



COMPASS Points



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COMPASS Points

ASTM D86-20a

Standard Test Method for Distillation of Petroleum Products and Liquid Fuels at Atmospheric Pressure

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surrounded by an air circulation chamber.

8.2.1 *Groups 1, 2, and 3*—Suitable media for low temperature baths include, but are not limited to, chopped ice and water, refrigerated brine, and refrigerated ethylene glycol.

8.2.2 *Group 4*—Suitable media for ambient and higher bath temperatures include, but are not limited to, cold water, hot water, and heated ethylene glycol.

8.3 Remove any residual liquid in the condenser tube by swabbing with a piece of soft, lint-free cloth attached to a cord or wire.

9. Calibration and Standardization

9.1 *Temperature Measurement System*—Temperature measurement systems using other than the specified mercury-in-glass thermometers shall exhibit the same temperature lag, emergent stem effect, and accuracy as the equivalent mercury-in-glass thermometer. Confirmation of the calibration of these temperature measuring systems shall be made at intervals of not more than six months, and after the system has been replaced or repaired.

9.1.1 The accuracy and the calibration of the electronic circuitry or computer algorithms, or both, shall be verified by

ing devices shall be conducted by distilling toluene in accordance with Group 1 of this test method and comparing the 50 % recovered temperature with that shown in Table 4.

9.1.2.1 If the temperature reading is not within the values shown in Table 4 for the respective apparatus being used (see Note 11 and Table 4), the temperature measurement system shall be considered defective and shall not be used for the test.

Note 10—Toluene is used as a verification fluid for calibration; it will yield almost no information on how well an electronic measurement system simulates the temperature lag of a liquid-in-glass thermometer.

9.1.2.2 Reagent grade toluene and hexadecane (cetane), conforming to the specifications of the Committee on Analytical Reagents of the American Chemical Society,⁸ shall be used.

⁸ Supporting data have been filed at ASTM International Headquarters and may be obtained by requesting Research Report RR-D02-1580. Contact ASTM Customer Service at service@astm.org.

⁹ ACS Reagent Chemicals, Specifications and Procedures for Reagents and Standard-Grade Reference Materials, American Chemical Society, Washington, DC. For suggestions on the testing of reagents not listed by the American Chemical Society, see *Analyst Standards for Laboratory Chemicals*, BDH Ltd., Poole, Dorset, U.K., and the *United States Pharmacopeia and National Formulary*, U.S. Pharmacopoeial Convention, Inc. (USPC), Rockville, MD.

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TABLE 4 True and Min and Max D86 50 % Recovered Boiling Points (°C)^a

		Manual		Automated	
		Distillation conditions min D86 50 % boiling point	Distillation conditions max D86 50 % boiling point	Distillation conditions min D86 50 % boiling point	Distillation conditions max D86 50 % boiling point
Toluene	ASTM true boiling point	Group 1, 2, and 3	Group 1, 2, and 3	Group 1, 2, and 3	Group 1, 2, and 3
		105.9	111.8	108.5	109.7
Hexadecane	ASTM true boiling point	Group 4	Group 4	Group 4	Group 4
		272.2	283.1	277.0	280.0

^a The manual and automated temperatures shown in this table are the values for the 95 % tolerance interval for the 99 % population coverage. The proposed tolerance is approximately 3x sigma. Information on the values in this table can be found in RR-D02-1580.

However, other grades may also be used, provided it is first ascertained that the reagent is of sufficient purity to permit its use without lessening the accuracy of the determination.

Note 11—At 101.3 kPa, toluene is shown in reference manuals as boiling at 110.6 °C when measured using a partial immersion thermom-

10.2 *Groups 1 and 2*—Ensure that the sample is conditioned in accordance with Table 2. Fit a low range thermometer provided with a snug-fitting cork or stopper of silicone rubber, or equivalent polymeric material, tightly into the neck of the sample container and bring the temperature of the sample to the

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9.1 Temperature Measurement System—Temperature measurement systems using other than the specified mercury-in-glass thermometers shall exhibit the same temperature lag, emergent stem effect, and accuracy as the equivalent mercury-in-glass thermometer. C... [Show More](#)

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Description
Be sure that manufacturing and procurement are aligned regarding heat analysis testing.

Overlays/Diffs
Confirmation of systems shall be performed by the first of each month.

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THE STATE OF STANDARDS TODAY

Data is growing at an exponential rate. Our world is expanding - almost exploding - in the volume of information we access and manage. At this stage, it's more important to know where to find the information we need than it is to recite the information. So what happens when that information changes? How do we stay connected to that information?

More than 25% of design, safety and engineering standards are updated annually! That's a lot of new data that engineers need to understand and manage. Science advances, new material trends hit the market, safety measures and guidelines change. With all the new data, there's a mass movement toward engineers having digital access to more granular information in standards.

Compared to the old days of "having to go to the storeroom to find the book" when a standard's source had to be tracked down, working with PDFs was a huge leap forward. But it's not enough.

When copying and pasting standard tables into an external system or document, there's risk for information to get

missed, for the original source to be left out. Sometimes tables don't copy correctly to the manufacturer or laboratory's system. Rekeying data from PDFs is even harder, as it opens up the opportunity for errors with every keystroke. Keeping up with the latest requirements and test methods is time consuming and tedious. And tracking standards back to their sources can be tough.

True digitization is more than just going from paper to PDFs. It requires providing a link to the data in the standard, a link that is system agnostic and provides a clear comparison of an older standard versus a new version. This digitization helps engineers overcome unintended incorporation of out-of-date recommendations, loss of the original source of standards used, accidental deletion of a standard's source and more. Now ASTM has delivered a groundbreaking opportunity to solve this digital dilemma. With Compass Points, you can zero-in on the specific parts of industry standards that are the most important to you and digitally incorporate them into your internal systems.

THE UNSEEN COST OF MAINTAINING STANDARDS

Training inexperienced staff on the use of standards and taking senior people off-task while they handle training	"Knowledge leakage" as experience is not properly passed down from experienced staff down to junior staff or new hires	Using staff to redline manually; practicing version control with a ruler and marker
Opportunities lost through a slowdown in speed and performance within the organization	Potential quality problems (and potential lawsuits) if you don't keep up with the latest safety and quality standards	Poor performance of your products/services, which results in a costly brand



Add Your Specific Standards Requirements Using Compass Points

Sarah is a Design Engineer working on a new type of office chair. She must rethink her design because of disruptions in the supply chain. One of her original moldable materials is no longer available, and she must replace it with a new material. When working from a PDF to note the changes in her design, she must rekey the data, opening up a risk for typos, data errors and other problems. To avoid future mistakes in translation, or other misunderstandings, she can use Compass Points. This premium tool digitally captures her new requirements alongside her standard, making the process easier for her, her colleagues, and her supply chain. Leveraging Compass Points, she is able to expedite knowledge for future users, including inspectors and auditors, to find her specification changes later in the production process.

THANKFULLY, THE WORLD IS MOVING TO DIGITAL STANDARDS AND YOU SHOULD TOO.

READ ON TO FIND OUT WHY.

BENEFITS OF DIGITIZING STANDARDS

SAVE TIME AND EFFORT WHILE STAYING CURRENT

Once engineers, designers, and information managers have moved to digital requirements and other digitized standards data, they can more quickly create new products that are safer and higher quality. Companies can innovate faster and get products to market in a shorter time.



Collaboration is Easier

Because everyone is looking at the same standard in real time, global innovation is easier as well. Multinational companies can integrate design teams no matter where they are located, knowing that everyone is accessing the same version of the data they need to succeed. Additionally, professionals across departments in any company are better able to keep up with changes in standards and stay on top of them for greater compliance success.



Turn Prose into Data

Currently, it's hard to integrate charts and data from prose-based standards into new environments. It's easier for engineers to simply link to those charts and data and see every piece of information they need, when they need it.



Link to Authoritative Sources

Compass Points act as custom bookmarks, that track data in a standard, making it harder for data to become “lost in the wild,” or stored in a company’s internal system without clear knowledge of where it originated. Often, that data storage separates it from the original authoritative source, making it so it is harder to know which standard, which version, and if that standard was updated.



Get Updates When They Matter

With true digitization, product designers and engineers can be notified when a standard is changed so they can compare the versions and make design and production adjustments.



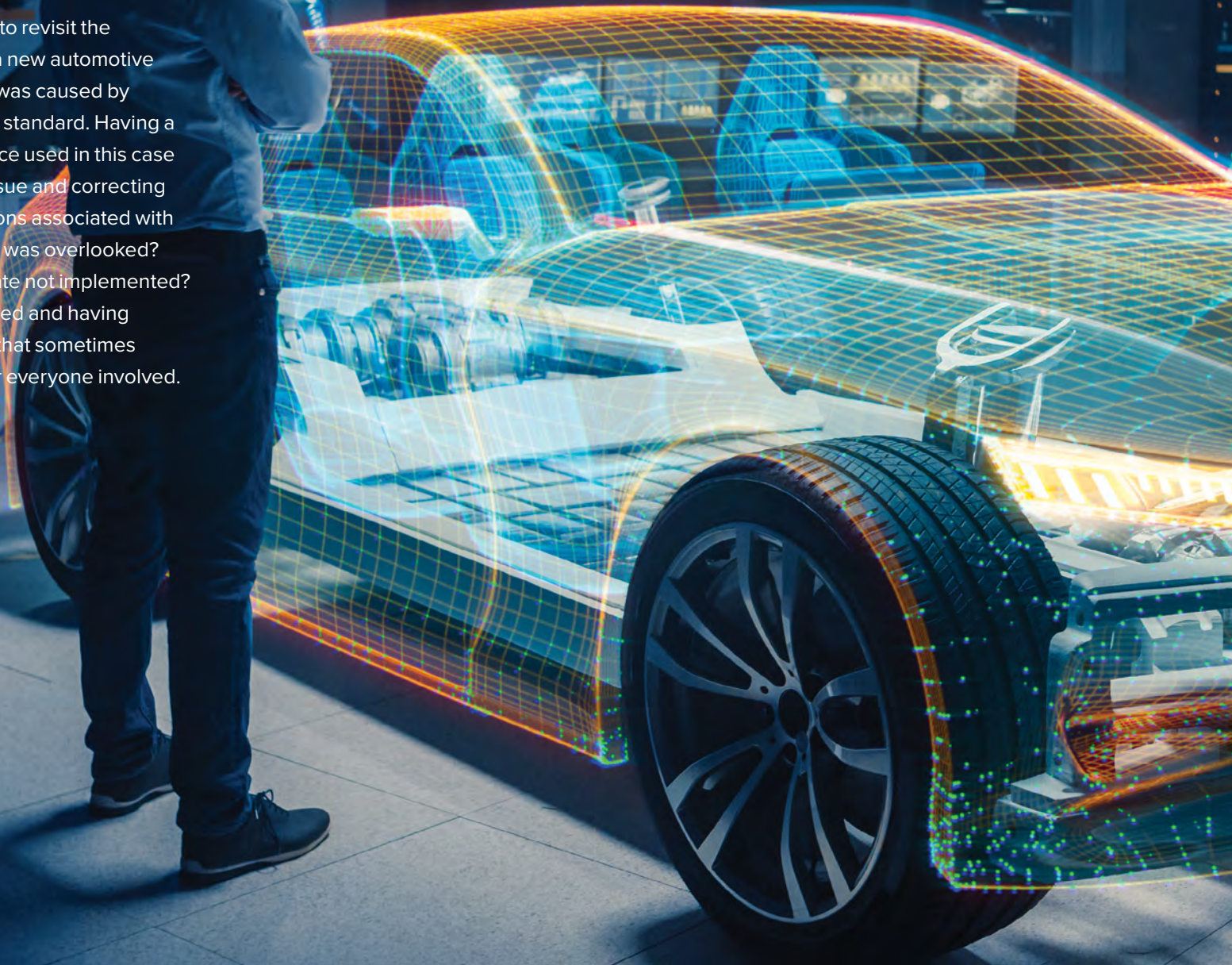
Save Time During Testing and Production

Despite care, problems can crop up during testing and production. Engineers and designers save valuable time, money and even liability when they can quickly link back to the data in a standard.



Turn Back Time with Ease and Accuracy

A car company's engineering group has to revisit the specifications because of an issue with a new automotive feature. They discover that the problem was caused by incorrect measurements pulled from the standard. Having a digital trail back to the authoritative source used in this case makes identifying and addressing the issue and correcting errors much easier. Were there calculations associated with the data? Was there a larger context that was overlooked? Was the standard changed and the update not implemented? All of these questions have to be answered and having custom bookmarks of standards makes that sometimes necessary process simpler and faster for everyone involved.



HOW COMPASS POINTS HELPS SMART USERS

ASTM International, the leader in normative standards, has a library of more than 12,900+ standards, plus books, articles and papers that can be searched in 14 languages. We introduced ASTM Compass® as our first major tool that allowed engineers, auditors and more to search those standards and other materials more easily and quickly. Over the last decade, we have added other important standards from publishers such as AASHTO, API, CGA, and ENs.

The platform has now evolved to include Compass Points, a new feature that enables users to pick and choose exactly what specific portions of standards are important, then integrate them into a workflow and share with others as needed.

“It’s easy to read a standard, hard to apply a standard.”

“Data is growing exponentially in industry. It’s all about how we handle it.”

Who can use Compass Points?

Engineers and designers, lab managers, installation teams, procurement, regulation/compliance managers, and R&D teams benefit from digitized parts of standards, as they all rely on the efficiency of working with accurate data often pulled from normative standards. Compass Points keeps them connected to that data and the authoritative source is clearly identified. Anyone with a subscription to ASTM Compass® can also purchase Compass Points.

“Engineering process needs impactful solutions”

“Engineers need to streamline their data management to prevent turn backs and increase speed to market.”

Always Current and Connected

Receive alerts when your standards are revised. Because Compass Points keep you forever connected to the standard, you'll get a notification when that portion of your standard is revised. Compass Points act as custom bookmarks, keeping you forever connected to those standards. You have the option to attach existing Compass Points to newly published versions of standards.

The unique data ID and URLs make Compass Points truly system agnostic and portable. There's no need to “fit” the content of a standard into allotted space - it's just a link that works universally. Compass Points also works with all standards, from all publishers available on Compass.



Look Back with Greater Clarity

Five years after a child's kitchen playset was put on the market, a toy manufacturer's engineering group has to undertake a lookback for an audit - and they find it much harder to track down the data after all that time. Team members have to find physical paper and PDFs with the requirements they used in designing the playset, which takes hours of research. A digital trail that leads to the data, no matter how far out the look back, would speed up the search and ensure accuracy and context are maintained, even if the original design and product team have left the company or move to other roles. The authoritative source of the data is preserved forever.

COMPASS POINTS BENEFITS

Compass Points allows users to send links to highlighted portions of documents they want reviewed. Teams can see the highlighted text right away and can review immediately or save it to their own instance in Compass to find again, later.

Users can also add data and context to the Compass Point, including naming to connect the Point to internal data, like project names, product numbers, business unit IDs, descriptions and more. Adding that metadata makes it easier to share intent and document the interpretation of a standard, even years later.

Compass Points enables users to set alerts for changes in standards. They can click on the standard and the platform will assist them in updating to the new version. When an update is needed, there's no need to re-enter the requirements. Data corrections are easier too.

The Compass Point URL will always take a user back to the authoritative source for the standards, including any metadata the user added. The Compass Points are kept in perpetuity for every version of the standard used.

Admins can easily access a list of Compass Points made by anyone in the organization. This list view makes it easy to search any information in the Compass Point. Search by standard, date, and user.

The list view also helps auditors and regulators to do their jobs better. When needed, they can see those authoritative sources and updates in seconds - no need to hunt down data and find the changes made to it.

Finally, using Compass Points makes it easier to understand nuances in lab testing methods. Knowing that employees immediately see the important requirements and guidelines makes consistency easier for everyone involved.

CONCLUSION

In an ever-growing and ever-evolving world of data, always having the ability to link back to the authoritative source is critical. Using Compass Points empowers engineers to do their jobs better, faster, and more accurately. To learn more about how Compass Points can help your teams, contact our sales team at **sales@astm.org**



Get Better Turnarounds on Turnover

Mark is a lab manager at a product testing facility that uses a lot of ASTM's testing methods and safety procedures. His lab tends to have fairly high rates of staff turnover, which makes getting new team members up to speed its own digital enterprise. Rather than using posters or other static methods, Mark can use digital methods to explain safety procedures and testing methods to new staff members, and the important measurements and methods are consistently captured in multiple locations.



COMPASS Points

ASTM INTERNATIONAL

Helping our world work better for 125 years

Committed to serving global societal needs, ASTM International positively impacts public health and safety, consumer confidence, and overall quality of life. We integrate consensus standards – developed with our international membership of volunteer technical experts – and innovative services to improve lives...Helping our world work better.

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