



ITC LIMITED - PAPERBOARDS AND SPECIALTY PAPERS DIVISION
UNIT :- BHADRACHALAM

DEVELOPMENT SPECIFICATION - C2S SG

Grade Name : C2S SAFIRE GRAPHIK
Grade Id : C2SSG

SPEC NO : SG/C2S/PSPD/BCM/004
Format No : F/QISD/1

SUBSTANCE (GSM) (Avg.)	CALIPER (µM) (Avg.)	BENDING RESISTANCE(L&W) mN		
		QS/TM/33		Tappi T 556
QS/TM/55 Tappi T 410	QS/TM/06 Tappi T 411	MD	CD	GM
220	243	105	57	77
230	254	126	64	90
240	265	135	70	97
250	276	158	85	116
260	299	180	99	133
270	310	198	105	144
280	323	213	114	156
290	333	242	132	179
300	345	251	136	185
310	372	293	154	212
320	384	312	169	230
330	396	337	183	248
340	408	378	196	272
350	420	401	203	285
TOL : ± 3%	± 5%			-15%

PARAMETER	UNITS	VALUE
PLY BOND (Avg.) QS/TM/40 , Tappi T 569	J/m ²	150MIN
ROUGHNESS PPS (Avg.) TOP	µm	
250 < GSM ≤ 340		1.5 MAX
GSM > 340		1.5 MAX
QS/TM/49 , Tappi T 555		
BRIGHTNESS ISO TOP	%	92 ± 2
QS/TM/77 , Tappi T 452		
WHITENESS CIE TOP	%	116 ± 4
QS/TM/78 , Tappi T 560		
DELTA - E TOP		1.5 MAX
QS/TM/79 , Tappi T 527		
SURFACE STRENGTH IGT PICK (MED.VISCOSITY) TOP	m/sec	0.7 MIN
QS/TM/31 , ISO 3782 & 3783		
GLOSS AT 75° (Avg.) TOP	%	50 MIN
QS/TM/27 , Tappi T 480 BOT		50 MIN
MOISTURE	%	
GSM ≤ 300		7.0 ± 1.0
GSM > 300		8.0 ± 1.0
QS/TM/35 , Tappi T 412		

Construction



Note :
 1.) All Properties are according to ITC Limited, PSPD Unit:BCM Measurements
 2.) Test Climate 23°C ± 1 & 50% ± 2 RH
 3.) Tolerances are based upon 95% Confidence limits of single mill measurements of conditioned random samples

APPROVED BY	Head - Marketing	ISSUED BY	Head - Technical
SIGNATURE		SIGNATURE	
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Material Safety Data Sheet

Product(s) : Safire Graphik

Specification Reference : SG/CSG/PSPD/BCM/IV/003
 SG/GEN/PSPD/BCM/IV/003
 SG/SGC/PSPD/BCM/IV/003
 SG/SGT/PSPD/BCM/IV/003
 SG/SSC/PSPD/BCM/IV/003
 SG/SSG/PSPD/BCM/IV/003
 SG/GEN/PSPD/BCM/V/003

MSDS Code : MSDS/SG/ALL/PSPD/BCM/003

1. Product Identification

Product	Manufacturing Location	Manufacturer
Safire Graphik (SG,CSG,SGC,SGT,SSC,SSG)	Unit: Bhadrachalam	ITC Limited, Paperboards and Specialty papers Division

2. Major Ingredients/Identity Information

Name	CAS#	Percent	Compliance
Bleached Fiber (Cellulose)	9004-34-6	70 – 80	US FDA 176.170 Compliant
Rosin Size	None	0.5 – 1.0	21CFR 176.170(a)(5)
Talcum (Filler)	None	4 – 5	
<u>Coating pigments</u>			FDA under 21 CFR 176.170,176.180

Calcium Carbonate	1317 – 65 – 3	22 – 25	
Kaolin Clay	1332 – 58 – 7		
Starch	None	4 – 5	FDA 172.892
Retention Aid	None	0.5 – 1.0	FDA 21CFR176.170
Binders	None	1.0 – 2.0	21CFR 176.170
OBA	None	1.0 – 2.0	21CFR 176.180 & BGVV XXXVI

3. Hazard identification

Appearance and Odor

The product is a White, Pigment Coated paperboard, which may impart a characteristic paperboard odor.

Primary Health Hazards

No health hazards in Normal handling. As the board edges are sharp, chances of injury when moving web/Cut sheets are touched without precaution.

Primary Route(s) of Exposure

() Ingestion

() Skin

4. Emergency and First Aid procedures

Ingestion

Not applicable for product in purchased form.

Eye Contact

Not applicable for product in purchase form.

Skin Contact

Product is essentially non-irritating.

Skin Absorption

None

Inhalation

Not applicable for product in purchase form.

5. Fire and Explosion Data

Flash Point (Method Used)

Not Applicable

Extinguishing Media

Water, CO₂, Dry Chemical.

Autoignition Temperature

450 – 572°F (232 – 300°C)

Special Firefighting Procedures

None

6. Accidental Release Measures

Steps to be Taken In Case Material Is Released or Spilled

Not applicable for product in purchased form.

7. Handling and Storage

Precautions to be Taken In Handling and Storage

Suitable material handling equipments only to be used.

Keep in cool, dry place away from open flame.

The moisture proof packing should not be removed till the point of usage.

8. Exposure Control Measures

Personal Protective Equipment

RESPIRATORY PROTECTION

Not applicable for product in purchased form.

PROTECTIVE GLOVES

Not applicable for product in purchased form.

EYE PROTECTION

Not applicable for product in purchased form.

PROTECTIVE CLOTHING OR EQUIPMENT

Not applicable for product in purchased form.

9. Physical / Chemical Properties

Boiling Point (@ 760 mm Hg)	: NAP
Vapor Pressure (mm Hg)	: NAP
Vapor Density (air = 1; 1 atm)	: NAP
Specific Gravity (H₂O = 1)	: 0.6 - 0.8
Melting Point	: NAP
Evaporation Rate (Butyl acetate = 1)	: NAP
Solubility in Water	: Insoluble
pH	: NAP

10. Stability and reactivity

Safire Graphik is a stable and inert material

11. Toxicological information.

Safire Graphik confirms as per US FDA 176.170 for contact with food products.

12. Ecological Information

Product is made with ECF pulp.

13. Disposal (Environmentally safe & Recycle Confirmation)

The product is recyclable.

Waste Disposal Method

If disposed or discarded in purchased form, incineration or dry land disposal is acceptable. It is, however, the user's responsibility to determine at the time of disposal whether your product is having hazardous waste. Dispose in accordance with federal, state, and local regulations.

14. Transport Information

Not regulated as a hazardous material.

15. Regulatory information

Product should be tested for any compliance to the local regulations by the consumer before usage.

16. Other Information

Product Stewardship

ITC limited (PSPD) is an ISO 14001 certified company has a fundamental concern for all who manufacture, distribute and use its product, and for the environment in which we live. This concern is the basis of our product stewardship philosophy by which we assess the health and environmental information on our products and take appropriate steps to protect employee and public health and our environment. Our product stewardship rest with each and every individual employed with ITC Limited from the concept and research, to manufacture, use, sale and disposal of each product.

Additional Information

Date Prepared : 28th June 2006
Date Revised : 1st November 2009
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Revision No : 00
Prepared By : Product Development, ITC limited, PSPD

User's Responsibility

The information contained in this Material Safety Data Sheet is based on the experience of occupational health and safety professionals and comes from sources believed to be accurate or otherwise technically correct. It is the user's responsibility to determine if this information is suitable for their applications and to follow safety precautions as may be necessary. The user has the responsibility to make sure that this sheet is the most up-to-date issue.