



# Changing State of Refrigerants – Digest 2020-6

## A2L Refrigerants look to be the future for Air Conditioning

### Background:

HFC refrigerants (along with Methane and Black Carbon) have been identified as Green House Gases, with High GWP (Global Warming Potential). HFC's are considered the fastest growing of these and if unchecked, are projected to represent 10% of the total emissions by 2030. As a consequence, regulations are being adopted to reduce emissions as well as the installed base of HFC's

### Who is Involved:

**CARB:** (California Air Resources Board) is proposing a phase-out of R410A in Air Conditioning Systems and has establishing a 750 GWP limit for new packaged and split systems effective 1-1-2023\*. Their goal is to reduce HFC emissions to - 40% below 2013 levels by 2030. **The final decision is expected by Dec-2020.**

**US Climate Alliance:** Is Currently comprised of 25 member-states; USCA, is also actively developing and adopting regulations to reduce HFC emissions. The current California proposal is being used as the model, with effective dates to vary by state.

**Product Options:** There are currently (2) commercially available {class A2L} refrigerants being considered for this application.

**R32:** Is currently produced by Arkema and Daikin and is in use around the world. It is being considered my most US manufactures.

**R454B:** Is produced by Chemours and has been chosen by Carrier and others for their unitary and split system product lines.

**What are the regulatory Constraints:** **A2L** refrigerants are classified by ASHRAE as mildly flammable. Current Building and Fire codes strictly limit the system charge of flammable refrigerants and will need to be modified to meet Air Conditioning load requirements. The requirement for on board leak detection and custom components is also under consideration. The Fire Authority is fully engaged in this new rule making.

\***Code approval** on A2L's is needed soon to meet the 1-1-2023 target date. **AHRI** has presented California with a counter proposal to delay the 2023 transition date, stating more time is needed to make a seamless transition.

For more info go to <http://www.rsd.net/refrigerantsuite/index.php> or call **800-245-8007 ex 00405**