



ASHRAE TC 3.1—Refrigerants and Secondary Coolants
American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
Las Vegas, Nevada & Virtual
2:30 – 4:30 p.m. PST (5:30 – 7:30 p.m. EST)

Name	Affiliation
Voting Members	
Dennis Dawe	CBRE
Josh Hughes	Chemours
Sarah Kim	Arkema
Valerie Lisi – Research SC	Carrier
Julie Majurin – Chair	AHRI
Mark McLinden	NIST
Alice Riemer (non-quorum)	Danfoss
Rosine Rohatgi	Spauschus
Casey Scruggs – Standards SC	Metalloid
Marc Scancarello	Emerson
Chris Seeton	Koura
Steve Kujak – Programs SC & Webmaster	Trane
Samuel Yana Motta – Vice Chair	ORNL
Non-Voting Members	
Michael Petersen – Handbook SC	Trane

Liaisons & Other:

William Dols - Section 3 Head
CheeSheng Ow - RAC Liaison
Michael Vaughn - ASHRAE Staff Liaison
Eric Granzow - Handbook Liaison
Theresa Weston - Standards Liaison

Virtual Meetings and Conference Log-in Information:

TC 3.1 Meeting – January 31st, 2022, 2:30 – 4:30 p.m. PST (5:30 – 7:30 p.m. EST) Caesars Palace, Milano I-III (P)

Link for Attendees:

<https://ashrae.webex.com/ashrae/j.php?MTID=m67dc5f63bea394cd3b8362ff554c6108>

TC 3 Combined Research Virtual Meeting – January 18th, 2022, 10:00 – 11:00 a.m. PST (1:00 – 2:00 p.m. EST)

Link for Attendees:

<https://ashrae.webex.com/ashrae/j.php?MTID=m91e1509b6b9b945238474a158dcd94d1>

TC 3 Combined Programs Virtual Meeting – January 18th, 2022, 11:00 a.m. – 12:00 p.m. PST (2:00 – 3:00 p.m. EST)

Link for Attendees:

<https://ashrae.webex.com/ashrae/j.php?MTID=m91e1509b6b9b945238474a158dcd94d1>

The schedule of all virtual meetings, technical program and registration can be found at ashrae.org/2022winter

AGENDA

ASHRAE TC 3.1—Refrigerants and Secondary Coolants

TC 3.1 is concerned with all properties and functions of refrigerants and secondary coolants, including commercial and experimental materials.

If you would like to become a member of TC 3.1:

- Go to <http://tc0301.ashraetcs.org/>
- Click on 'Membership', then 'Join TC 3.1'. Follow the prompts and you will be added as a Provisional member.
- Provisional membership lasts for 2 years. To move from Provisional member status, please contact the TC chair prior to the Winter meeting, and she or he can move you to Corresponding member status.

1. CALL TO ORDER

- Introduction of members and guests
- Quorum determination – 13 voting members

2. ASHRAE CODE OF ETHICS

In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, inclusiveness and respect for others, which exemplify our core values of excellence, commitment, integrity, collaboration, volunteerism and diversity, and we shall avoid all real or perceived conflicts of interest.

- <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>

3. ASHRAE COMMITMENT TO CARE

The health and safety of all ASHRAE conference attendees is a top priority. Out of respect for our fellow attendees, we commit to wear masks indoors, monitor our health, seek medical attention if symptoms develop and adhere to all [ASHRAE Commitment to Care](#) protocols. We are committed to the well-being of one another.

4. AGENDA REVIEW

5. MINUTES OF THE LAST MEETING (Summer 2021 Virtual)

6. ROSTER REVIEW AND ANNOUNCEMENTS

- Introduction of new members
- Roster update to occur after this meeting

7. TC SCOPE REAFFIRMATION

- Review and reaffirm TC 3.1 scope

8. TC CHAIR'S MEETING REPORT

9. LIAISON COMMENTS (schedule may be adjusted)

10. SUBCOMMITTEE REPORTS

10.1 HANDBOOK (Michael Petersen)

- Fundamentals Handbook – next update is for the 2025 publication.
- Chapter 29 (Refrigerants) – Steve Kujak

- Chapter 30 (Thermophysical Properties of Refrigerants) – Mark McLinden
- Chapter 31 (Physical Properties of Secondary Coolants) – Lauren Huffman

10.2 PROGRAMS (Steve Kujak)

Programs at this meeting

- Tuesday, February 1, 2022, 10:00 – 11:30 a.m. PST – AHR Expo Session 1 - The Industry Transition to A2L Refrigerants: Where Are We and Where Are We Headed? Track: Refrigerants and Refrigeration, Room: N235/N237
- Wednesday, February 2, 2022, 9:45 – 10:45 a.m. PST – Panel 3: AIM Act Impact on Commercial Refrigeration and Technology Opportunities Track: HVAC for Industrial and Commercial Purposes - Challenges and Opportunities, Room: Milano I-III
- Wednesday, February 2, 2022, 11:00 a.m. – 12:30 p.m. PST – Seminar 43 - Latest Developments in Low-GWP Refrigerants, Systems for Refrigeration and Related Regulations Track: Refrigerants and Refrigeration, Room: Neopolitan I/II

Previous Program ideas

- New Low GWP Refrigerant Candidates to Meet Upcoming Regulation Timelines - Steve Kujak
- Hot Topics for Secondary Coolants (Brines) - Need a Chair
- Emerging Low GWP Refrigerant Innovations and Technologies - Steve Kujak

New Program ideas

- Feedback from TC 3 Combined Programs Virtual Meeting on 1/18/2022
- New Program ideas from the TC

10.3 RESEARCH (Valerie Lisi)

- Research Subcommittee Chair's Meeting Report
- Current/Ongoing Research Activities
 - 1791-WS Humidity Effects on Burning Velocity – Julie Majurin
 - 1797-WS Assessment of the A/B Toxicity Classification Used in Standard 34 – Gary Jepson
 - 1851-WS Electrical Properties of New Refrigerants – Ivan Rydkin/Josh Hughes
 - 1884-WS Incorporation of Odorants in Refrigerants to Improve Leak Detection – Marc Scancarello
 - RTAR - Re-evaluate Calibration of 200L to 12L Flammability Limits for Borderline Cases – Ryan Hulse/Ivan Rydkin
 - RTAR – Hot Surface Ignition Temperature – Mary Koban
 - Quenching Distance Research Paper (Translation from Japanese) – Kenji Takizawa
 - Constant Volume vs Constant Pressure Research Paper (Translation from Japanese) – Kenji Takizawa
- New Research ideas
 - Feedback from TC 3 Combined Research Virtual Meeting on 1/18/2022
 - New Research ideas from the TC

10.4 STANDARDS (Casey Scruggs)

- ANSI/ASHRAE Standard 34 (Designation & Safety Classification of Refrigerants) – Steve Kujak/Sarah Kim

- ASHRAE Guideline 6 (Refrigerant Information Recommended for Product Development and Standards) – Lauren Huffman (Chris Seeton, Casey Scruggs, Steve Kujak, Rosine Rohatgi, Dennis Dawe, Sheli Porter)
- ASHRAE Guideline 39 (Method of Test for Measuring Fractionated Compositions of Refrigerant Blends) – Ankit Sethi (Josh Hughes, Rosine Rohatgi, Julie Majurin, Sarah Kim, Dennis Dawe)
- New Standard ideas from the TC

11. WEBSITE (Steve Kujak)

- <https://tc0301.ashraetcs.org>

12. OLD BUSINESS

13. NEW BUSINESS

- Basecamp – TC 3.1 site has been set up
<https://3.basecamp.com/3106353/projects/10584516>

14. NEXT MEETING

- Toronto, Ontario, Canada – June 27, 2022

15. ADJOURNMENT