

The Doorway

M.C. Gill Corporation Group of Companies

High-Performance Composite Products Since 1945 • www.mcgillcorp.com

Volume 49 • Number 3 • Fall 2013 • 199 issues in print



Gillcore:

Built to Perform

Gillcore!

Built to Perform

M.C. Gill Corporation in El Monte manufactures non-metallic honeycomb for its own use as core materials for sandwich panels used primarily as floor panels. The floor panels are supplied as both original equipment and replacement parts for commercial passenger aircraft. In addition to floor panels, other passenger aircraft interior uses for panels we manufacture using Gillcore include class dividers, sidewall, ceiling, galley carts and lavatory panels.

We also manufacture Gillcore as a raw material for further modification by airframe and component

manufacturers. With our CNC and fabrication capabilities we shape Gillcore to virtually any configuration required by our customers for end use as trailing edges, flaps, ailerons, engine components and access panels. Other aviation-related uses include doors, nose cones, helicopter blades and radomes. Marine builders use Gillcore for v dividing berthing areas and staterooms. Gillcore is so widely used because honeycomb sandwich panels possess rigidity with low mass; i.e., high specific strength. M.C. Gill Corporation in El Monte manufactures several honeycomb varieties.



Gillcore™ HD

is a Nomex® aramid fiber-reinforced honeycomb which is coated with heat-resistant phenolic resin. Gillcore™ HD provides a wide range of honeycomb

types, including different cell sizes, cell geometries, paper thicknesses and densities, for commercial and aerospace defense applications.

Gillcore HD Performance Properties

Gillcore™ HD Honeycomb Description	Gillcore™ HD Honeycomb Configuration	Cell Size	Density	Compressive				Plate Shear					
				Bare Strength		Stabilized Strength		L Direction			W Direction		
				TYP		MIN		Strength		Modulus	Strength		Modulus
				Mpa	Mpa	Mpa	Mpa	Mpa	Mpa	Gpa	Mpa	Mpa	Gpa
HD-1/8-1.8	HD111	3.2	29	0.74	0.64	0.79	0.66	0.68	0.56	0.036	0.35	0.30	0.016
HD-1/8-3.0	HD132	3.2	48	2.13	1.81	2.27	1.98	1.54	1.32	0.050	0.75	0.64	0.027
HD-1/8-4.0	HD142	3.2	64	3.82	3.17	4.10	3.54	1.91	1.64	0.062	1.05	0.89	0.035
HD-1/8-5.0	HD153	3.2	80	4.93	4.18	5.33	4.69	2.86	2.51	0.081	1.59	1.39	0.045
HD-1/8-6.0	HD163	3.2	96	7.40	6.64	8.18	7.00	3.21	3.02	0.099	1.98	1.77	0.053
HD-1/8-8.0	HD183	3.2	128	11.86	9.89	12.64	11.33	3.78	3.36	0.128	2.74	2.39	0.071
HD-1/8-9.0	HD193	3.2	144	13.33	11.97	14.70	13.10	3.89	3.64	0.141	2.91	2.62	0.083
HD-3/16-2.0	HD322	4.8	32	0.88	0.72	0.95	0.74	0.87	0.70	0.036	0.43	0.34	0.019
HD-3/16-3.0	HD332	4.8	z	2.09	1.63	2.51	2.09	1.44	1.27	0.050	0.76	0.64	0.031
HD-3/16-4.0	HD342	4.8	64	3.59	3.09	3.95	3.60	2.28	2.09	0.070	1.23	1.06	0.036
HD-1/4-1.5	HD412	6.4	24	0.56	0.5	0.60	0.54	0.66	0.56	0.030	0.36	0.30	0.019
HD-1/4-3.0	HD433	6.4	48	2.08	1.08	2.23	1.92	1.63	1.42	0.051	0.88	0.71	0.029
HD-3/8-3.0	HD533	9.5	48	1.91	1.65	2.26	2.10	1.54	1.38	0.051	0.92	0.79	0.033
HD-3/16-1.8-OX	HD3120	4.8	29	0.74	0.59	1.10	0.98	0.41	0.37	0.015	0.42	0.37	0.026
HD-3/16-3.0-OX	HD3320	4.8	48	2.23	1.74	2.51	1.99	0.88	0.77	0.023	1.01	0.90	0.047
HD-3/16-4.0-OX	HD3420	4.8	64	3.80	2.92	4.18	3.33	1.31	1.24	0.032	1.87	1.76	0.065

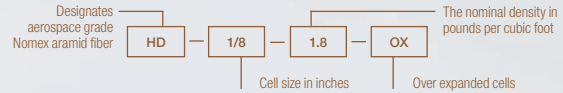
Flammability: Gillcore™ HD honeycomb meets the flammability requirements of BMS 8-124.

Water migration: Gillcore™ HD honeycomb does not exceed 1 cell migration in 24 hours when tested per BMS 8-124.

Performance Properties, Typical

The following tests are run in accordance with BMS 8-124 requirements.

Gillcore™ HD Honeycomb Description	Gillcore™ HD Honeycomb Configuration	Compressive				Plate Shear					
		Bare Strength		Stabilized Strength		L Direction			W Direction		
		TYP		MIN		Strength		Modulus	Strength		Modulus
		psi	psi	psi	psi	psi	psi	ksi	psi	psi	ksi
HD-1/8-1.8	HD111	107	93	114	96	99	82	5.28	51	44	2.37
HD-1/8-3.0	HD132	309	263	329	288	224	192	7.26	109	93	3.97
HD-1/8-4.0	HD142	554	460	595	514	277	238	9.04	153	129	5.15
HD-1/8-5.0	HD153	715	606	773	681	415	364	11.79	231	202	6.48
HD-1/8-6.0	HD163	1,074	963	1,187	1,016	466	438	14.35	287	257	7.76
HD-1/8-8.0	HD183	1,722	1,435	1,835	1,644	548	488	18.61	398	347	10.37
HD-1/8-9.0	HD193	1,934	1,737	2,133	1,901	564	529	20.51	422	380	12.08
HD-3/16-2.0	HD322	127	104	138	108	126	102	5.29	62	50	2.74
HD-3/16-3.0	HD332	303	237	365	304	209	185	7.22	111	93	4.45
HD-3/16-4.0	HD342	521	449	573	523	331	303	10.18	178	154	5.16
HD-1/4-1.5	HD412	81	73	87	78	96	81	4.37	52	44	2.81
HD-1/4-3.0	HD433	302	261	323	279	236	206	7.47	128	103	4.24
HD-3/8-3.0	HD533	277	240	328	305	223	200	7.37	134	114	4.77
HD-3/16-1.8-OX	HD3120	107	86	160	142	59	54	2.11	61	53	3.74
HD-3/16-3.0-OX	HD3320	323	253	365	289	128	112	3.30	146	130	6.84
HD-3/16-4.0-OX	HD3420	552	424	607	484	190	180	4.60	271	256	9.40



Qualified Specifications

Qualified to FMS 1030

Qualified to Boeing BMS 8-124 CI IV

Qualified to McDonnell Douglas DMS 1974 Gr A

Qualified to Lockheed STM 28-105

Qualified to Lockheed LCM 28-1041, G28001

Qualified to Northrop Grumman GC101

Qualified to Vought 207-8-430

Qualified to Cessna CMNP083, Ty II, CI 4, Gr 1.8, 3.0, 6.0

Qualified to AMS 3711, Aerospace Material Standards

Qualified to Bell Helicopter (Textron) 299-947-103

Qualified to Raytheon/Beech - BS 23732

Qualified to AIM Aviation AIM-M-1002, AIMS 11-01-001

Meets the requirements of AMS-C-81986

Qualified to Airbus AIMS 11-01-001/ABS5035

Qualified to Lockheed-Georgia STM 28-105. [1/8 - 1.8 (1.5) and 1/8 - 3.0 (2)]

DHMS P1.26 DeHavilland

Gillcore™ HK

is a Kelvar® aramid fiber-reinforced honeycomb which is coated with heat-resistant phenolic resin. Kevlar® honeycomb cores exhibit enhanced performance characteristics over Nomex® honeycomb core in the areas of weight, strength, stiffness and fatigue. Gillcore™ HK provides a wide range of honeycomb types, including different cell sizes, cell geometries, paper thicknesses and densities, for commercial, military, aerospace and defense applications.

Gillcore HK is used in the same aircraft interior, non-aerospace and recreational applications as Gillcore HD, offering heat formability for complex and contoured components.

Qualified Specifications

Gillcore Kevlar® honeycomb core is qualified to the following specifications:

Boeing BMS 8-124, Class 6, Type V, Grades 2.5, 3.0, 4.0, 6.0; and Type VI, Grade 2.5.

Airbus Industrie: AIMS 11-01-004 Grades D,F,T,W (ABS5341-A3,A5,C1,C5,C8).

Bell Helicopter: 299-947-386: Type 1, Grade A, Classes 2.0, 3.0, 4.5, and 6.0.

Northrop-Grumman: ACS-MRS-5301, Class 1, 1/8" cell, 6 pcf density.

Lockheed-Martin: 5PTMDL17-D

Gillcore HK Performance Properties

Gillcore™ HK Honeycomb Description	Gillcore™ HK Honeycomb Configuration	Cell Size	Density	Compressive				Plate Shear					
				Bare Strength		Stabilized Strength		L Direction			W Direction		
				TYP	MIN	TYP	MIN	Strength		Modulus	Strength		Modulus
		mm	kg/m3	Mpa	Mpa	Mpa	Mpa	Mpa	Mpa	Gpa	Mpa	Mpa	Gpa
HK-1/8-2.5	HK1061	3.2	40	1.98	1.65	2.21	2.05	1.87	1.71	0.12	1.07	1.01	0.05
HK-1/8-3.0	HK131	3.2	48	2.69	2.35	2.91	2.43	1.94	1.70	0.12	1.01	0.87	0.06
HK-1/8-3.0*	HK132	3.2	48	2.60	2.38	2.78	2.58	2.09	1.90	0.15	1.13	1.04	0.07
HK-1/8-4.0	HK141	3.2	64	3.98	3.30	4.33	4.06	2.49	2.32	0.14	1.42	1.35	0.07
HK-1/8-4.5	HK1033	3.2	72	5.13	4.77	5.26	4.90	3.82	3.63	0.21	2.10	1.99	0.09
HK-1/8-6.0	HK162	3.2	96	7.79	6.93	8.20	7.32	3.61	3.42	0.19	2.49	2.33	0.10
HK-1/8-6.0*	HK163	3.2	96	8.18	7.58	8.58	8.06	4.28	3.96	0.26	2.87	2.69	0.12
HK-5/32-2.5	HK2061	4.0	40	1.94	1.79	2.14	1.97	1.60	1.41	0.10	0.93	0.81	0.06
HK-5/32-6.0	HK262	4.0	96	7.30	6.86	8.01	7.45	3.56	3.46	0.18	2.71	2.60	0.10
HK-3/16-2.0	HK322	4.8	32	2.23	2.00	2.45	2.32	2.22	2.00	0.13	1.16	1.07	0.06
HK-3/16-2.5-OX	HK30610	4.8	40	1.44	1.23	1.50	1.28	1.05	0.95	0.05	1.02	0.90	0.08

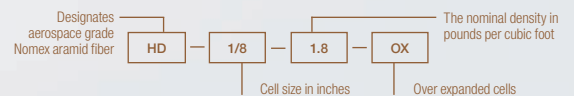
Flammability: Gillcore™ HD honeycomb meets the flammability requirements of BMS 8-124.

Water migration: Gillcore™ HD honeycomb does not exceed 1 cell migration in 24 hours when tested per BMS 8-124.

Performance Properties, Typical

The following tests are run in accordance with BMS 8-124 requirements.

Gillcore™ HK Honeycomb Description	Gillcore™ HK Honeycomb Configuration	Compressive				Plate Shear					
		Bare Strength		Stabilized Strength		L Direction			W Direction		
		TYP	MIN	TYP	MIN	Strength		Modulus	Strength		Modulus
		psi	psi	psi	psi	psi	psi	ksi	psi	psi	ksi
HK-1/8-2.5	HK1061	288	240	321	297	272	248	16.7	156	147	7.9
HK-1/8-3.0	HK131	390	341	422	352	281	247	17.8	146	126	8.2
HK-1/8-3.0*	HK132	378	345	403	374	304	276	22.2	164	151	10.5
HK-1/8-4.0	HK141	578	480	628	589	362	337	21.0	206	196	9.7
HK-1/8-4.5	HK1033	744	693	764	711	555	527	30.9	305	289	13.4
HK-1/8-6.0	HK162	1,131	1,006	1,190	1,062	524	496	27.0	362	338	14.6
HK-1/8-6.0*	HK163	1,187	1,100	1,246	1,170	621	575	37.2	417	391	16.8
HK-5/32-2.5	HK2061	282	260	310	285	232	204	13.8	135	118	8.3
HK-5/32-6.0	HK262	1060	995	1163	1082	517	502	25.7	394	378	14.0
HK-3/16-2.0	HK322	323	290	356	336	322	290	18.9	169	155	8.9
HK-3/16-2.5-OX	HK30610	208	179	217	186	152	138	7.4	148	130	11.5



Within the last five years, M.C. Gill Corporation El Monte has experienced significant growth and the shareholders have made the necessary investments to increase our honeycomb production capacity, including:

- 1 additional heat-set oven
- 2 additional bake ovens
- Refurbished and reactivated Dip Room 1
- 1 additional thermal oxidizer

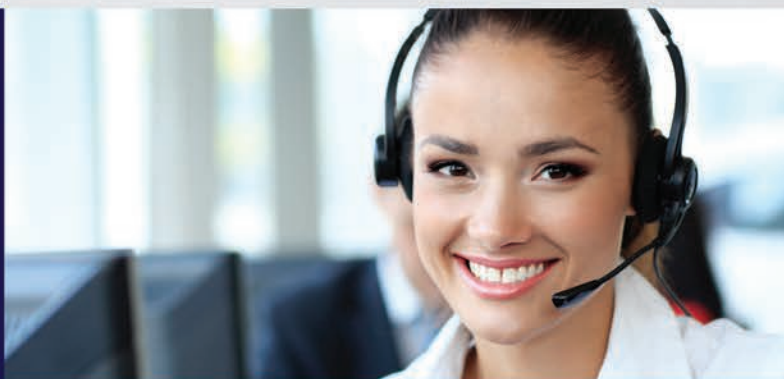
The combination of new equipment and upgrades to our facility will help increase capacity and improve lead times, something our customers will appreciate. The applications for honeycomb materials in raw form and as finished panels are far-reaching. In a future issue we will explore the metallic honeycomb products we manufacture at Alcore Inc., our subsidiary in Maryland. In addition, we will cover some of the new technology initiatives with respect to honeycomb.

Right: Bake oven

Bottom: Heat-set oven



We have a highly trained customer service staff who can help you select the right core material for your applications. Please contact us today at **626-443-6094** or visit our website at **www.mcgillcorp.com**



I N M E M



Matthew Allen Lowry
1954 - 2014

It is with much sadness we announce the passing of Matt Lowry, Director of Research and Development at M.C. Gill Corporation.

Matt grew up in Illinois and attended Graceland College where he earned a Bachelor of Science degree in Chemistry/Physical Science and a minor in Education. After his move to Southern California, Matt attended Cal State University, Fullerton, for graduate work in Organic Chemistry.

In his early career, Matt taught chemistry, physics, mathematics and the physical sciences at Villisca Community schools, Iowa. In addition to all that, he volunteered as the school wrestling coach.

In the 1970s, Matt moved to Southern California where he worked as a chemist starting at U.S. Polymeric, Ciba Composites and Ciba Specialty Chemicals.

In 2001, M.C. Gill Corporation hired Matt to oversee the Research and Development function at its headquarters in El Monte, California. Matt worked in that capacity from January 2001 until the time of his death.

Matt was a gifted scientist and writer who authored several publications and led teams that secured

two patents prior to joining M.C. Gill Corporation and a third patent (Gillcore Foamed In-Situ Thermosetting System - U.S. Patent no. 7,842,147) for M.C. Gill Corporation.

During his tenure, Matt brought a tireless curiosity to the science of advanced composites. His expertise and advice were often sought industry-wide by other scientists and aircraft manufacturers who incorporated advanced composites into their designs.

Matt had the unique ability to take a variety of scientific, highly technical subjects and translate them into a form that even non-scientific types could understand. He was the technical advisor for the Discovery Channel's segment of "How It's Made" that aired in September 2009 and supported the video production of two podcasts about GillFISTS that are found on YouTube.

Matt was never too busy to stop and answer questions posed by coworkers, peers and especially M.C. Gill Corporation customers. Matt was a leader in his local church, a great teacher, mentor and friend.

Matt is survived by his second wife of 22 years, Lisa Guidi Kemp; his two daughters, Melanie Garrison and Stephanie Merriott; stepson Sam Kemp; Matt's sisters, Lisa Ann Moeller and Kristie Lynn Deselms; brother Mark Lowry; five grandchildren and several nieces and nephews. He will be missed.

O R I A M



Gilbert W. Speed

1933 - 2014

Gilbert Speed enjoyed a career that spanned more than 60 years in the aviation industry.

He entered the field in 1952 as a student apprentice at The Bristol Aeroplane Company (now part of BAE SYSTEMS).

In 1957, he moved to New York and worked for Eastern Airlines as a Development Engineer for the DC-8 and Lockheed Electra. In 1959, he joined Pan Am as a Structures Engineer, and later became an Aeronautical Engineer. While at Pan Am, he worked on the specifications for the 727, 707 Freighter, Concorde, and Dassault Fanjet Falcon.

In 1968, he founded Transequip (now part of Telair International), which manufactured composite panels, cargo and baggage containers and cargo systems.

In 1979, after releasing interest in Transequip, he founded *SpeedNews*, which is the industry's newsletter of record and the first newsletter to accept advertising. He later added *SpeedNews Defense BiWeekly* and *Aircraft Insider* to the portfolio. In 1987, he launched the first annual SpeedNews Aviation Industry Suppliers Conference.

In September 2006, *SpeedNews* was purchased by Prism Business Media. Prism Business Media is now known as Penton Media.

Mr. Speed was on the Board of Directors of KAPCO and LeFiell Manufacturing and on the Advisory Boards of M.C. Gill Corporation, Janes Capital Partners and Perfect Point EDM. He was also on the Board of the Aero Club of Southern California and has been a member of the SAE since 1959.

A member of ISTAT since 1983, he was the recipient of the 2010 ISTAT Award.

"The M. C. Gill Corporation is saddened to learn of the passing of Gilbert Speed. Gil was a valued advisor and friend to this corporation for over 25 years. His expertise and advice will be sorely missed."

– Stephen Gill



M.C. GILL CORPORATION EMBRACES ITAR

se·cu·ri·ty \si-'kyur-ə-tē\

The origins of the word security date back to the 1400s' late Middle English *securtye*, *securite e*); Latin *sēcūrītās*.¹ Merriam Webster's dictionary defines security as:

- the state of being protected or safe from harm
- things done to make people or places safe
- the area in a place (such as an airport) where people are checked to make sure they are not carrying weapons or other illegal materials
- something that secures – protection or measures taken to guard against espionage or sabotage, crime or attack
- an organization or department whose task is security

Security is a word many of us rarely thought about for much of our lives, but during the last two decades the increase in international commerce combined with globally felt criminal acts have sadly become a normal part of our everyday reality.

That reality has significantly changed the way people travel, conduct businesses and how governments operate.

Webster's definition reflects this new reality and supports the ongoing argument for tighter security and, therefore, increased oversight by governmental agencies.

M.C. Gill Corporation is a U.S. manufacturer that supplies materials worldwide to private as well as military and foreign interests. That positions the company as subject to greater government oversight and security. Most notable is the International Traffic in Arms Regulations, also known as ITAR.

ITAR is a set of United States government regulations that control the export and import of defense-related articles and services on the United States Munitions List (USML). These regulations implement the provisions of the Arms Export Control Act (AECA), and are described in Title 22 (Foreign Relations), Chapter I (Department of State), subchapter M of the Code of Federal Regulations.²

The AECA and ITAR were first enacted in 1976 during the Cold War as a means to establish unilateral arms export controls for Eastern Bloc countries by a multilateral Coordinating Committee. In the late 1990, the U.S. Department of State became involved when it took over export regulations (or controls) for satellites.

Export controls have been in existence since ancient times. Export controls are government mandates that ensure employees and/or U.S. companies comply with regulations that restrict the export of goods, technology and related technical information to foreign nationals and foreign countries. The controls help to limit illicit activities, prevent terrorism and provide economic protections. After 9/11, these controls have largely been touted as “anti-terrorism” tools.

ITAR regulations stipulate that providing access to materials or information related to defense or military technologies will be limited to U.S. Persons only. U.S. Persons are defined as U.S. citizens, permanent residents (not employed by a foreign company, government or agency), political asylee or a business entity (corporation or group that is incorporated) operating in the United States.

All U.S. manufacturers, exporters and brokers of defense-related services must register with the Department of State. Registration is a precondition for the issuance of a license or approval to export goods outside the United States.

The Department of State is the only agency that can provide a special exemption to non-U.S. Persons, while other governmental agencies provide supporting roles in the enforcement and implementation of these regulations.



The Department of State Directorate of Defense Trade Controls (DDTC) interprets and enforces ITAR. Its goal is to safeguard U.S. national security and further U.S. foreign policy objectives



The Export Administration Regulations (Code of Federal Regulations Title 15 chapter VII, subchapter C) are enforced and interpreted by the Bureau of Industry and Security in the Commerce Department



Physical enforcement of import and export laws at border crossings is performed by Customs and Border Protection, an agency of the Department of Homeland Security

¹ Security, www.dictionary.com, November 11, 2013.

² Wikipedia.com/ITAR

ITAR also seeks to prevent re-export of items deemed sensitive to non-authorized countries, foreign persons or companies. For example, it would be unlawful for a U.S. company to sell certain materials, technologies, equipment, software or services to terrorist-supporting and embargoed countries such as Cuba, Iran, North Korea, Libya, Sudan, and Syria. This includes third-party agreements where something is sold to a “middle-man” who would then sell to the embargoed country.

Violation of ITAR regulations can result in severe penalties that serve as a strong deterrent to future breaches. Violators are subject to both civil and criminal actions and the loss of export privileges.

Obviously, compliance with ITAR regulations is a critical part of business to M.C. Gill Corporation. An in-depth study of the regulations was initiated, senior-level management became involved and an independent consultant was hired to help oversee an ITAR compliance program for M.C. Gill Corporation and its subsidiaries (Castle Industries of California- Ontario, California, Alcore, Inc- Edgewood, Maryland).

The goal is to achieve ITAR/EAR compliance while minimizing impact to our customers both domestically and abroad. The plan is rigorous and focuses on our facilities, procedures, employee interactions and potential exposures.

The plan includes:

ITAR GENERAL FACILITY COMPLIANCE UPDATES:

- Additional security gates
- Secure card reader system
- New lobby/visitor tracking system
- Existing entry key management/controls procedures
- ITAR order quarantine zone
- ITAR plant signage
- ITAR laptop and cell phone controls



While it is tempting to sometimes bend rules, responsible, future-thinking companies will give increased security the serious attention it deserves. In our post 9/11 world, it's not an option but imperative to protect our products, processes, intelligence and personnel so we can all enjoy safe and productive commercial success.



ITAR COMPLIANCE DOCUMENT UPDATES:

- All work order forms
- Shipping instructions
- Recordkeeping and Disposal Procedures
- Employee Master Compliance Manual
- Export Compliance Policy for all employees
- ITAR compliance letter for distributors and agents
- Visitor Control Procedures
- Plant Tour Notification forms
- Employee Overview training modules
- EAR and ITAR classification matrix
- Contract reviews
- ITAR Material Purpose Questionnaire
- End-Use/End-User Statement
- Supplier Evaluation and Rating System
- Purchasing/Purchased Materials Policy

Coming soon...

In a future issue we will visit some exciting changes and improvements to our Quality Systems corporate-wide. Meet our Quality Department personnel and learn about how they implement and ensure world-class quality practices and procedures.

THE M.C. GILL GROUP OF COMPANIES



M.C. GILL CORPORATION

4056 Easy Street, El Monte, California 91731

phone: 626 443-4022 fax: 626 350-5880

email: info@mcgillcorp.com



Alcore, Inc.
Lakeside Business Park,
1502 Quarry Drive
Edgewood, Maryland
21040 USA
phone: 410 676-7100
fax: 410 676-7050
email: sales@alcore.com
Alcore Overnight
Expedited Delivery
email: overnight@alcore.com
Alcore does not sell sandwich
panels. Contact M.C. Gill for
these products.



Alcore Brigantine, Inc.
Route de l'Aviation
7, allée Etchecopar
64600 Anglet France
phone/téléphone:
+33 (0) 5 59 41 25 25
fax/télécopie:
+33 (0) 5 59 41 25 00
email: sales@alcorebrigantine.fr



M.C. Gill Corporation Europe Ltd.
23 Enterprise Road,
Balloo Industrial Estate South
Bangor Co-Down
BT19 7TA, N. Ireland
phone: +44 (0) 2891 470073
fax: +44 (0) 2891 478247
email: sales@insoleq.co.uk



Castle Industries, Inc.
of California
601 South Dupont Avenue
Ontario, CA 91761-1502 USA
phone: 909 390-0899
fax: 909 390-0898
email: info@castleindustries.net

www.mcgillcorp.com

© 2014 M.C. Gill Corporation. All Rights Reserved. M.C. Gill, the M.C. Gill logo, Insoleq, Gillfab composite, Gillcore, Gilliner, Gillite, Alcore, Alcore Overnight, Alcore Brigantine, the Alcore logo, the Alcore Brigantine logo, PAA-CORE, the Insoleq logo, the Castle logo and The Doorway are trademarks of M.C. Gill Corporation. The M.C. Gill "Honeycomb Bee" character is a trademark character of the M.C. Gill Corporation. Nomex, Korex and Kevlar are trademarks of Dupont.



THE DOORWAY IS PRINTED ON 10% POST-CONSUMER RECYCLED PAPER AND SHOULD BE RECYCLED

THE FUNNY SIDE

Rubber bands last longer when refrigerated.

Peanuts are one of the ingredients in dynamite.

There are 293 ways to make change for a dollar.

The average person's left hand does 56% of the typing.

A shark is the only marine animal that can blink with both eyes.

There are more chickens than people in the world.

The longest one-syllable word in the English language is "screeched."

All of the clocks in the movie *Pulp Fiction* are stuck on 4:20.

No word in the English language rhymes with month, orange, silver or purple.

"Dreamt" is the only English word that ends in the letters "mt."

The average person who drives a car or rides the bus spends about three months of their life at a red light.

All 50 states are listed across the top of the Lincoln Memorial on the back of the \$5 bill.

Almonds are a member of the peach family.

Winston Churchill was born in a ladies' room during a dance.

Maine is the only state whose name is just one syllable.

There are only four words in the English language which end in "dous": tremendous, horrendous, stupendous, and hazardous.

Los Angeles' full name is "El Pueblo de Nuestra Senora la Reina de Los Angeles de Porciuncula" and can be abbreviated to 3.63% of its size: L.A.

A cat has 32 muscles in each ear.

An ostrich's eye is bigger than its brain.

Tigers have striped skin, not just striped fur.

In most advertisements, including newspapers, the time displayed on a watch is 10:10.



SILLY BEE JOKES

Why do bees have sticky hair?
They use honeycombs.

What kind of insects read the dictionary?
Spelling Bees

What do you call a bee born in May?
A maybee

What kind of bees drop things?
Fumble bees

What kind of bees can't be understood?
Mumble bees

Where do bees go on vacation?
The Beech

What does a bee sit on?
It's bee-hind

Where do bees cook their dinner?
On the bar-Bee-que

Where do bees wait for buses?
At a buzz stop

What kind of bees live in graveyards?
Zombees

Who is the bee's favorite singer?
Sting

Why are bees so healthy?
They take vitamin bee