

## EXT. APPLICATIONS

ID	REV	DATE	HWS TARGET	K FACTOR, # / # D.S.			RES. AMMONIA HIGH REJECT LIMIT	CALCULATED ADDITION RATE			TYPE
				LOW	TARGET	HIGH		LOW	TARGET	HIGH	
G7-7	AA	12/26/1989	41%	0.015	0.03	0.04	0.55%	0.6%	1.2%	1.6%	AA
G7-7	AF	11/7/1991	41%	0.015	0.03	0.04	0.55%	0.6%	1.2%	1.6%	AA
G7-7	AG	11/14/1991	41%	0.015	0.03	0.04	0.55%	0.6%	1.2%	1.6%	AA
G7-7	AH	12/17/1991	41%	0.015	0.03	0.04	0.55%	0.6%	1.2%	1.6%	AA
G7-7	AI	3/9/1992	41%	0.015	0.03	0.04	0.55%	0.6%	1.2%	1.6%	AA
G7-7	AJ	10/5/1992	42%	0.015	0.03	0.04	0.55%	0.6%	1.2%	1.6%	AA
G7-7	AK	1/8/1993	42%	0.015	0.03	0.04	0.70%	0.6%	1.2%	1.6%	AA
G7-7	AL	2/1/1993	42%	0.015	0.03	0.04	0.70%	0.6%	1.2%	1.6%	AA
G7-7	AM	7/30/1993	42%	0.015	0.021	0.027	0.70%	0.6%	0.9%	1.1%	AA
G7-7	AN	10/11/1993	42%	0.015	0.021	0.027	0.70%	0.6%	0.9%	1.1%	AA
G7-7	AP	10/18/1993	42%	0.015	0.021	0.027	0.70%	0.6%	0.9%	1.1%	AA
G7-7	AU	3/3/1994	42%	0.015	-	0.027	0.70%	0.6%	-	1.1%	AA
G7-7	AV	11/21/1994	42%	0.015	-	0.027	0.70%	0.6%	-	1.1%	AA
G7-7	AW	1/12/1996	42%	0.015	-	0.027	0.70%	0.6%	-	1.1%	AA
G7-9	AC	5/17/1991	34%	0.015	0.03	0.04	0.59%	0.5%	1.0%	1.3%	AA
G7-9	AH	11/7/1991	34%	0.015	0.03	0.04	0.59%	0.5%	1.0%	1.3%	AA
G7-9	AI	11/14/1991	34%	0.015	0.03	0.04	0.59%	0.5%	1.0%	1.3%	AA
G7-9	AJ	12/17/1991	34%	0.015	0.03	0.04	0.59%	0.5%	1.0%	1.3%	AA
G7-9	AK	1/8/1993	34%	0.015	0.03	0.04	0.59%	0.5%	1.0%	1.3%	AA
G7-9	AL	2/1/1993	34%	0.015	0.03	0.04	0.59%	0.5%	1.0%	1.3%	AA

SHEET ID REV	G7-7 AA - AL	G7-7 AM-AW	G7-9	G7-25	G7-42
AMMONIA	1.2%	0.9%	1.0%	0.4%	0.4%
DAP				1.3%	1.3%
UREA					

NOTES: G7-7, G7-9 USED ANHYDROUS AMMONIA

G7-25, G7-42 USED ANHYDROUS AMMONIA UNTIL 11/94  
 G7-25, G7-42 USED AMMONIUM HYDROXIDE AFTER 11/94

G7-57, G7-61, G7-62 USE AMMONIUM HYDROXIDE

Num	BRAND FAMILY	STYLE
1	CAMEL	REG FF 85
2	CAMEL	LIGHT 85
3	CAMEL	REG FF CPB
4	CAMEL	LIGHT CPB
5	CAMEL	FF 100 SP
6	CAMEL	LT 100 SP
7	CAMEL	FF 99 CPB
8	CAMEL	LT 99 CPB
9	WINSTON	REG FF 85
10	WINSTON	LIGHT 85
11	WINSTON	REG FF CPB
12	WINSTON	LIGHT CPB
13	WINSTON	FF 100 SP
14	WINSTON	LT 100 SP
15	WINSTON	FF 100 CPB
16	WINSTON	LT 100 CPB
17	SALEM	REG FF 85
18	SALEM	LIGHT 85
19	SALEM	REG FF CPB
20	SALEM	LIGHT CPB
21	SALEM	FF 100 SP
22	SALEM	LT 100 SP
23	SALEM	FF 100 CPB
24	SALEM	LT 100 CPB
25	DORAL	REG FF 85
26	DORAL	LIGHT 85
27	DORAL	REG FF CPB
28	DORAL	LIGHT CPB
29	DORAL	FF 100 SP
30	DORAL	LT 100 SP
31	DORAL	FF 100 CPB
32	DORAL	LT 100 CPB
33	CAMEL	REG FF 85
34	CAMEL	LIGHT 85
35	CAMEL	LIGHT CPB
36	WINSTON	REG FF 85
37	WINSTON	LIGHT 85
38	WINSTON	LIGHT CPB
39	SALEM	FF 100 CPB
40	SALEM	LT 100 CPB
41	DORAL	REG FF 85
42	DORAL	LIGHT 85
43	DORAL	REG FF CPB
44	DORAL	LIGHT CPB
45	DORAL	FF 100 SP
46	DORAL	LT 100 SP
47	DORAL	FF 100 CPB
48	DORAL	LT 100 CPB

1002  
1827  
1639  
2043  
3070  
1953  
3828  
3838  
1804  
1016  
1003 3779  
1743 2733  
1005  
1743  
6567  
2737  
1008  
1535  
3004  
1681

## 605 APPLICATIONS

ID	REV	DATE	HWS TARGET	APPLICATION FACTOR, #/ 1000			RES. AMMONIA HIGH REJECT LIMIT	CALCULATED ADDITION RATE			TYPE
				LOW	TARGET	HIGH		LOW	TARGET	HIGH	
G7A	AA	7/22/1987	43%	6	11	16	1%	0.6%	1.088%	1.6%	AA
G7NXA	AA	7/22/1987	-	6	11	16	-	0.6%	1.088%	1.6%	AA
G7-2	AA	11/23/1987	41%	6	11	16	1%	0.6%	1.088%	1.6%	AA
G7-4	AA	3/8/1988	34%	6	11	16	1%	0.6%	1.088%	1.6%	AA

## 605 APPLICATIONS

ID	REV	DATE	HWS TARGET	APPLICATION FACTOR, #/ 1000			RES. AMMONIA HIGH REJECT LIMIT	CALCULATED ADDITION RATE			TYPE
				LOW	TARGET	HIGH		LOW	TARGET	HIGH	
G7A	AA	7/22/1987	43%	6	11	16	1%	0.6%	1.1%	1.6%	AA
G7NXA	AA	7/22/1987	-	6	11	16	-	0.6%	1.1%	1.6%	AA
G7-2	AA	11/23/1987	41%	6	11	16	1%	0.6%	1.1%	1.6%	AA
G7-4	AA	3/8/1988	34%	6	11	16	1%	0.6%	1.1%	1.6%	AA

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			TARGET	LOW	TARGET	HIGH		LOW	TARGET	HIGH	
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G7-7	AL	2/1/1993	42%	0.015	0.03	0.04	0.70%	0.6%	1.2%	1.6%	AA
G7-7	AM	7/30/1993	42%	0.015	0.021	0.027	0.70%	0.6%	0.9%	1.1%	AA
G7-7	AN	10/11/1993	42%	0.015	0.021	0.027	0.70%	0.6%	0.9%	1.1%	AA
G7-7	AP	10/18/1993	42%	0.015	0.021	0.027	0.70%	0.6%	0.9%	1.1%	AA
G7-7	AU	3/3/1994	42%	0.015	-	0.027	0.70%	0.6%	-	1.1%	AA
G7-7	AV	11/21/1994	42%	0.015	-	0.027	0.70%	0.6%	-	1.1%	AA
G7-7	AW	1/12/1996	42%	0.015	-	0.027	0.70%	0.6%	-	1.1%	AA
G7-9	AC	5/17/1991	34%	0.015	0.03	0.04	0.59%	0.5%	1.0%	1.3%	AA
G7-9	AH	11/7/1991	34%	0.015	0.03	0.04	0.59%	0.5%	1.0%	1.3%	AA
G7-9	AI	11/14/1991	34%	0.015	0.03	0.04	0.59%	0.5%	1.0%	1.3%	AA
G7-9	AJ	12/17/1991	34%	0.015	0.03	0.04	0.59%	0.5%	1.0%	1.3%	AA
G7-9	AK	1/8/1993	34%	0.015	0.03	0.04	0.59%	0.5%	1.0%	1.3%	AA
G7-9	AL	2/1/1993	34%	0.015	0.03	0.04	0.59%	0.5%	1.0%	1.3%	AA

Reconstituted Tobacco Sheet Added Ammonia Summary Table						
YEAR	RTb Type In Blends	Is RTE Ammoniated	Ammonia Source		Source Dry Wt %	
			Source 1	Source 2	Source 1	Source 2
1993						
	G7-29	no	None	None		
	G7-40	no	None	None		
	G7-42	yes	DAP	NH4OH	1.406	1.649
	G7-43	no	None	None		
	G7-7	yes	??	n/a	??	
1992						
	G7-1	no	None	None		
	G7-28	no	None	None		
	G7-7 ✓	yes	??	n/a	??	
	G7-9	yes	??	n/a	??	
1991						
	G7-1 ✓	no	None	None		
	G7-7	yes	??	n/a	??	
	G7-9	yes	??	n/a	??	
1990						
	G7-1 ✓	no	None	None		
	G7-2	yes	??	n/a	??	
	G7-4	yes	??	n/a	??	
	G7-7 ✓	yes	??	n/a	??	
1989						
	G7-1	no	None	None		
	G7-2	yes	??	n/a	??	
	G7-4	yes	??	n/a	??	
1988						
	G7-1	no	None	None		
	G7-2	yes	??	n/a	??	
	G7-4	yes	??	n/a	??	
1987						
	G7	no	None	None		
	G7A	yes	??	n/a	??	
	G7NXA	yes	??	n/a	??	

NH4OH = AMMONIUM HYDROXIDE  
DAP = DIAMMONIUM PHOSPHATE

53186 2061

Reconstituted Tobacco Sheet Added Ammonia Summary Table						
YEAR	RTb Type In Blends	Is RTB	Ammonia Source		Calculated addition rate	
		Ammoniated	Source 1	Source 2	Source 1	Source 2
1993						
	G7-1 ✓	no				
	G7-7 ✓	yes	AA	n/a	0.86	
	G7-25 ✓	yes	DAP	AA	1.30	0.41
	G7-28 ✓	no				
1992						
	G7-1	no				
	G7-28	no				
	G7-7	yes	AA	n/a	1.22	
	G7-9	yes	AA	n/a	0.99	
1991						
	G7-1	no				
	G7-7	yes	AA	n/a	1.19	
	G7-9	yes	AA	n/a	0.99	
1990						
	G7-1	no				
	G7-2	yes	AA	n/a	1.19	
	G7-4	yes	AA	n/a	1.09	
	G7-7	yes	AA	n/a	1.09	
1989						
	G7-1	no				
	G7-2	yes	AA	n/a	1.09	
	G7-4	yes	AA	n/a	1.09	
1988						
	G7-1	no				
	G7-2	yes	AA	n/a	1.09	
	G7-4	yes	AA	n/a	1.09	
1987						
	G7	no				
	G7A	yes	AA	n/a	1.09	
	G7NXA	yes	AA	n/a	1.09	

NH<sub>4</sub>OH = AMMONIUM HYDROXIDE

DAP = DIAMMONIUM PHOSPHATE

AA = ANHYDROUS AMMONIA

53186 2062



Reconstituted Tobacco Sheet Added Ammonia Summary Table						
YEAR	RTb Type In Blends	Is RTB Ammoniated	Ammonia Source		Calculated addition rate	
			Source 1	Source 2	Source 1	Source 2
2001						
	G7-60	no				
	G7-62	yes	DAP	NH4OH	1.37	0.34
	G7-64	no				
	G7-66	no				
2000						
	G7-62	yes	DAP	NH4OH	1.37	0.34
	G7-64	no				
	G7-66	no				
1999						
	G7-40	no				
	G7-50	no				
	G7-53	no				
	G7-62	yes	DAP	NH4OH	1.37	0.34
1998						
	G7-40	no				
	G7-50	no				
	G7-53	no				
	G7-62	yes	DAP	NH4OH	1.37	0.34
1997						
	G7-40	no				
	G7-50	no				
	G7-53	no				
	G7-57	yes	DAP	NH4OH	1.37	0.34
1996						
	G7-40	no				
	G7-41	no				
	G7-42	yes	DAP	NH4OH	1.41	0.41
	G7-50	no				
	G7-53	no				
	G7-54	no				
1995						
	G7-29	no				
	G7-40	no				
	G7-41	no				
	G7-42	yes	DAP	NH4OH	1.41	0.41
	G7-43	no				
1994						
	G7-29	no				
	G7-40	no				
	G7-42	yes	DAP	NH4OH	1.30	0.41
	G7-43	no				
	G7-7	yes	AA	n/a	0.86	

53186 2063

Reconstituted Tobacco Sheet Added Ammonia Summary Table						
YEAR	RTb Type In Blends	Is RTb Ammoniated	Ammonia Source		Source Dry Wt %	
			Source 1	Source 2	Source 1	Source 2
2001						
	G7-60	no	None	None		
	G7-62	yes	DAP	NH4OH	1.366	1.81
	G7-64	no	None	None		
2000	G7-66	no	None	None		
	G7-62	yes	DAP	NH4OH	1.366	1.81
	G7-64	no	None	None		
1999	G7-66	no	None	None		
	G7-40	no	None	None		
	G7-50	no	None	None		
1998	G7-53	no	None	None		
	G7-62	yes	DAP	NH4OH	1.366	1.81
	G7-40	no	None	None		
1997	G7-50	no	None	None		
	G7-53	no	None	None		
	G7-57	yes	DAP	NH4OH	1.366	1.81
1996	G7-40	no	None	None		
	G7-41	no	None	None		
	G7-42	yes	DAP	NH4OH	1.406	1.649
	G7-50	no	None	None		
	G7-53	no	None	None		
	G7-54	no	None	None		
1995						
	G7-29	no	None	None		
	G7-40	no	None	None		
	G7-41	no	None	None		
	G7-42	yes	DAP	NH4OH	1.406	1.649
1994	G7-43	no	None	None		
	G7-29	no	None	None		
	G7-40	no	None	None		
	G7-42	yes	DAP	NH4OH	1.406	1.649
	G7-43	no	None	None		
	G7-7	yes	??	n/a	??	

53186 2064

## EXT. APPLICATIONS

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			TARGET	LOW	TARGET	HIGH		LOW	TARGET	HIGH	
G7-7	AA	12/26/1989	41%	0.015	0.03	0.04	0.55%	0.6%	1.2%	1.6%	AA
G7-7	AF	11/7/1991	41%	0.015	0.03	0.04	0.55%	0.6%	1.2%	1.6%	AA
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G7-7	AH	12/17/1991	41%	0.015	0.03	0.04	0.55%	0.6%	1.2%	1.6%	AA
G7-7	AI	3/9/1992	41%	0.015	0.03	0.04	0.55%	0.6%	1.2%	1.6%	AA
G7-7	AJ	10/5/1992	42%	0.015	0.03	0.04	0.55%	0.6%	1.2%	1.6%	AA
G7-7	AK	1/8/1993	42%	0.015	0.03	0.04	0.70%	0.6%	1.2%	1.6%	AA
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G7-7	AM	7/30/1993	42%	0.015	0.021	0.027	0.70%	0.6%	0.9%	1.1%	AA
G7-7	AN	10/11/1993	42%	0.015	0.021	0.027	0.70%	0.6%	0.9%	1.1%	AA
G7-7	AP	10/18/1993	42%	0.015	0.021	0.027	0.70%	0.6%	0.9%	1.1%	AA
G7-7	AU	3/3/1994	42%	0.015	-	0.027	0.70%	0.6%	-	1.1%	AA
G7-7	AV	11/21/1994	42%	0.015	-	0.027	0.70%	0.6%	-	1.1%	AA
G7-7	AW	1/12/1996	42%	0.015	-	0.027	0.70%	0.6%	-	1.1%	AA
G7-9	AC	5/17/1991	34%	0.015	0.03	0.04	0.59%	0.5%	1.0%	1.3%	AA
G7-9	AH	11/7/1991	34%	0.015	0.03	0.04	0.59%	0.5%	1.0%	1.3%	AA
G7-9	AI	11/14/1991	34%	0.015	0.03	0.04	0.59%	0.5%	1.0%	1.3%	AA
G7-9	AJ	12/17/1991	34%	0.015	0.03	0.04	0.59%	0.5%	1.0%	1.3%	AA
G7-9	AK	1/8/1993	34%	0.015	0.03	0.04	0.59%	0.5%	1.0%	1.3%	AA
G7-9	AL	2/1/1993	34%	0.015	0.03	0.04	0.59%	0.5%	1.0%	1.3%	AA

SHEET ID REV	G7-7 AA - AL	G7-7 AM-AW	G7-9	G7-25	G7-42	G7-57	G7-61	G7-62	G7-59
AMMONIA	1.2%	0.9%	1.0%	0.4%	0.4%	0.3%	0.3%	0.3%	
DAP				1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
UREA									0.9%

NOTES:

G7-7, G7-9 USED ANNHYDROUS AMMONIA

G7-25, G7-42 USED ANNHYDROUS AMMONIA UNTIL 11/94  
 G7-25, G7-42 USED AMMONIUM HYDROXIDE AFTER 11/94

G7-57, G7-61, G7-62 USE AMMONIUM HYDROXIDE

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				LOW	TARGET	HIGH		LOW	TARGET	HIGH	
G7A	AA	7/22/1987	43%	6	11	16	1%	0.6%	1.1%	1.6%	AA
G7NXA	AA	7/22/1987	-	6	11	16	-	0.6%	1.1%	1.6%	AA
G7-2	AA	11/23/1987	41%	6	11	16	1%	0.6%	1.1%	1.6%	AA
G7-4	AA	3/8/1988	34%	6	11	16	1%	0.6%	1.1%	1.6%	AA

SHEET ID REV	G7-7 AA - AL	G7-7 AM-AW	G7-9	G7-25	G7-42	G7-57	G7-61	G7-62	G7-59
AMMONIA	1.194%	0.864%	1.000%	0.410%	0.410%	0.340%	0.340%	0.340%	
DAP				1.300%	1.300%	1.300%	1.300%	1.300%	1.300%
UREA									0.900%

NOTES: G7-7, G7-9 USED ANHYDROUS AMMONIA

G7-25, G7-42 USED ANHYDROUS AMMONIA UNTIL 11/94

G7-25, G7-42 USED AMMONIUM HYDROXIDE AFTER 11/94

G7-57, G7-61, G7-62 USE AMMONIUM HYDROXIDE

SHEET ID REV	G7-7 AA - AL	G7-7 AM-AW	G7-9	G7-25	G7-42	G7-57	G7-61	G7-62	G7-59
AMMONIA	1.2%	0.9%	1.0%	0.4%	0.4%	0.3%	0.3%	0.3%	
DAP				1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
UREA									0.9%

NOTES:

G7-7, G7-9 USED ANNHYDROUS AMMONIA

G7-25, G7-42 USED ANNHYDROUS AMMONIA UNTIL 11/94

G7-25, G7-42 USED AMMONIUM HYDROXIDE AFTER 11/94

G7-57, G7-61, G7-62 USE AMMONIUM HYDROXIDE

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G7-7	AF	11/7/1991	41%	0.015	0.03	0.04	0.55%	0.6%	1.194%	1.6%	AA
G7-7	AG	11/14/1991	41%	0.015	0.03	0.04	0.55%	0.6%	1.194%	1.6%	AA
G7-7	AH	12/17/1991	41%	0.015	0.03	0.04	0.55%	0.6%	1.194%	1.6%	AA
G7-7	AI	3/9/1992	41%	0.015	0.03	0.04	0.55%	0.6%	1.194%	1.6%	AA
G7-7	AJ	10/5/1992	42%	0.015	0.03	0.04	0.55%	0.6%	1.220%	1.6%	AA
G7-7	AK	1/8/1993	42%	0.015	0.03	0.04	0.70%	0.6%	1.220%	1.6%	AA
G7-7	AL	2/1/1993	42%	0.015	0.03	0.04	0.70%	0.6%	1.220%	1.6%	AA
G7-7	AM	7/30/1993	42%	0.015	0.021	0.027	0.70%	0.6%	0.864%	1.1%	AA
G7-7	AN	10/11/1993	42%	0.015	0.021	0.027	0.70%	0.6%	0.864%	1.1%	AA
G7-7	AP	10/18/1993	42%	0.015	0.021	0.027	0.70%	0.6%	0.864%	1.1%	AA
G7-7	AU	3/3/1994	42%	0.015	-	0.027	0.70%	0.6%	-	1.1%	AA
G7-7	AV	11/21/1994	42%	0.015	-	0.027	0.70%	0.6%	-	1.1%	AA
G7-7	AW	11/21/1996	42%	0.015	-	0.027	0.70%	0.6%	-	1.1%	AA
G7-9	AC	5/17/1991	34%	0.015	0.03	0.04	0.59%	0.5%	0.990%	1.3%	AA
G7-9	AD	11/7/1991	34%	0.015	0.03	0.04	0.59%	0.5%	0.990%	1.3%	AA
G7-9	AE	11/14/1991	34%	0.015	0.03	0.04	0.59%	0.5%	0.990%	1.3%	AA
G7-9	AF	12/17/1991	34%	0.015	0.03	0.04	0.59%	0.5%	0.990%	1.3%	AA
G7-9	AG	1/8/1993	34%	0.015	0.03	0.04	0.59%	0.5%	0.990%	1.3%	AA
G7-9	AH	2/1/1993	34%	0.015	0.03	0.04	0.59%	0.5%	0.990%	1.3%	AA



1987	C7A	1992	1 7 9	1999	40 50 53 62
	C7NxA				
	C7	1993	1 7	2000	
1988	67-1		C7-25		62
	67-2	1994			64 66
	67-4			2001	
1989	1 2 4		7 42 46		62 66
		1995	<del>40</del> 29 <del>41</del> 42 <del>42</del> 41 43		
1989	1 2 4 7	1996	40 41 42 50 54		
1990	1 2 4 7				
		1997	40 ✓ 50 ✓ 57 ✓ 53 ✓		
1991	1 7 9	1998	40 50 62 53		

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