OR LEAK PROCEDURES STEPS TO BE TAKEN IN CASE MATERIAL IS
 RELEASED OR SPILLED SWEEP UP MATERIAL. AVOID GENERATING DUST.
 WASTE DISPOSAL METHOD COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR LOCAL
 REGULATIONS SECTION VIII - - - - - SPECIAL PROTECTION INFORMATION
 RESPIRATORY PROTECTION (SPECIFIC TYPE) N/A PROTECTIVE GLOVES
 WEAR GLOVES. EYE PROTECTION WEAR PROTECTIVE GLASSES. VENTILATION
 USE ONLY IN WELL VENTILATED AREA. SPECIAL N/A OTHER PROTECTIVE
 EQUIPMENT N/A SECTION IX - - - - - SPECIAL
 PRECAUTIONS STORAGE AND HANDLING STORE IN SEALED CONTAINER IN COOL,

DRY LOCATION. KEEP AWAY FROM OXIDIZERS. KEEP AWAY FROM BASES.
AVOID GENERATING DUST. OTHER PRECAUTIONS AVOID EYE OR SKIN CONTACT.
WHILE THE INFORMATION AND RECOMMENDATIONS SET FORTH HEREIN ARE BELIEVED TO BE
ACCURATE AS OF THE DATE HEREOF, SUPELCO, INC. MAKES NO WARRANTY WITH RESPECT
THERE TO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON. LAST REVISED
1/01/99 COPYRIGHT 1999 SUPELCO, INC. SUPELCO PARK BELLEFONTE, PA 16823-
0048 3303 ALL RIGHTS RESERVED

Polychlorinated biphenyl CAS: 1336-36-3

One of several aromatic compounds containing two benzene nuclei with two or more substituent chlorine atoms. they are colorless liquids with a density of 1.4-1.5. Because of their persistence, toxicity, and ecological damage via water pollution their manufacture was discontinued in the US in 1976.

Hazard: Highly toxic.

ENVIROSAV, L.L.C.

Phase I & Phase II Environmental Audits

RESUME'

George W. Guider, Jr.
105 Montaign Drive
Vicksburg, Mississippi 39180
(601) 638-7575

PERSONAL:

Birth Date: April 7, 1946 Height: 5' 10" Health: Excellent
Marital Status: Married, 2 children Weight: 190 lbs. SSN: 428-90-3378

EDUCATION:

1969 Bachelor of Science, Biology: University of Southern Miss, Hattiesburg, MS
1964 St. Aloysius High School, Vicksburg, MS

WORK EXPERIENCE:

- April 1993 - Present** Conducting PHASE 1 and PHASE 2 Environmental Audits for ENVIROSAV, LLC. President / CEO since July 1998.
- August 1992 - April 1993** Environmental Specialist for Industrial Pollution Control, Inc. in Jackson, MS. Responsible for developing training program on environmental regulations and safety, interfaced with regulatory community on both state and federal level, prepared bids on projects, conducted internal and external audits, conducted training programs for municipalities and industry, conducted both PHASE 1 & PHASE 2 environmental audits, performed site assessments.
- August 1973 - August 1992** Environmental Specialist with Entergy Operations, Inc. at Grand Gulf Nuclear Station, Port Gibson, MS. Responsible for implementing environmental protection programs and writing procedures. Developed GGNS Waste Minimization program. Developed and taught hazardous waste training. Proficient with current State NPDES and EPA regulations.
- July 1971 - August 1973** Research Assistant with U. S. Department of Agriculture at Mississippi State University. Responsible for rotary and fixed wing aircraft dispersion of cotton insecticide for research program.
- May 1970 - July 1971** Inspector for Mississippi State Highway Department. Responsible for bridge inspection on I-20 construction.
- Nov 1969 - May 1970** U. S. Army Reserves active duty at Fort Jackson, SC.
- May 1969 - Nov 1969** Biologist with Mississippi Game & Fish Commission at Ross Barnett Reservoir.

Warren Guider
105 Montaign Drive
Vicksburg, MS 39180

gwg@magnolia.net

(601) 638-7575
Mobile (601) 529-2464
Fax (601) 638-6763

ENVIROSAV, L.L.C.

Phase I & Phase II Environmental Audits

TRAINING

Emergency Preparedness
Texas A & M Hazardous Materials/Response Course
Certified 8 Hour refresher trainer

Air Emission Training
Computer Training
National Assoc of Truckers

SPECIAL KNOWLEDGE AND EXPERIENCE:

Proven ability to communicate effectively with state departments, and private business. Act in a lead of a team or individual effort, plan work effectively, judgement in accomplishing a plan of action.

REFERENCES:

Mr. Mark Buys	RIVER HILLS BANK - VICKSBURG	601 636-1445
Mr. Richard Ball	MISS DEPT of ENVIRONMENTAL QUALITY	601 961-5079
Mr. Mark Fulton	CASINO AMERICA, INC	601 357-0851
Mr. Mike Flannes	TRITEL COMMUNICATIONS, INC	601 914-8000
Mr. Tommy Breazeale	GREAT SOUTHERN NATIONAL BANK	601 354-2800
Mr. Herb Stathes	HILL CITY OIL CO., INC.	601 636-2523
Mr. Alec Batton	RIVER HILLS BANK - PORT GIBSON	601 437-4271
Mr. Ray Eaton	EATON & ASSOCIATES	601 371-1637
Mr. Ralph Abraham	SOS OIL COMPANY	601 924-5880
Mr. Bill Windham	MAGNOLIA HEALTH SERVICES	318 747-9315
Mr. J. O. Smith	SMITH TOWING COMPANY	601 636-2454
Mr. Larry Hamil	MISS DEPT of ENVIRONMENTAL QUALITY	601 961-5123
Mr. Sam Hill	FARM CHEMICAL GROUP of TALLULAH	318 574-5640
Mr. Bill Lauderdale	WARREN COUNTY BOARD of SUPERVISORS	601 634-8073
Mr. Laurence Koestler	CENTURY 21 REALTORS - VICKSBURG	601 634-1921
Mr. Michael Sugrue	MULTI-FAMILY CAPITAL MARKETS, INC.	804 285-3200
Mr. Paul Campbell	MAY & CAMPBELL LAND CO.	601 634-8255
Mr. Keith Kennedy	BELMONT HOMES, INC.	601 454-9217
Mr. Bob Parker	TRI-LAKE LAND & TIMBER COMPANY	601 636-6003
Mr. John Harper	BRUNINI, GRANTHAM, GROWER & HEWES	601 948-3101
Mr. Charles Morris	UNION PLANTERS BANK	601 948-5090
Mr. Kenneth Hall	THE VALLEY BANK	601 969-6148
Mr. Bryan Chandler	THE COLONIAL SOUTHERN GROUP	817 282-2505
Mr. Hal Gage	BANCORPSOUTH	601 636-3752
Mr. Ravi Josi	THE VICKSBURG DEVELOPMENT COMPANY	318 559-3801
Mr. Jerry Jackson	THE MACK ROBINSON DEVELOPMENT	601 892-4672
Mr. Lester Bellah	COMMUNITY BANK	601 978-3322
Mr. Ben Watson	CROSS KEYS BANK	318 766-3246
Mr. Steve Grantham	J & R RESTAURANT GROUP, INC.	601 982-0568
Ms. Kim Torrence	TORRENCE CABLE TELEVISION	601 977-0069
Mr. Larry Cooley	BURNS, DENNIS, & COOLEY ENGINEERING	601 856-9911
Ms. Gay Gaddis Barnes	KING LUMBER COMPANY	601 469-3271
Mr. Roy Patel	COMFORT INNS	601 634-8438
Mr. Mike Cappaert	CAPPAERT MANUFACTURED HOUSING	601 636-5401
Mr. Fred Farrell	FALCO LIME, INC.	601 636-0932
Ms. Traci Schwartz	GREENTREE FINANCIAL SERVICES, INC.	888 513-8733
Mr. Gene Delcomyn	BANK PLUS	601 992-7394
Mr. Steve Bryan	THE BRYAN COMPANY	601 956-1533
Mr. Mike Chaney	CHANEY OIL COMPANY	601 636-3275

Warren Guider
105 Montaign Drive
Vicksburg, MS 39180

gwg@magnolia.net

(601) 638-7575
Mobile (601) 529-2464
Fax (601) 638-6763