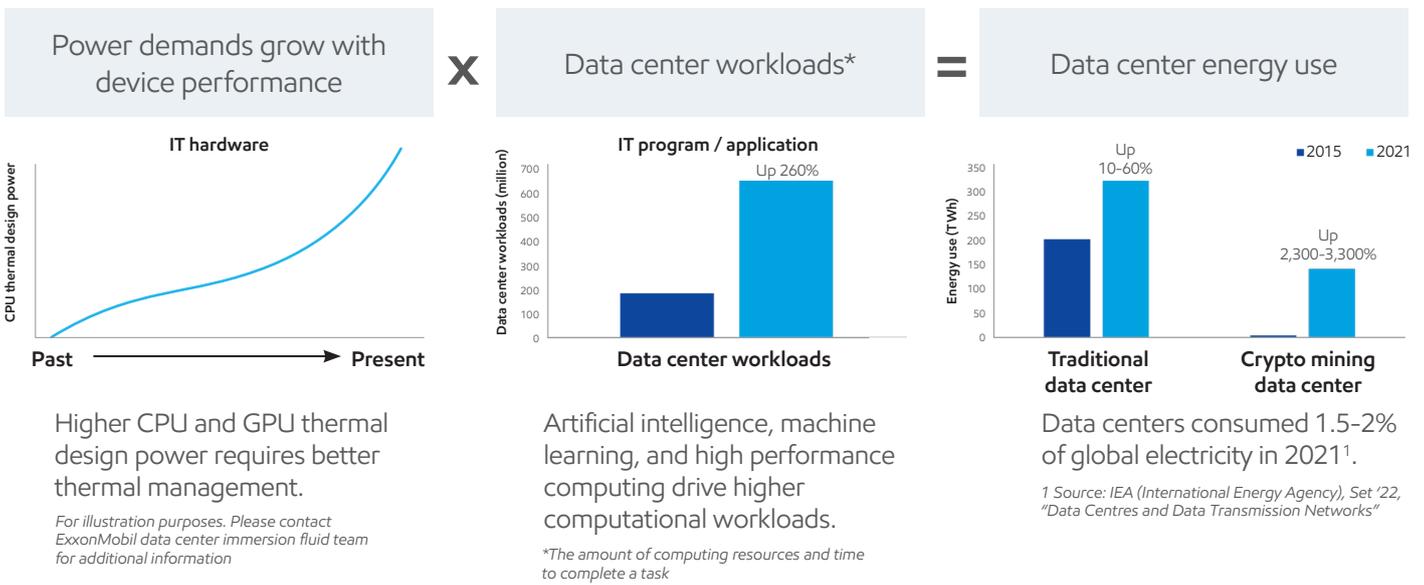




Optimize data center performance with our broad range of data center immersion fluid solutions.

Energy use in data centers is undergoing explosive growth, consuming up to 2% of the global electricity supply in 2021¹. For example, since 2015¹ energy use in traditional data centers has increased up to 60%, while in crypto mining data centers it has risen by up to 3,300%. Continuous improvements in hardware performance are increasing heat generation, and advanced computing techniques, such as artificial intelligence and machine learning, are driving higher computational workloads. In such a dynamic environment, effective thermal management through immersion cooling solutions has never been so important.

The challenge: Managing data center energy demand and growth



ENABLE HIGH TDP PROCESSOR	IMPROVED PERFORMANCE	LOWER COST	SUSTAINABILITY
Effectively remove heat	Increase hardware lifespan ²	Save CAPEX 20-35% ² Save OPEX 40-50% ² Save TCO 30-40% ²	Better EE: pPUE as low as 1.03 ³ PFAS-free fluids Less water consumption ²

TDP - Thermal Design Power

EE - Energy Efficiency
pPUE - Partial Power Usage Effectiveness
PFAS - Per- and Polyfluoroalkyl Substances

1 Source: IEA (International Energy Agency), Set '22, "Data Centres and Data Transmission Networks"
2 Source: OCP Regional Summit 2023
3 Source: ExxonMobil data.

Product gradeslate

Grade	Kinematic Viscosity at 40 °C (cSt) ASTM D445	Flash point (°C) ASTM D92
EM DC 3152/3150/3151	5.0-6.4	149-157
EM DC 3220	19.0	220
EM DC 3235 Super**	14.3	234
EM DC 3250	31.0	246
EM DC 1150	8.6	164
EM DC 1210 (AP)	30.4	225

Typical properties; actual values will vary; not to be construed as specifications

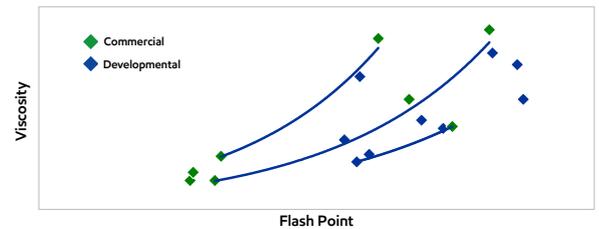
** Super: Step-out balance of viscosity and flash point

Immersion cooling solutions

By effectively removing heat compared to traditional air cooling, immersion cooling can enable thermal management of high TDP processors². Immersion cooling can also help increase hardware lifespan² and lower cost². Superior thermal management can translate to both lower pPUE³ and less water consumption².

Achieving the right balance between heat transfer and flashpoint is essential for optimal server component performance. ExxonMobil's PFAS-free immersion cooling products offer data center OEMs and end-users both high performance and the flexibility to customize thermal management to meet specific needs. A wide range of immersion solutions is available, including immersion cooling tank and chassis cooling.

Broad portfolio



Portfolio of synthetic & non-synthetic fluids enabling customized solution(s)⁴

²Source: OCP Regional Summit 2023

³Source: ExxonMobil data.

⁴Source: Based on ExxonMobil data. Please contact ExxonMobil data center immersion fluid team for additional information

Your source for immersion cooling solutions

ExxonMobil Product Solutions offers a broad portfolio of cooling fluids to meet specific needs. Our fit-for-purpose product options deliver properties that make them highly effective and sustainable thermal management solutions:

- Low viscosity to effectively remove heat from IT equipment
- Higher flashpoint for facility safety
- Excellent compatibility with various metal, plastic and rubber materials for long equipment life
- Exceptional pPUE



Let's work together.

Collaboration is vital for rapid development of innovative immersion cooling solutions. ExxonMobil is an ideal partner, offering:

- Molecular synthesis expertise to enable future thermal fluid development
- Next generation solution delivery
- Working with key partners across the value chain
- Global manufacturing, logistics, commercial and technical support
- A lasting commitment to your success

©2024 ExxonMobil. ExxonMobil, the ExxonMobil logo, the interlocking "X" device and other product or service names used herein are trademarks of ExxonMobil, unless indicated otherwise. This document may not be distributed, displayed, copied or altered without ExxonMobil's prior written authorization. To the extent ExxonMobil authorizes distributing, displaying and/or copying of this document, the user may do so only if the document is unaltered and complete, including all of its headers, footers, disclaimers and other information. You may not copy this document to or reproduce it in whole or in part on a website. ExxonMobil does not guarantee the typical (or other) values. Any data included herein is based upon analysis of representative samples and not the actual product shipped. The information in this document relates only to the named product or materials when not in combination with any other product or materials. We based the information on data believed to be reliable on the date compiled, but we do not represent, warrant, or otherwise guarantee, expressly or impliedly, the merchantability, fitness for a particular purpose, freedom from patent infringement, suitability, accuracy, reliability, or completeness of this information or the products, materials or processes described. The user is solely responsible for all determinations regarding any use of material or product and any process in its territories of interest. We expressly disclaim liability for any loss, damage or injury directly or indirectly suffered or incurred as a result of or related to anyone using or relying on any of the information in this document. This document is not an endorsement of any non-ExxonMobil product or process, and we expressly disclaim any contrary implication. The terms "we," "our," "ExxonMobil Product Solutions" and "ExxonMobil" are each used for convenience, and may include any one or more of ExxonMobil Product Solutions Company, Exxon Mobil Corporation, or any affiliate either directly or indirectly stewarded.

Contact us for more information:
exxonmobilchemical.com/datacenter

ExxonMobil