

DANGEROUS GOODS REPORT

ISSUE

11

SEPTEMBER 2019

INSIGHTS ON HAZMAT ISSUES

GET IT TOMORROW!

How top DG pros keep e-commerce
shippers compliant **PAGE 4**

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LABELMASTER®

SOFTWARE PRODUCTS SERVICES

Welcome to the 11th issue of the *Dangerous Goods Report*

Today's "I want it now" e-commerce consumer has forced every supply chain organization to rethink and re-engineer how they do business. How do Dangerous Goods professionals ensure compliance in the new environment?

That's the question we answer in this issue's cover story, which examines the challenges of e-commerce hazmat compliance and the solutions employed by leading organizations. Other stories introduce a new line of labels, marks and placards for extreme conditions, take a closer look at lithium battery packaging testing, and reveal some key findings of the 2019 Global DG Confidence Outlook.

As always, we at Labelmaster are here to help you make sense of the ever-changing hazmat transport landscape. We hope you find the information and solutions in the *Dangerous Goods Report* to be useful, and we welcome any questions.



Alan Schoen

President of Labelmaster

ONLINE RESOURCES



GET CONNECTED

For more information on handling lithium batteries throughout your DG supply chain, visit labelmaster.com/lithium-battery-shipping.



STAY INFORMED

The world of DG is constantly changing. To find updates on a wide range of DG topics, including lithium battery shipping, visit labelmaster.com/blog.



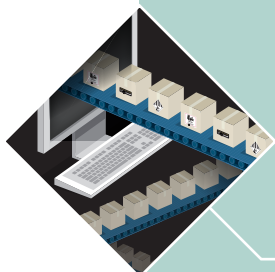
MAKE COMPLIANCE A GROWTH DRIVER

Find out how leading shippers use the total value of compliance (TVC) framework to combine reduced costs with increased revenue to boost earnings, visit labelmaster.com/tvc.



MAINTAIN COMPLIANCE

From advanced shipping software to logistics consulting, Labelmaster Services can help keep your business on the right side of DG regulations. Visit labelmaster.com/services to learn more.



HAZMAT TRANSPORT IN TODAY'S "GET IT TOMORROW" WORLD.

How top DG pros handle compliance and safety in the new e-commerce landscape.

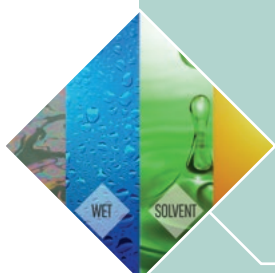
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IS YOUR OPERATION "COMPETITIVELY COMPLIANT"?

The 2019 Global DG Confidence Outlook reveals three types of hazmat groups.

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MOTHER NATURE HAS NO RESPECT FOR YOUR COMPLIANCE RECORD.

That's why we developed a line of labels, marks and placards for extreme conditions.

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DO YOU KNOW HOW YOUR LITHIUM BATTERY PACKAGING WAS TESTED?

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Products and resources to keep your Dangerous Goods shipments compliant and safe.

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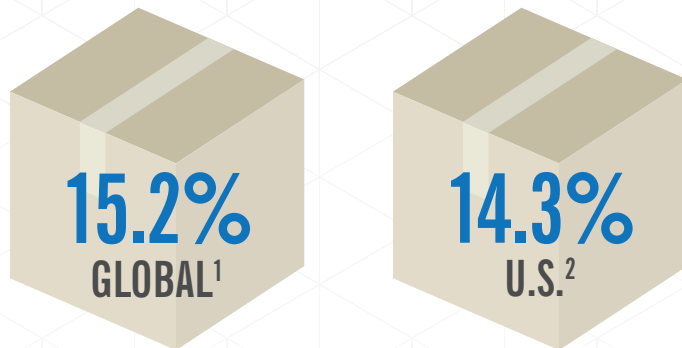
An isometric illustration of a warehouse conveyor belt system. The belt is blue with circular rollers and carries several cardboard boxes. Some boxes are light brown, while others are grey. Several boxes feature hazard labels, including a black and white diamond-shaped label with a flame and a label with the text 'UN3481'. A white computer keyboard is positioned on the left side of the belt. The background is a light teal color with a white grid pattern.

HAZMAT TRANSPORT IN TODAY'S “GET IT TOMORROW” WORLD

HOW TOP DG PROS KEEP
E-COMMERCE SHIPPERS COMPLIANT

E-commerce has reshaped the retail supply chain over the last 10 years, and its impact likely will continue expanding. With double-digit growth year after year, e-commerce now represents more than 15% of global retail sales.

E-COMMERCE AS A PERCENTAGE OF RETAIL SALES:



Retailers and their supply chain partners are adapting to the new e-commerce landscape, but **Dangerous Goods compliance and safety are ongoing challenges.**

Companies new to e-commerce sometimes don't even know they're shipping hazmat. More established shippers often struggle to maintain best practices for compliance and efficiency in a fast-changing world.

Here's a look at the challenges e-commerce shippers face, and how top Dangerous Goods pros help them keep shipments safe, compliant, affordable and fast.

DECENTRALIZED OMNICHANNEL SHIPMENTS

If you're an e-commerce customer—and who isn't these days?—you have expectations that would have been unthinkable a generation ago.

You know exactly what you want, and you want it tomorrow. If not sooner.

To meet those expectations, many e-commerce shippers have abandoned the traditional distribution center model for a decentralized omnichannel approach. **Shipments can originate from almost anywhere and can travel by any modes necessary.**

That's great if you're shipping candy bars or compact discs—but what if those shipments contain Dangerous Goods? Without a centralized distribution center, who has the knowledge and authority to make sure each shipment is compliant?

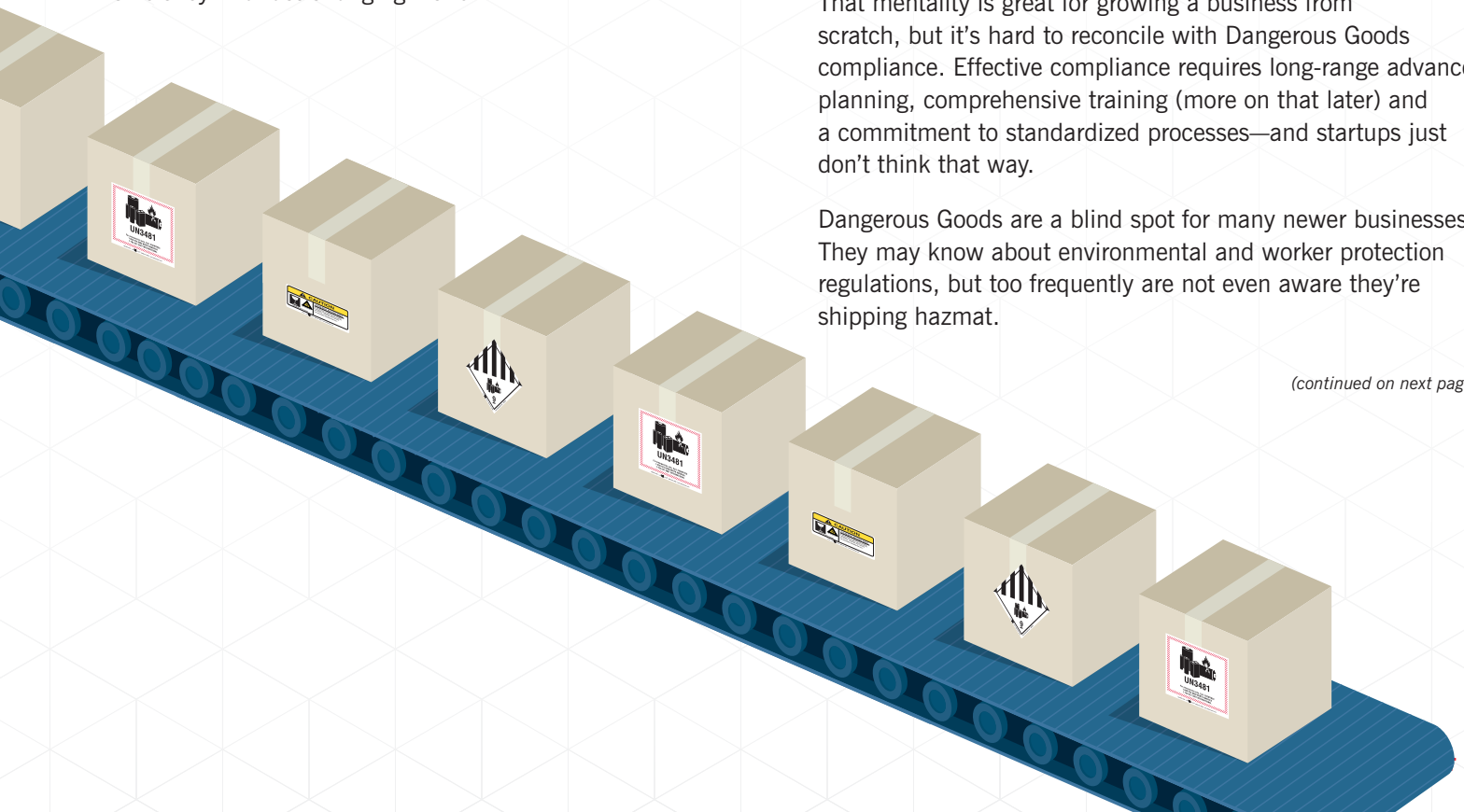
THE STARTUP MENTALITY

Many newer e-commerce shippers are smaller organizations—even individuals—with a scrappy, agile approach to business. They change product specifications frequently and charge into new markets with abandon.

That mentality is great for growing a business from scratch, but it's hard to reconcile with Dangerous Goods compliance. Effective compliance requires long-range advance planning, comprehensive training (more on that later) and a commitment to standardized processes—and startups just don't think that way.

Dangerous Goods are a blind spot for many newer businesses. They may know about environmental and worker protection regulations, but too frequently are not even aware they're shipping hazmat.

(continued on next page)



REGULATIONS FROM ANOTHER ERA

The fact is, many regulations were written before e-commerce even existed.

We know how hard people at regulatory agencies work and how carefully they try to balance business considerations with public safety. **But regulations evolve like an aircraft carrier changing direction, while e-commerce zips around like a speedboat.**

There is no excuse for non-compliance, but compliance can be even more difficult when the rules don't align with the business model.

MANY UNHAPPY RETURNS

Along with overnight delivery, online shoppers expect hassle-free, no-cost returns. In fact, **e-commerce purchases get returned more than three times as often as brick-and-mortar purchases.**³

Returns of any merchandise can be complicated, but when the merchandise is Dangerous Goods, the complication goes exponential. In many cases, a completely untrained consumer must be trusted to compliantly ship something that's fully regulated hazmat. What could go wrong?



MEETING THE DG CHALLENGES OF E-COMMERCE

Many e-commerce companies manage to maintain excellent hazmat compliance along with profitable efficiency. How do they do it?

Here are some strategies and tactics shared by Labelmaster experts and top supply chain organizations.

BLENDED, CUSTOMIZED TRAINING

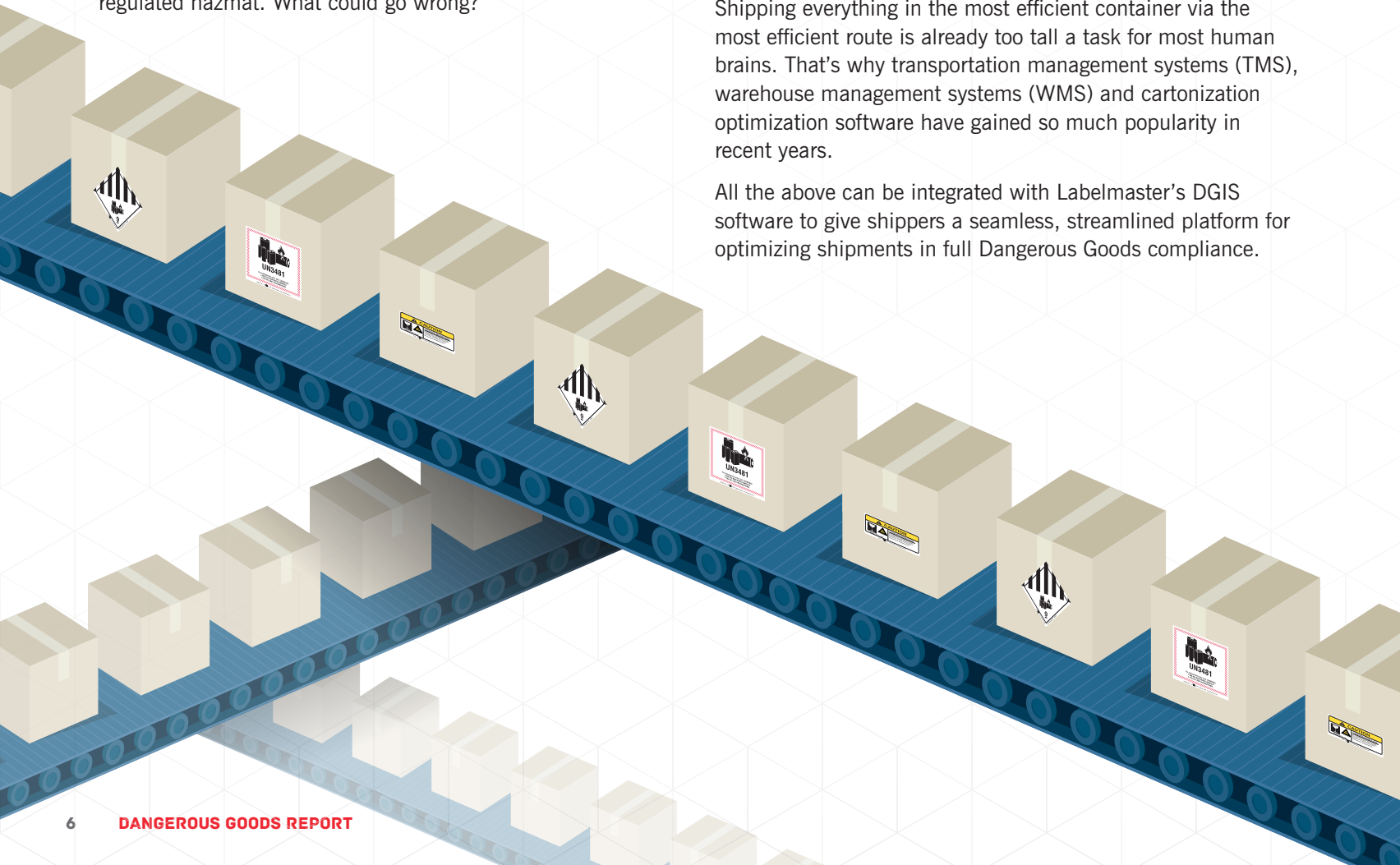
Labelmaster Senior Manager Jim Shimko says, "These companies sometimes have high turnover, so they need training programs that teach them safety and the regs they need to know to do their jobs—and eliminate the noise. The less time away from work, the better."

A blend of convenient online courses and tailored onsite classroom training can be the most cost-effective way to ensure compliance up and down the operation. Smart shippers even train customer service representatives who never handle hazmat, because those reps can then help untrained consumers send their return shipments compliantly.

TECHNOLOGY FOR OPTIMIZED SHIPPING

Shipping everything in the most efficient container via the most efficient route is already too tall a task for most human brains. That's why transportation management systems (TMS), warehouse management systems (WMS) and cartonization optimization software have gained so much popularity in recent years.

All the above can be integrated with Labelmaster's DGIS software to give shippers a seamless, streamlined platform for optimizing shipments in full Dangerous Goods compliance.



UNEXPECTED CHANNELS

Can you ship lithium batteries through the U.S. Mail? Many e-commerce retailers don't realize that's an option, but **most major carriers and many third-party logistics companies already save significant money by using the U.S. Postal Service for final-mile delivery.**

Of course, the USPS has its own set of hazmat regulations—known as Publication 52—and sometimes they're in direct conflict with PHMSA regulations. We never said this would be easy.

WORKING THE SYSTEM

The regulatory system allows flexibility and offers options for shippers who know the regulations. **"You need to understand and find exceptions you can apply,"** advises Shimko. "Sometimes shippers don't even know they can ship their goods as excepted quantities or limited quantities without having to buy more expensive UN packaging."

Securing a special permit can also be a game changer. As an example, Shimko points to a retailer that recently got a permit to transport packages with smaller limited quantity markings.

ORGANIZATION-WIDE BUY-IN

In spring 2019, Shimko and a lawyer co-led a webinar that gave in-house lawyers a 101-level introduction to the world of Dangerous Goods shipping. They recommend a proactive approach—where a company's in-house legal team is part of the hazmat decision-making operation—over simply reacting when and if there's an incident.

A proactive, inclusive approach makes compliance part of the conversation just like speed, cost and other considerations—from product development to sales, and all the way up to the C-suite.



A COMPETITIVE ADVANTAGE FOR E-COMMERCE

E-commerce has created strong customer expectations for high-speed, low-cost delivery. Multiply those expectations by billions of shipments a year, and you can see why organizations throughout the supply chain have had to rethink, reorganize and rebuild their processes from A to Z.

Add the complexity of Dangerous Goods regulations, and those challenges get truly colossal. That's why **any e-commerce organization that maintains a high level of compliance without sacrificing efficiency can truly make compliance a competitive advantage.**

¹ <https://www.digitalcommerce360.com/article/global-ecommerce-sales/>

² <https://www.digitalcommerce360.com/article/us-ecommerce-sales/>

³ <https://www.invespcro.com/blog/ecommerce-product-return-rate-statistics/>

Is your company “Competitively Compliant”?

**HIGHLIGHTS OF THE FOURTH ANNUAL
GLOBAL DANGEROUS GOODS CONFIDENCE OUTLOOK**



Everyone in the Dangerous Goods business knows some companies do the bare minimum to stay compliant, while others leverage superior compliance into a distinct competitive advantage.

Why is that the case? And how can DG pros improve overall compliance confidence across the global supply chain?

Our latest Global DG Confidence Outlook offers some answers.

With responses from 432 DG pros based all over the globe, this survey—co-sponsored by HCB and IATA—is the first ever to define and explore three broad groups of the DG galaxy.

Statistics revealed by the survey defined three groups of companies, each based on how DG pros perceived their companies' views on hazmat operations. Each group has unique attitudes about confidence, resource availability, technology effectiveness, training and other issues.

WHICH TYPE OF ORGANIZATION ARE YOU IN?



BASICALLY COMPLIANT

Companies in the Basically Compliant group view DG management as simply a regulatory mandate.



SAFELY COMPLIANT

Companies in the Safely Compliant group have a strong commitment to overall safety in which compliance efforts go beyond regulatory requirements.

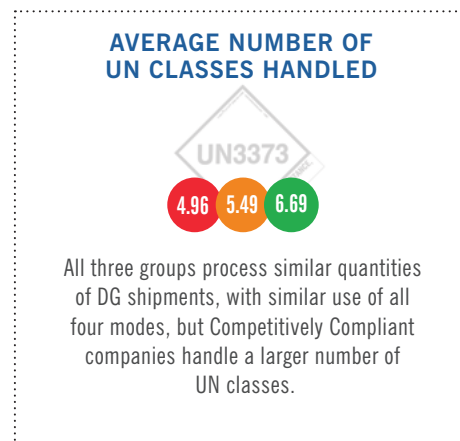
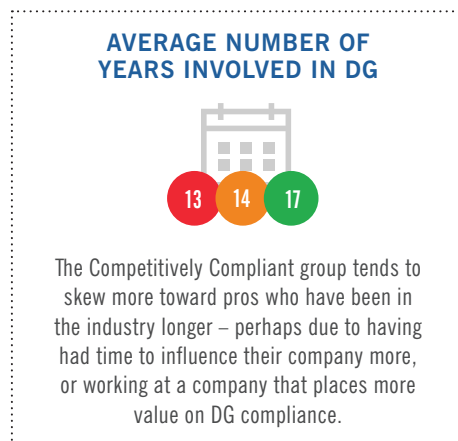
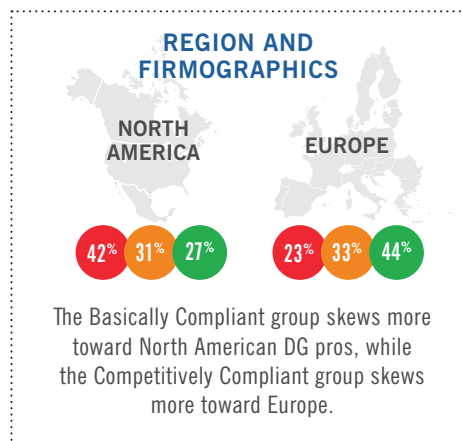


COMPETITIVELY COMPLIANT

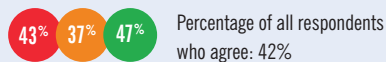
Companies in the Competitively Compliant group view DG compliance as a competitive advantage.

FACTS ABOUT THE THREE GROUPS

While you can find companies in all three groups everywhere, and many companies have the characteristics of more than one group, we did find some interesting trends:

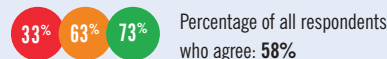


Carelessness with which carriers handle/transport DG is a significant problem for my business.



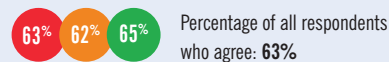
OVERALL, 4 OUT OF 10 DG PROS believe carrier carelessness places an undue compliance burden on the supply chain... with the Competitively Compliant group feeling more passionate than the Safely Compliant group.

DG professional certifications are viewed as valuable credentials by leaders in my company.



MORE THAN HALF THE RESPONDENTS say they value certifications, but the Competitively Compliant group does so at more than twice the rate of the Basically Compliant.

Hiring and retaining qualified people to work in DG is becoming harder.



HIRING QUALIFIED PEOPLE IS HARD for companies in all three groups, and their attitudes toward compliance seem to make no difference.

BASICALLY COMPLIANT

With a relative lack of DG infrastructure and resources, the DG pros who work at these companies lack confidence and find compliance more challenging.

Greatest challenges:

1. Company leadership not aware of the risk if something goes wrong
2. Budget constraints
3. Insufficient or ineffective training

If they had additional budget, they would spend it on: More effective training

If your company is in this group, you can focus on: Helping to solve immediate compliance problems to gain confidence; beginning to raise awareness with senior leadership of the value of compliance

SAFELY COMPLIANT

The DG pros who work at these companies are confident in their ability to manage DG compliantly, but they're often uncertain about the future. Their companies' investment in DG infrastructure and technology is current within the industry but needs updating to address future needs.

Greatest challenges:

1. Lack of technology
2. Budget constraints
3. Lack of access to resources, information and guidance required to keep up with changing regulations

If they had additional budget, they would spend it on: Technology for better supply chain efficiency

If your company is in this group, you can focus on: Building on the organization's safety mindset to define and prepare for future compliance needs

COMPETITIVELY COMPLIANT

The DG pros who work at these companies are highly confident in their ability to manage DG compliantly, because their companies' DG investments exceed the industry average.

Greatest challenges:

1. Lack of access to resources, information and guidance required to keep up with changing regulations
2. Lack of technology
3. Budget constraints

If they had additional budget, they would spend it on: Technology for better supply chain efficiency

If your company is in this group, you can focus on: Gaining additional business value by further integrating compliance throughout your organization and with supply chain partners

To learn more about these groups, along with checklists and resources for improvement, download the complete survey results at labelmaster.com/dg-confidence-outlook

MOTHER NATURE HAS NO RESPECT FOR YOUR COMPLIANCE RECORD.

COLD

OILY

WET

SOLVENT

UV

5 situations where you might need “extreme” labels, marks and placards.

Maybe you’ve had a shipment returned because a mark fell off.

Maybe you’ve had to re-placard a drum because the old placard faded.

Or maybe you’re just tired of cleaning drums before you can apply safety labels.

Standard Dangerous Goods labels, marks and placards can endure most normal shipping conditions without fading, peeling or losing adherence. But, explains Labelmaster’s Jill Resendiz, Product Manager of Labels and Placards, “Mother Nature has no respect for your Dangerous Goods compliance record, and some conditions are too harsh for standard labels.”

From bone-chilling Montana highways to sweltering Texas warehouses, your shipments may sometimes face conditions that are anything but normal.

What are “extreme” labels, marks and placards?

Resendiz describes five harsh conditions for which Labelmaster has developed a line of “extreme” labels, marks and placards—where standard products might fall short:

COLD ENVIRONMENTS

Polar blizzards? Industrial freezers? No problem! With material designed for cryogenic laboratories, these labels and placards adhere down to -320°F. The edges resist lifting even with repeated changes in the surrounding temperature.



NOT FOR HAZMAT ONLY!

Because we recognize that your operation may have documentation adherence needs (i.e., information that sticks to stuff) beyond the world of hazmat transport, **we can create customized labels or placards for virtually any use under any conditions—for Dangerous Goods and beyond.**

As an example, Resendiz points to a carrier currently evaluating “Cold Environment” and “Wet Surface” labels for a contract with a dessert manufacturer.



A few more potential examples:

- Cold labels for laboratories and cryogenics facilities
- “Oily Surfaces” safety and hazard communication labels
- Wet labels compliant with FDA Indirect regulation
- UV-resistant labels and placards for BS5609 Certified Section Two, Marine Immersion

Need solutions for your most challenging conditions? **Call Labelmaster at 800.621.5808.**

For a closer look at our new “extreme” labels, placards and marks, **visit labelmaster.com/extreme-conditions.**



OILY SURFACES

Resendiz says, “When there’s residue from filling your drums, if you don’t really clean them, most labels won’t stick. And who’s got time for that?” The adhesive backing on these labels and placards absorbs oil, so it adheres directly to lubricated surfaces—textured or smooth.



WET SURFACES

“When it’s hot and humid, if your warehouse isn’t climate controlled, ordinary labels will keep falling off,” says Resendiz. “But ‘extreme’ labels have a high-tack rubber-based adhesive that keeps them adhered.” They also stay stuck to low- and high-energy substrates and can be applied from 10°F to 150°F.



SOLVENT EXPOSURE

Sprayed, abraded, baked or abused? No worries. These placards and labels stand up to the harshest conditions for extended periods. They offer superior chemical and abrasion resistance while also resisting acids, humidity, high temperatures and UV exposure.



ULTRAVIOLET EXPOSURE

Arizona? Dubai? Bring it on! The topcoat of these labels and placards resists fading and deterioration for up to two years, and offers superior resistance to acids, moisture and solvents from -40°F to 257°F.

See page 19 for our stock selection of labels and placards for extreme conditions.



Do you know how your lithium battery packaging was tested?

WHY SPECIAL PERMITS SHOULD REFLECT REAL WORST-CASE SCENARIOS

When you ship lithium batteries and battery-powered devices, your packaging must be able to mitigate a thermal runaway event. If it fails, you can have a serious (and seriously expensive) incident on your hands.

So how do you know if your package is good enough? It's all in the testing.

SPECIAL PERMITS BASED ON SELF-TESTING

Were you aware that when it issues Special Permits, PHMSA relies on test data self-reported by manufacturers?

"The agency simply doesn't have the resources to conduct tests verifying every data point shared by manufacturers," says Brian Beetz, Labelmaster Manager of Regulatory Affairs and Corporate Responsibility. **"It's up to the manufacturers to make sure their tests reflect real-world performance."**

Because there's no universally recognized standard for these self-reported tests, a box could be in full compliance yet still not provide full mitigation of your thermal runaway event.

How can you know if a particular packaging will protect your specific shipments against a realistic worst-case scenario?

5 QUESTIONS YOU SHOULD ASK ABOUT PACKAGING TESTING

For complete peace of mind, here are five questions Beetz recommends you ask your packaging manufacturer about the thermal runaway testing of your lithium battery packaging:



Were the batteries or cells tested at their maximum chargeable capacity? New batteries can maintain a 100% state-of-charge, while older batteries have lower capacities. Regardless, batteries charged to their fullest capacity pose the highest danger in a thermal runaway incident—and tests should reflect this higher degree of risk.



What was the maximum temperature attained in the packages tested? Labelmaster's Obexion Max packaging, for instance, has mitigated lithium battery fires as hot as 1246°F in test conditions, while the exterior of the box never exceeded the 392°F limit set by its Special Permit.



What actual total watt-hours of the batteries or cells in the package were used in the test? Data submitted for Special Permits covering shipments up to 100 watt-hours do not necessarily have to reflect tests performed with 100 watt-hours of batteries or cells. Some tests use lower wattage.



Were the batteries or devices used in the test similar to the size, quantity and weight of the batteries or devices you ship? Testers can achieve a given level of watt-hours through many combinations of cells or batteries. Tests conducted with the configurations closest to those you actually ship will likely provide the best protection against thermal runaway in one of your shipments.



Has the test simulated the worst-case scenario for the batteries or devices you're shipping? All these factors combine to create a worst-case scenario test of the shipments you actually make, and only a worst-case scenario test can assure that your packaging can handle, well, a worst-case scenario.

FULLY TESTED UNDER THE MOST DANGEROUS CONDITIONS

A thermal runaway event is one of the most unpredictable, most damaging hazards in Dangerous Goods transport.

That's why packaging for lithium batteries and battery devices must be fully tested with the specific batteries they're designed to contain, under the most dangerous conditions in which they'll ever be shipped.

For example, we test Obexion with brand new batteries, at maximum watt-hours, at a full state-of-charge—because you may not actually know how old the batteries in your shipment will be, or what their state-of-charge will be.

Regardless of where your batteries are in their lifecycle or what you're shipping, there's an Obexion package for you. And you can be confident it's been worst-case scenario tested.

Find the Obexion packaging that meets your lithium battery shipping needs at labelmaster.com/Obexion.



IF LITHIUM BATTERIES ARE THE QUESTION, OBEXION IS THE ANSWER.



Shipping lithium batteries and battery-powered devices compliantly can be challenging, time-consuming and complex.

That's why we created Obexion—a complete line of protective packaging that mitigates the risks of lithium battery fires. For any type of lithium battery or device, you'll find a simple, complete and compliant Obexion solution.



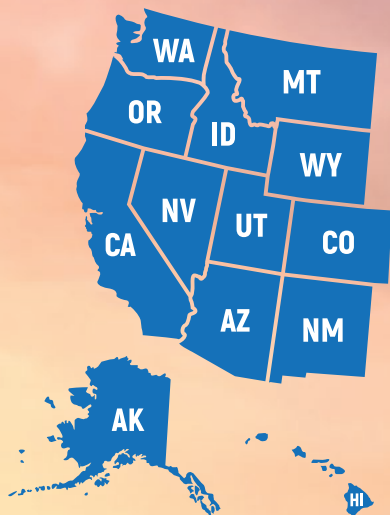
INNOVATIVE PACKAGING TECHNOLOGY

[LABELMASTER.COM/OBEXION](http://labelmaster.com/Obexion)
800.621.5808

EXCLUSIVELY FROM

LABELMASTER®
SOFTWARE PRODUCTS SERVICES

THE BEST DEAL
FOR SHIPPING WEST.



LOWER CHARGES AND FASTER DELIVERY.

Now, get some of our best-selling labels and placards delivered via ground to select Western states within 24 to 48 hours, with great prices and lower shipping charges.

Call 800.621.5808 or visit
labelmaster.com/ship-west
to learn more.

Are you a **DG** genius?

HAVE FUN WITH THESE DANGEROUS

GAME #1:

Unscramble Me!

Rearrange the letters in the phrases below to spell out common Dangerous Goods terminology. Don't let the spacing fool you—the solutions may be spaced differently (or not at all)!

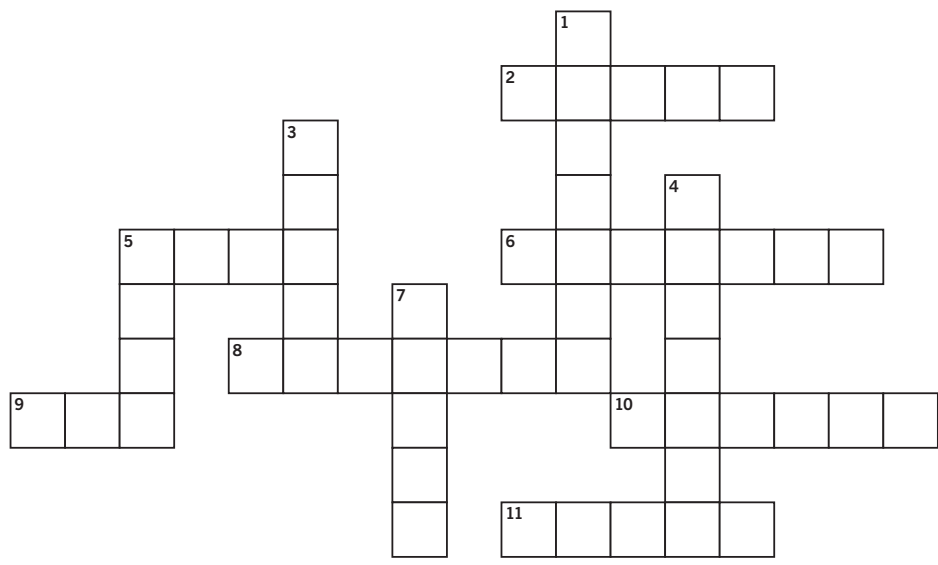
1. **DO ME** _____
2. **HEMP TINS** _____
3. **ANT IN RIG** _____
4. **PICK A GANG** _____
5. **COMIC PANEL** _____
6. **PAUNCHY LIPS** _____
7. **ROUTINE SLAG** _____
8. **CZAR HAD LASS** _____
9. **TIRE EMITS HALIBUTS** _____
10. **LUNATICS IN RICOCHET ACTIONS** _____

(See page 19 for the answers)



GOODS-THEMED GAMES!

GAME #2:
DG Crossword



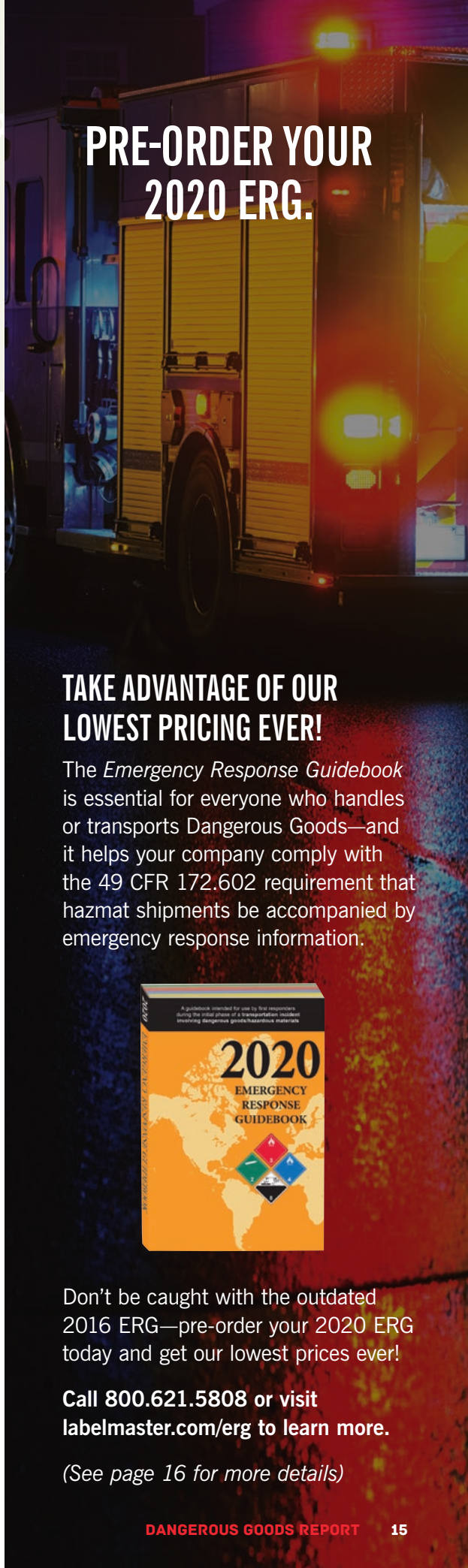
ACROSS:

- 2 Wahlberg, Twain and lithium battery
- 5 This regulatory body was founded in Havana
- 6 The 3rd element, or a song by Nirvana
- 8 A runaway that's hard to control
- 9 Get a new one every 4 years
- 10 Don't call them stickers
- 11 The agency that oversees PHMSA

DOWN:

- 1 One essential shipping document
- 3 The point where Class 3 can ignite
- 4 Where the Dangerous Goods Symposium is held
- 5 The code for shipping hazmat by sea
- 7 Certain containers, or what Charlie Watts plays

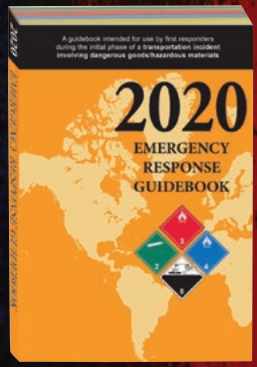
(See page 19 for the answers)



**PRE-ORDER YOUR
2020 ERG.**

**TAKE ADVANTAGE OF OUR
LOWEST PRICING EVER!**

The *Emergency Response Guidebook* is essential for everyone who handles or transports Dangerous Goods—and it helps your company comply with the 49 CFR 172.602 requirement that hazmat shipments be accompanied by emergency response information.



Don't be caught with the outdated 2016 ERG—pre-order your 2020 ERG today and get our lowest prices ever!

**Call 800.621.5808 or visit
labelmaster.com/erg to learn more.**

(See page 16 for more details)

Get prepared for 2020! Order the regulatory publications you'll need to stay compliant.

IATA DGR 61st Edition

Available in a variety of formats to fit your individual needs, these platforms all provide easy access to the latest regulations when and where you need them – from your office, the warehouse or in the field.

The IATA DGR is available in standard print and digital formats. Digital formats include software for Windows computers, floating licenses for Windows computers and the DGR Mobile version. All digital DGR formats auto-update to keep your eDGR current and up to date!

The Windows version offers the DGR in an easy-to-use desktop application with more advanced features. The Mobile version is an e-Book that can be used on any platform on a computer, tablet or phone in a browser or in an app. No need to have an internet connection to access the regulations.

Item#	Description
IATA0134	English Standard Bound Book
IATA0135	English Spiral Bound Book
IATA0138	English E-Book Download for Windows
IATA0161	English Mobile Multi-Platform Version for Computer, Tablet, and Phone
IATA0162	English Floating License for Windows

Visit labelmaster.com/iata to learn more and view the full selection of IATA publications.

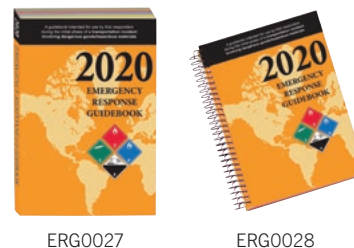


2020 Emergency Response Guidebook

The ERG is the ideal guide to help when responding to transportation emergencies involving hazardous materials. It is a must-have for everyone who handles and transports Dangerous Goods and hazmat. This guide helps your company comply with the DOT 49 CFR 172.602 requirement that hazmat shipments be accompanied with emergency response information. The Emergency Response Guidebook is updated every four years.

Item#	Description
ERG0029	Pocket Size, Standard Bound
ERG0030	Pocket Size, Spiral Bound
ERG0027	Full Size, Standard Bound
ERG0028	Full Size, Spiral Bound

Pre-Order Your 2020 Emergency Response Guidebook Now to Secure Our Lowest Pricing Ever! Anticipated to ship in spring 2020.



Early 49 CFR

The Early 49 CFR has the same formatted information as the government release Parts 100-185 but includes additional features that make it easier to find information. A Labelmaster exclusive, it features a 4-digit number cross-reference table, an easy-to-read Hazardous Materials Table, a detailed index to easily find regulations, tabbed sections for easy reference, a "How to Use the CFR" section, color displays of hazmat labels and placards, and much more. Printed about six months prior to the release of the government 49 CFR, this early version is imperative for all hazmat shippers, since it provides the most current regulatory updates, helping to keep you in compliance and on the road. Anticipated to ship in late November.

Item#	Description
EARLY0037	Early 49 CFR, Standard Bound, Revised October 2019
EARLY0038	Early 49 CFR, Spiral Bound, Revised October 2019





LABELMASTER

ONLINE HAZMAT TRAINING

9 STRESS-FREE ONLINE COURSES

We're proud to present **nine essential interactive online training courses.**

General Awareness

- An introduction to hazardous materials/Dangerous Goods
- General packing, labeling, marking and documentation guidelines

PRODUCT NUMBER	QUANTITY PRICE 1-9	QUANTITY PRICE 10+
SHPGA2018	\$99.00	\$75.00

Excepted Lithium Battery Shipping

- Lithium battery awareness
- Identifying excepted batteries
- Relevant regulations
- Packing, marking and labeling

PRODUCT NUMBER	QUANTITY PRICE 1-9	QUANTITY PRICE 10+
SPHEXLB2018	\$129.00	\$100.00

Fully Regulated and Excepted Lithium Battery Shipping

- Lithium batteries and their potential hazards
- Marking, labeling and documentation
- Packaging and package selection
- Safety, emergency response and security awareness

PRODUCT NUMBER	QUANTITY PRICE 1-9	QUANTITY PRICE 10+
SHPLB2018	\$199.00	\$150.00

ADR Ground Shipping

- How the ADR applies in various countries
- Correctly documenting DG shipments
- Packing items in accordance with the ADR
- Safety and security

PRODUCT NUMBER	QUANTITY PRICE 1-9	QUANTITY PRICE 10+
SHPADR	\$325.00	\$275.00

Shipping DG by Air (IATA 60th Edition) for Operations Personnel

- How the DGR applies across various countries and airlines
- Correctly documenting DG shipments
- Packing, marking and labeling
- Safety and security

PRODUCT NUMBER	QUANTITY PRICE 1-9	QUANTITY PRICE 10+
SHPAIOPS60	\$225.00	\$199.00

Shipping DG by Air (IATA 60th Edition) Category 1 Full Shipper Training

- Selection of the proper shipping name and use of the Dangerous Goods List (DGL)
- Package Testing and UN Specification Requirements
- IATA Packing Instructions and packaging selection
- Documentation requirements for air shipments

PRODUCT NUMBER	QUANTITY PRICE 1-9	QUANTITY PRICE 10+
SHPIATACAT160	\$325.00	\$275.00

49 CFR

- General awareness of hazardous materials
- How to pack, mark and label items
- Proper package selection and use
- How to prepare shipping papers

PRODUCT NUMBER	QUANTITY PRICE 1-9	QUANTITY PRICE 10+
SPH492018	\$325.00	\$275.00

Shipping Dangerous Goods by Sea

- Responsibilities of sending dangerous goods by sea
- Documentation according to the IMDG Code
- Packing, marking and labeling according to the IMDG Code
- How the IMDG Code applies in the United States

PRODUCT NUMBER	QUANTITY PRICE 1-9	QUANTITY PRICE 10+
SHPIMO39	\$325.00	\$275.00

Shipping Limited and Excepted Quantities

- Hazardous Materials General Awareness
- Understanding the IATA DGR, ADR, 49 CFR, and IMDG Code
- The advantages of excepted quantity and limited quantity exceptions
- Packing, marking and labeling limited and excepted quantity shipments

PRODUCT NUMBER	QUANTITY PRICE 1-9	QUANTITY PRICE 10+
SHPLTDQTY2018	\$179.00	\$159.00

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BATTERY MARKINGS



LB435-C



LB435C-3090



LB435C-3091



LB435C-3480



LB435C-3481

CHEMTREC® Lithium Battery Marks—Exclusively From Labelmaster®

Safely transport your lithium battery packages with Labelmaster's Lithium Battery Marks preprinted with the CHEMTREC emergency contact information. Available as 120mm x 110mm or 105mm x 74mm markings in paper or PVC-free film, these labels are designed in accordance with the regulations. These handling marks have space to designate the UN number of the lithium battery being shipped as well as a telephone number for additional information required by the regulations. Choose personalized labels and we'll imprint your information for you. Also available preprinted with CHEMTREC emergency contact information and UN numbers 3480, 3481, 3090 and 3091. Only companies registered with CHEMTREC are authorized to use those labels. For more information or to register, visit CHEMTREC.com. These marks were required for use as of January 1, 2019.



LB435



LB435TP

Lithium Battery Marks

Safely transport your lithium battery packages with Labelmaster's Lithium Battery Marks. With the recent changes in lithium battery shipping regulations, as of January 1, 2019, these marks are required on all packages carrying lithium ion or metal batteries. Available as 120mm x 110mm or 105mm x 74mm markings in paper or PVC-free film, these labels are designed in accordance with the regulations. These handling marks have space to designate the UN number of the lithium battery being shipped as well as a telephone number for additional information required by the regulations. The tab version features a 120mm x 110mm marking plus a 20mm tab extension to conveniently add any additional marking requirements to the package. Choose personalized labels and we'll imprint your information for you.

DOT Lithium Ion Battery Markings

Help stay in compliance and ensure the safe transport of your lithium ion battery shipments with these DOT Lithium Ion Battery Markings. Effective March 6, 2019, these labels can help meet the DOT PHMSA Interim Final Rule harmonizing the 49 CFR with the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air.

Item#	Size (W x H)	Material	Personalize	Unit
Preprinted with CHEMTREC Contact Information				
LB435-C	120mm x 110mm	Semi-Gloss Paper	No	Roll of 500
Preprinted with CHEMTREC Contact Information and Personalized with Your UN Number				
LB435P-C	120mm x 110mm	Semi-Gloss Paper	Yes	Roll of 500
SLB435P-C	120mm x 110mm	PVC-Free Film	Yes	Roll of 500
Preprinted with UN Number and CHEMTREC Contact Information				
LB435C-3090	120mm x 110mm	Semi-Gloss Paper	No	Roll of 500
SLB435C-3090	120mm x 110mm	PVC-Free Film	No	Roll of 500
LB735C-3090	105mm x 74mm	Semi-Gloss Paper	No	Roll of 500
SLB735C-3090	105mm x 74mm	PVC-Free Film	No	Roll of 500
LB435C-3091	120mm x 110mm	Semi-Gloss Paper	No	Roll of 500
SLB435C-3091	120mm x 110mm	PVC-Free Film	No	Roll of 500
LB735C-3091	105mm x 74mm	Semi-Gloss Paper	No	Roll of 500
SLB735C-3091	105mm x 74mm	PVC-Free Film	No	Roll of 500
LB435C-3480	120mm x 110mm	Semi-Gloss Paper	No	Roll of 500
SLB435C-3480	120mm x 110mm	PVC-Free Film	No	Roll of 500
LB735C-3480	105mm x 74mm	Semi-Gloss Paper	No	Roll of 500
SLB735C-3480	105mm x 74mm	PVC-Free Film	No	Roll of 500
LB435C-3481	120mm x 110mm	Semi-Gloss Paper	No	Roll of 500
SLB435C-3481	120mm x 110mm	PVC-Free Film	No	Roll of 500
LB735C-3481	105mm x 74mm	Semi-Gloss Paper	No	Roll of 500
SLB735C-3481	105mm x 74mm	PVC-Free Film	No	Roll of 500

Item#	Size (W x H)	Material	Personalize	Unit
Blank				
LB435	120mm x 110mm	Semi-Gloss Paper	No	Roll of 500
LB735	105mm x 74mm	Semi-Gloss Paper	No	Roll of 500
SLB435	120mm x 110mm	PVC-Free Film	No	Roll of 500
SLB735	105mm x 74mm	PVC-Free Film	No	Roll of 500
Blank with Tab				
LB435T	120mm x 110mm	Semi-Gloss Paper	No	Roll of 500
Personalized with Your UN Number and Contact Information				
LB435P	120mm x 110mm	Semi-Gloss Paper	Yes	Roll of 500
LB735P	105mm x 74mm	Semi-Gloss Paper	Yes	Roll of 500
SLB435P	120mm x 110mm	PVC-Free Film	Yes	Roll of 500
SLB735P	105mm x 74mm	PVC-Free Film	Yes	Roll of 500
Personalized with Your UN Number, Contact Information and Additional Tab Information				
LB435TP	120mm x 110mm	Semi-Gloss Paper	Yes	Roll of 500

Item#	Size (W x H)	Material	Unit
L384	4" x 2"	Semi-Gloss Paper	Roll of 500
L384L	6" x 4"	Semi-Gloss Paper	Roll of 500
SL384	4" x 2"	PVC-Free Film	Roll of 500
SL384L	6" x 4"	PVC-Free Film	Roll of 500

**LITHIUM ION BATTERIES -
FORBIDDEN FOR TRANSPORT
ABOARD PASSENGER AIRCRAFT**

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Placards for Oily Surfaces



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Stop wasting time cleaning oily surfaces before you apply placards. The adhesive backing on these labels and placards absorbs oil, so it adheres directly to lubricated surfaces—textured or smooth.



UN3264O8



UN3266O8



UN1263O8

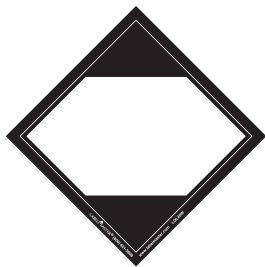
Item#	Description
UN3264O8	Corrosive Placard, UN 3264, Polypropylene for Oily Surfaces, Pack of 25
UN3266O8	Corrosive Placard, UN 3266, Polypropylene for Oily Surfaces, Pack of 25
UN1263O8	Flammable Liquid Placard, UN 1263, Polypropylene for Oily Surfaces, Pack of 25

Labels for Wet Surfaces



DOMINATE THE DAMP.

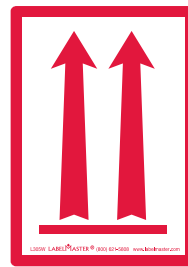
In the kinds of wet, damp and cold conditions where other labels might slink off and hide, a high-tack rubber-based adhesive keeps these adhered. They also stay stuck to low- and high-energy substrates and can be applied from 10°F to 150°F. Useful anywhere.



LQL40W



L701W



L305W



HML6W

Item#	Description
LQL40W	Limited Quantity Label, Blank, 101mm x 101mm, Paper for Wet Applications, Roll of 500
L701W	Environmentally Hazardous Substance, 101mm x 101mm, Paper for Wet Applications, Roll of 500
L305W	Red Arrows Up Air Label, 2 15/16" x 4 1/8", Paper for Wet Applications, Roll of 500
HML6W	Flammable Liquid Label, 4" x 4", Paper for Wet Applications, Roll of 500

Learn more about placards and labels for extreme condition on **pages 10–11**.

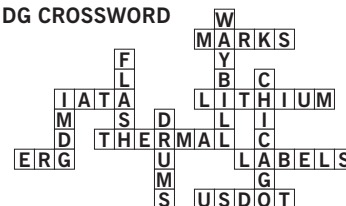
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Puzzle Answers

GAME #1: UNSCRAMBLE ME!

- MODE
- SHIPMENT
- TRAINING
- PACKAGING
- COMPLIANCE
- SUPPLY CHAIN
- REGULATIONS
- HAZARD CLASS
- LITHIUM BATTERIES
- ICAO TECHNICAL INSTRUCTIONS

GAME #2: DG CROSSWORD



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DG SHIPPING
ESSENTIALS!



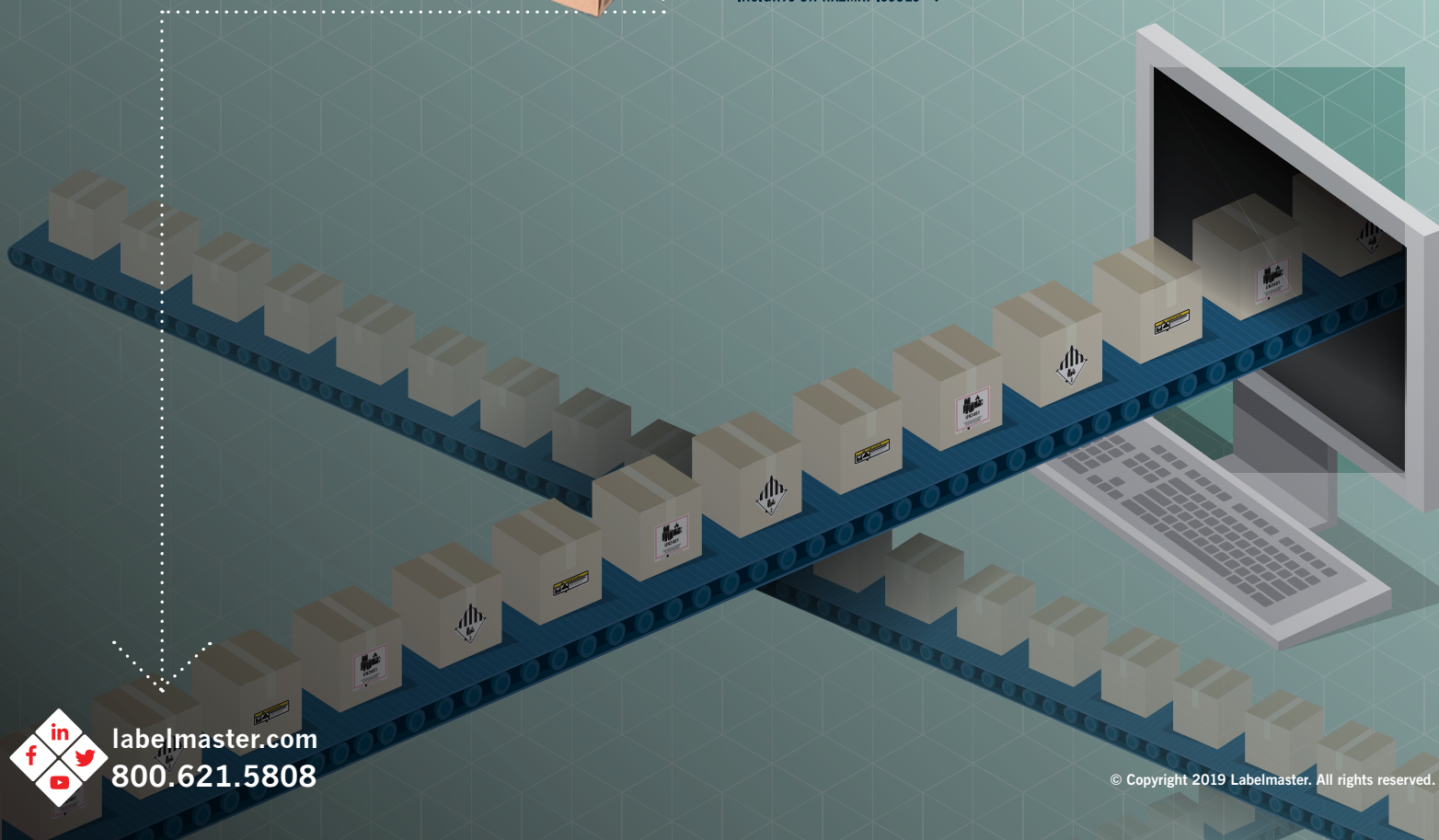
DANGEROUS GOODS REPORT

INSIGHTS ON HAZMAT ISSUES

ISSUE

11

SEPTEMBER 2019



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