



## Technical Data Sheet

# CSM 180W Microcrystalline Wax

*\*Manufactured products shall conform to specifications. Revision Date: 8/1/2006*

Test Description	Test Method	Min.	Max.	Typical
MELT POINT °F(°C)	ASTM D-87	178 (81.1)	184 (84.4)	181(82.8)
PENETRATION @ 77°F	ASTM D-1321	14	22	19
PENETRATION @ 110°F	ASTM D-1321			
VISC @ 210°F (cSt)	ASTM D-445	14.5	17.5	16.0
COLOR	ASTM D-1500	0.5	3.5	
FDA Approval	FDA 172.886	PASS		
OIL CONTENT, wt %	ASTM D-721		2.0	1.0
FLASH POINT, COC, °C	ASTM D-92	290		

### WARRANTY DISCLAIMER STATEMENT

Please be advised that there are no warranties, representations or conditions, expressed or implied, of any kind, including, but not limited to, merchantability or fitness for a particular purpose made by CLARUS SPECIALTY PRODUCTS, LLC (Hereafter "CLARUS") or its officers, employees or affiliates, in connection with the sale of the products described in this bulletin. The information contained in this document is based solely on tests, which are believed to be reliable. As actual conditions of use may vary and are beyond the control of CLARUS, the product's specified characteristics cannot be guaranteed and are offered solely for the buyer's evaluation and verification. Accordingly, the purchaser and each user assume all risks and liability connected to their specific use of such products. Nothing contained herein is to be construed as permission, recommendation or inducement by CLARUS or its officers, employees or affiliates, to use any product or process so as to infringe or conflict with any patent. Further, it is the user's obligation to utilize this material in full compliance with all required health, safety and environmental regulations. CLARUS recommends that the Material Safety Data Sheet for this product be consulted prior to handling and use.



## Technical Data Sheet\*

# CSM ClarFlex Microcrystalline Wax

*\*Manufactured products shall conform to specifications. Revision Date: 3/29/2004*

Test Description	Test Method	Min.	Max.	Typical
MELT POINT °F(°C)	ASTM D-127	147 (63.9)	166 (74.4)	157 (69.4)
PENETRATION @ 77 °F	ASTM D-1321	21	39	30
VISC @ 210 °F (SUS)	ASTM D-2161	76	94	85
COLOR	ASTM D-1500		1.5	1.0
FDA Approval	FDA 172.886	PASS		

### WARRANTY DISCLAIMER STATEMENT

Please be advised that there are no warranties, representations or conditions, expressed or implied, of any kind, including, but not limited to, merchantability or fitness for a particular purpose made by CLARUS SPECIALTY PRODUCTS, LLC (Hereafter "CLARUS") or its officers, employees or affiliates, in connection with the sale of the products described in this bulletin. The information contained in this document is based solely on tests, which are believed to be reliable. As actual conditions of use may vary and are beyond the control of CLARUS, the product's specified characteristics cannot be guaranteed and are offered solely for the buyer's evaluation and verification. Accordingly, the purchaser and each user assume all risks and liability connected to their specific use of such products. Nothing contained herein is to be construed as permission, recommendation or inducement by CLARUS or its officers, employees or affiliates, to use any product or process so as to infringe or conflict with any patent. Further, it is the user's obligation to utilize this material in full compliance with all required health, safety and environmental regulations. CLARUS recommends that the Material Safety Data Sheet for this product be consulted prior to handling and use.



Technical Data Sheet\*

CSX Microblend 25

\*Manufactured products shall conform to specifications. Revision Date: 4/05/2004

Test Description	Test Method	Min.	Max.	Typical
CONGEALING POINT °F (°C)	D-938	144 (62.2)	154 (67.8)	150 (65.6)
PENETRATION @ 77°F	ASTM D-1321	10	35	27
PENETRATION @ 110°F	ASTM D-1321	—	—	120
KINEMATIC VISCOSITY, cSt @ 210°F (98.9°C)	D-445	—	—	15.4
SAYBOLT VISCOSITY, SUS @ 210°F (98.9°C)	D-2161	—	—	79.5
SAYBOLT COLOR	D-156	+10	—	+16
OIL CONTENT, Wt%	D-721	—	1.0	0.2
ODOR	D-1833	—	1	—

WARRANTY DISCLAIMER STATEMENT

Please be advised that there are no warranties, representations or conditions, expressed or implied, of any kind, including, but not limited to, merchantability or fitness for a particular purpose made by CLARUS SPECIALTY PRODUCTS, LLC (Hereafter "CLARUS") or its officers, employees or affiliates, in connection with the sale of the products described in this bulletin. The information contained in this document is based solely on tests, which are believed to be reliable. As actual conditions of use may vary and are beyond the control of CLARUS, the product's specified characteristics cannot be guaranteed and are offered solely for the buyer's evaluation and verification. Accordingly, the purchaser and each user assume all risks and liability connected to their specific use of such products. Nothing contained herein is to be construed as permission, recommendation or inducement by CLARUS or its officers, employees or affiliates, to use any product or process so as to infringe or conflict with any patent. Further, it is the user's obligation to utilize this material in full compliance with all required health, safety and environmental regulations. CLARUS recommends that the Material Safety Data Sheet for this product be consulted prior to handling and use.



Technical Data Sheet\*

CSX Microblend 45  
Microcrystalline Wax

*\*Manufactured products shall conform to specifications. Revision Date: 10/12/2006*

Test Description	Test Method	Min.	Max.	Typical
MELTING POINT °F (°C)	ASTM D-3954	195 (90.6)	203 (95.0)	
PENETRATION @ 77°F	ASTM D-1321	3.0	7.0	
VISCOSITY, cSt @ 210°F (98.9°C)	ASTM D-445	18	25	
VISCOSITY, SUS @ 210°F (98.9°C)	ASTM D-2161	90	120	
COLOR	ASTM D-1500		1.0	L0.5
OIL CONTENT, Wt%	ASTM D-721		1.8	
FDA, TITLE 21 CFR	172.886; 176.170; 176.180; 178.3710	PASS		

WARRANTY DISCLAIMER STATEMENT

Please be advised that there are no warranties, representations or conditions, expressed or implied, of any kind, including, but not limited to, merchantability or fitness for a particular purpose made by CLARUS SPECIALTY PRODUCTS, LLC (Hereafter "CLARUS") or its officers, employees or affiliates, in connection with the sale of the products described in this bulletin. The information contained in this document is based solely on tests, which are believed to be reliable. As actual conditions of use may vary and are beyond the control of CLARUS, the product's specified characteristics cannot be guaranteed and are offered solely for the buyer's evaluation and verification. Accordingly, the purchaser and each user assume all risks and liability connected to their specific use of such products. Nothing contained herein is to be construed as permission, recommendation or inducement by CLARUS or its officers, employees or affiliates, to use any product or process so as to infringe or conflict with any patent. Further, it is the user's obligation to utilize this material in full compliance with all required health, safety and environmental regulations. CLARUS recommends that the Material Safety Data Sheet for this product be consulted prior to handling and use.



## Technical Data Sheet\*

# CSM MicroPlast Microcrystalline Wax

*\*Manufactured products shall conform to specifications. Revision Date: 12/1/2004*

Test Description	Test Method	Min.	Max.	Typical
MELT POINT °F(°C)	ASTM D-127	152 (66.7)	164 (73.3)	159 (70.6)
PENETRATION @ 77°F	ASTM D-1321	20	33	28
VISC @ 210°F (SUS)	ASTM D-445/2161	70.0		75.0
OIL CONTENT	ASTM D-721		2.5	
FDA Approval	FDA 172.886	PASS		
ODOR	ASTM D 1833		2	2
COLOR	ASTM D-1500		1.5	L 1.5

### WARRANTY DISCLAIMER STATEMENT

Please be advised that there are no warranties, representations or conditions, expressed or implied, of any kind, including, but not limited to, merchantability or fitness for a particular purpose made by CLARUS SPECIALTY PRODUCTS, LLC (Hereafter "CLARUS") or its officers, employees or affiliates, in connection with the sale of the products described in this bulletin. The information contained in this document is based solely on tests, which are believed to be reliable. As actual conditions of use may vary and are beyond the control of CLARUS, the product's specified characteristics cannot be guaranteed and are offered solely for the buyer's evaluation and verification. Accordingly, the purchaser and each user assume all risks and liability connected to their specific use of such products. Nothing contained herein is to be construed as permission, recommendation or inducement by CLARUS or its officers, employees or affiliates, to use any product or process so as to infringe or conflict with any patent. Further, it is the user's obligation to utilize this material in full compliance with all required health, safety and environmental regulations. CLARUS recommends that the Material Safety Data Sheet for this product be consulted prior to handling and use.



Technical Data Sheet\*

CSM Optimus 1.0  
Microcrystalline Wax

*\*Manufactured products shall conform to specifications. Revision Date: 3/04/2004*

Test Description	Test Method	Min.	Max.	Typical
MELT POINT °F(°C)	ASTM D-127	165 (73.9)	175 (79.4)	
PENETRATION @ 77 °F	ASTM D-1321	20	35	
PENETRATION @ 110 °F	ASTM D-1321	138	198	
VISC @ 210 °F (SUS)	ASTM D-2161	70	90	
SAYBOLT COLOR	ASTM D-156	+6.0		
FDA, 21 CFR	FDA 172.886	PASS		
ODOR	ASTM D-1833		1.0	

WARRANTY DISCLAIMER STATEMENT

Please be advised that there are no warranties, representations or conditions, expressed or implied, of any kind, including, but not limited to, merchantability or fitness for a particular purpose made by CLARUS SPECIALTY PRODUCTS, LLC (Hereafter "CLARUS") or its officers, employees or affiliates, in connection with the sale of the products described in this bulletin. The information contained in this document is based solely on tests, which are believed to be reliable. As actual conditions of use may vary and are beyond the control of CLARUS, the product's specified characteristics cannot be guaranteed and are offered solely for the buyer's evaluation and verification. Accordingly, the purchaser and each user assume all risks and liability connected to their specific use of such products. Nothing contained herein is to be construed as permission, recommendation or inducement by CLARUS or its officers, employees or affiliates, to use any product or process so as to infringe or conflict with any patent. Further, it is the user's obligation to utilize this material in full compliance with all required health, safety and environmental regulations. CLARUS recommends that the Material Safety Data Sheet for this product be consulted prior to handling and use.



## Technical Data Sheet\*

# CSM Optimus 3.0

*\*Manufactured products shall conform to specifications. Revision Date: 9/15/2005*

Test Description	Test Method	Min.	Max.	Typical
MELT POINT °F(°C)	ASTM D-127	150 (65.6)	170 (76.7)	162 (72.2)
PENETRATION @ 77°F	ASTM D-1321	20	35	
PENETRATION @ 110°F	ASTM D-1321	90	200	
VISC @ 210°F (SUS)	ASTM D-2161	70	100	
COLOR	ASTM D-1500			DARK BROWN

### WARRANTY DISCLAIMER STATEMENT

Please be advised that there are no warranties, representations or conditions, expressed or implied, of any kind, including, but not limited to, merchantability or fitness for a particular purpose made by CLARUS SPECIALTY PRODUCTS, LLC (Hereafter "CLARUS") or its officers, employees or affiliates, in connection with the sale of the products described in this bulletin. The information contained in this document is based solely on tests, which are believed to be reliable. As actual conditions of use may vary and are beyond the control of CLARUS, the product's specified characteristics cannot be guaranteed and are offered solely for the buyer's evaluation and verification. Accordingly, the purchaser and each user assume all risks and liability connected to their specific use of such products. Nothing contained herein is to be construed as permission, recommendation or inducement by CLARUS or its officers, employees or affiliates, to use any product or process so as to infringe or conflict with any patent. Further, it is the user's obligation to utilize this material in full compliance with all required health, safety and environmental regulations. CLARUS recommends that the Material Safety Data Sheet for this product be consulted prior to handling and use.



## Technical Data Sheet\*

# CSM Onyx .80

*\*Manufactured products shall conform to specifications. Revision Date: 2/23/2005*

Test Description	Test Method	Min.	Max.	Typical
MELT POINT °F(°C)	ASTM D-3954	175 (79.4)	187 (86.1)	
DROP MELT POINT °F(°C)	ASTM D-127	170 (76.7)	190 (87.8)	180 (82.2)
PENETRATION @ 77°F	ASTM D-1321	13	33	23
PENETRATION @ 110°F	ASTM D-1321	93	143	118
VISC @ 210°F (SUS)	ASTM D-2161	75	115	91
VISC @ 210°F (cP)	ASTM D-3236	11	19	15
COLOR	ASTM D-1500			D8.0 (BLACK)

### WARRANTY DISCLAIMER STATEMENT

Please be advised that there are no warranties, representations or conditions, expressed or implied, of any kind, including, but not limited to, merchantability or fitness for a particular purpose made by CLARUS SPECIALTY PRODUCTS, LLC (Hereafter "CLARUS") or its officers, employees or affiliates, in connection with the sale of the products described in this bulletin. The information contained in this document is based solely on tests, which are believed to be reliable. As actual conditions of use may vary and are beyond the control of CLARUS, the product's specified characteristics cannot be guaranteed and are offered solely for the buyer's evaluation and verification. Accordingly, the purchaser and each user assume all risks and liability connected to their specific use of such products. Nothing contained herein is to be construed as permission, recommendation or inducement by CLARUS or its officers, employees or affiliates, to use any product or process so as to infringe or conflict with any patent. Further, it is the user's obligation to utilize this material in full compliance with all required health, safety and environmental regulations. CLARUS recommends that the Material Safety Data Sheet for this product be consulted prior to handling and use.