Tracking ID: PM01163
Project #: 010
Region: 01

NSF International

July 3, 2000

Ann Arbor, MI • Sacramento, CA • Washington, D.C. • Brussels, Belgium

QUALIFICATION TESTING
WIRSBO AQUATK ½"

Send To 50820
WIRSBO COMPANY
5925 148TH STREET WEST
APPLE VALLEY MN 55124
Attn: MR. RICH HOULE

Customer 50820
WIRSBO COMPANY
5925 148TH STREET WEST
APPLE VALLEY MN 55124
Attn: MR. RICH HOULE

Plant 50828
WIRSBO OF CANADA
79 MCILLVEEN DRIVE
P.O. BOX 2059
SAINT JOHN, NEW BRUNSWICK E2L 3T5
CANADA
Attn: MR. DAVID JACKMAN

The enclosed report details the results of the testing performed by NSF on your product(s). Your program representative will contact you if there are any remaining issues concerning the evaluation/certification of this product.

Please contact your representative if you have any questions. We thank you for having your product(s) tested by NSF.

CC : 010
John Goins
01 - Domestic

F20000703110907

Report for Job 200551-00

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E-Mail: info@nsf.org Web:http://www.nsf.org

WIRS0113

01/13/2003 15:44 FAX 9164446209 ADAMS BROADWELL TO [illegible]

Tracking ID:	PM01163
Project #:	010
Region:	01
NSF Field Representative:	John Goins
Lab Number:	S004174649
Description:	Wirsbo Aqua PEX 1/2"
Sampled:	MAR 27, 2000
Received:	APR 05, 2000
Normalization Time:	16
Normalization Factor - Additional (NFx):	1
Class Function:	PIPE/PIP
Tracking ID:	PM01163
Listing Status:	A1
NSF Standard:	14
Normalization Amount (Field):	488.2
Normalization Volume (Field):	1
Normalization Factor - NF2:	1

Parameter	Result	Control	Units	Entered

Lab Number:	S004174650
Description:	Wirsbo Aqua PEX 1/2", Sample exposed at 23C and pH 8
Sampled:	MAR 27, 2000
Received:	APR 05, 2000

$Normalization Information:

A_f =	488.2	A_l =	149	A_c =	149
V_f =	1	V_l =	0.310	V_c =	0.310
T_f =	16	T_l =	16.00	T_c =	16.00
NF_t =	1.0157181208	NF_3 =	1	NF_s =	1.0157181208
NF_a =	1				

Parameter	Result	Control	Normalized Result	Units	Entered
Additives sample preparation information					
Date exposure completed	11-MAY-00	11-MAY-00			12-MAY-00
Surface area exposed (Al)	149	Unavail		in2	12-MAY-00
Final volume of solution (Vl)	0.310	2.87		liters	12-MAY-00
Length of exposure (Tl)	16.00	16.00		hours	12-MAY-00
Number of units exposed in-product (Al)	2	Unavail		units	12-MAY-00
External Note: 1 unit = 1 pipe 50 inches long		Unavail			12-MAY-00
Volatiles: Unregulated VOC's					
Dichlorodifluoromethane	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00

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Parameter	Result	Control	Normalized Result	Units	Entered
Chloromethane	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Vinyl Chloride	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Bromomethane	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Chloroethane	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Trichlorofluoromethane	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Trichlorotrifluoroethane	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
1,1-Dichloroethylene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Methylene Chloride	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
trans-1,2-Dichloroethylene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
1,1-Dichloroethane	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
2,2-Dichloropropane	1.7	ND(0.5)	1.7§	ug/L	17-MAY-00
cis-1,2-Dichloroethylene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Chloroform	6.1	ND(0.5)	6.2§	ug/L	17-MAY-00
Bromochloromethane	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
1,1,1-Trichloroethane	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
1,1-Dichloropropene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Carbon Tetrachloride	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
1,2-Dichloroethane	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Trichloroethylene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
1,2-Dichloropropane	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Bromodichloromethane	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Dibromomethane	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
2-Chloroethylvinyl Ether	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
cis-1,3-Dichloropropene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
trans-1,3-Dichloropropene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00

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Parameter	Result	Control	Normalized Result	Units	Entered
1,1,2-Trichloroethane	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
1,3-Dichloropropane	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Tetrachloroethylene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Chlorodibromomethane	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Chlorobenzene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
1,1,1,2-Tetrachloroethane	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Bromoform	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
1,1,2,2-Tetrachloroethane	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
1,2,3-Trichloropropane	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
1,3-Dichlorobenzene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
1,4-Dichlorobenzene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
1,2-Dichlorobenzene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Carbon Disulfide	ND(1)	ND(1)	ND(1.0)	ug/L	17-MAY-00
Methyl-tert-Butyl Ether	17	ND(0.5)	17	ug/L	17-MAY-00
Methyl Isobutyl Ketone	ND(5)	ND(5)	ND(5.1)	ug/L	17-MAY-00
Methyl Ethyl Ketone	ND(5)	ND(5)	ND(5.1)	ug/L	17-MAY-00
Toluene	1.2	ND(0.5)	1.25	ug/L	17-MAY-00
Ethyl Benzene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
m+p-Xylenes	ND(1.0)	ND(1.0)	ND(1.0)	ug/L	17-MAY-00
o-Xylene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Styrene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Isopropylbenzene (Cumene)	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
n-Propylbenzene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Bromobenzene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
2-Chlorotoluene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00

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Parameter	Result	Control	Normalized Result	Units	Entered
4-Chlorotoluene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
1,3,5-Trimethylbenzene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
tert-Butylbenzene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
1,2,4-Trimethylbenzene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
sec-Butylbenzene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
p-Isopropyltoluene (Cymene)	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
1,2,3-Trimethylbenzene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
n-Butylbenzene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
1,2,4-Trichlorobenzene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Hexachlorobutadiene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
1,2,3-Trichlorobenzene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Naphthalene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Benzene	ND(0.5)	ND(0.5)	ND(0.51)	ug/L	17-MAY-00
Total Trihalomethanes	6.1	ND(0.5)	6.2§	ug/L	17-MAY-00

Lab Number: S004174651
Description: Wirsbo Aqua PEX 1/2", Sample exposed at 82C and pH 8
Sampled: MAR 27, 2000
Received: APR 05, 2000

$Normalization information:

A_f = 488.2
V_f = 1
T_f = 16
NF_1 = 0.9580836941
NF_x = 1

A_1 = 672
V_1 = 1.36
T_1 = 16.50
NF_2 = 1

A_c = 672
V_c = 1.36
T_c = 16.50
NF_c = 0.9580836941

Parameter	Result	Control	Normalized Result	Units	Entered
Additives sample preparation information					
Date exposure completed	11-MAY-00	11-MAY-00			12-MAY-00
Surface area exposed (Al)	672	Unavail		In2	12-MAY-00

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Parameter	Result	Control	Normalized Result	Units	Entered
Final volume of solution (Vf)	1.36	1.98		liters	12-MAY-00
Length of exposure (Tl)	16.50	16.50		hours	12-MAY-00
Number of units exposed in-product (Ai)	9	Unavail		units	12-MAY-00
External Note: 1 unit = 1 pipe 50 inches long		Unavail			12-MAY-00
2-Methyl-2-propanol	7200	ND(200)	6900	ug/L	21-JUN-00
Semivolatile Compounds, Base/Neutral/Acid 625					
N-Nitrosodimethylamine	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
N-Nitrosomethylethylamine	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
N-Nitrosodiethylamine	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Cyclohexanone	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Phenol	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Aniline	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
2-Chlorophenol	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
2-Ethyl-1-hexanol	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Benzenemethanol (Benzylalcohol)	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
2-Methylphenol (o-Cresol)	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
4-Methylphenol (p-Cresol)	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
N-Nitrosopyrrolidine	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
N-Nitrosodi-n-propylamine	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
1-Phenylethanone (Acetophenone)	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
N-Nitrosomorphofine	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
2-Phenyl-2-propanol	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
N-Nitrosopiperidine	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Isophorone	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
2,4-Dimethylphenol	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00

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Parameter	Result	Control	Normalized Result	Units	Entered
Naphthalene	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Benzothiazole	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
N-Nitrosodi-n-butylamine	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
p-tert-Butylphenol	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
2-Methylnaphthalene	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
a,a-Dimethyl-p-isopropylbenzenemethanol	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Dimethylphthalate	ND(40)	ND(40)	ND(38)	ug/L	28-JUN-00
aaa'a'Tetramethyl-1,3-benzenedimethanol	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Acenaphthylene	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
aaa'a'Tetramethyl-1,4-benzenedimethanol	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Acenaphthene	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Diethylphthalate	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Fluorene	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
N-Nitrosodiphenylamine	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Phenanthrene	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Anthracene	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Di-n-butylphthalate	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Fluoranthene	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Pyrene	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Butylbenzylphthalate	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Benzo(a)anthracene	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
bis(2-Ethylhexyl)phthalate	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
bis(2-Ethylhexyl)adipate	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Chrysene	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Di-n-octylphthalate	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00

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Parameter	Result	Control	Normalized Result	Units	Entered
Benzo(b)fluoranthene	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Benzo(k)fluoranthene	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Benzo(a)pyrene	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Dibenzo(a,h)anthracene	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Indeno(1,2,3-cd)pyrene	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Benzo(g,h,i)perylene	ND(4)	ND(4)	ND(3.8)	ug/L	28-JUN-00
Semivolatile Compounds, Base/Neutral/Acid 625 Scan					
Scan Control Complete	Complete	Complete			28-JUN-00
Methyl hexanone CAS# 110-12-3	8	Unavail	8	ug/L	28-JUN-00
(1) External note:		Unavail			28-JUN-00

Compounds with AS: are Authentic Standard compounds. Those without AS: are Tentatively Identified Compounds (TICs). CAS numbers for TICs are provided for toxicological evaluation

Status: **Pass**

Reviewer: M Sanders Date: 7/3/00

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