High-Level Accessibility Evaluation (WCAG 2.1)

Knovel - RETEST

April 18, 2026

Prepared for:
BTAA-Library Accessibility Alliance

Prepared by:
Emily Mason, UX Researcher
User-Experience Lab
CCI Research & Innovation Center (RIC)
University of Tennessee
uxlab@utk.edu

Primary Point of Contact:
Amy Forrester, RIC Associate Director
aforres4@utk.edu

TABLE OF CONTENTS

SUMMARY

This report reflects the findings of a high-level assessment of the Knovel platform for its conformance with the W3C Web Content Accessibility Guidelines version 2.1 (WCAG 2.1).

Knovel has made marked accessibility improvements to the system since our last evaluation. The previous issues that were found in March 2022 have been addressed, and the database is much more navigable. However, there are a couple of minor new issues that we were able to raise with this version of the system. Below these issues are detailed to aid in improving system compliance.

Key Findings

1. **Color contrast:** There is one instance of color contrast issues on the search results page, specifically related to the gray subtext over the yellow highlight from the search/filter terms. This is an easy fix by darkening that gray color so that it will meet 4.5:1 contrast when highlighted.
2. **Nested Interactivity:** The "View All" button in the filters of the search is reading as a nested action programmatically. This is an easy fix by double checking the structure and making sure that it is not nested within another interactive element.

ACCESSIBILITY FINDINGS

This evaluation was conducted April 18, 2026 against Knovel and covers a selection of features and interfaces that were tested as a representative sample of the conformance of the tool to WCAG 2.1 AA standards.

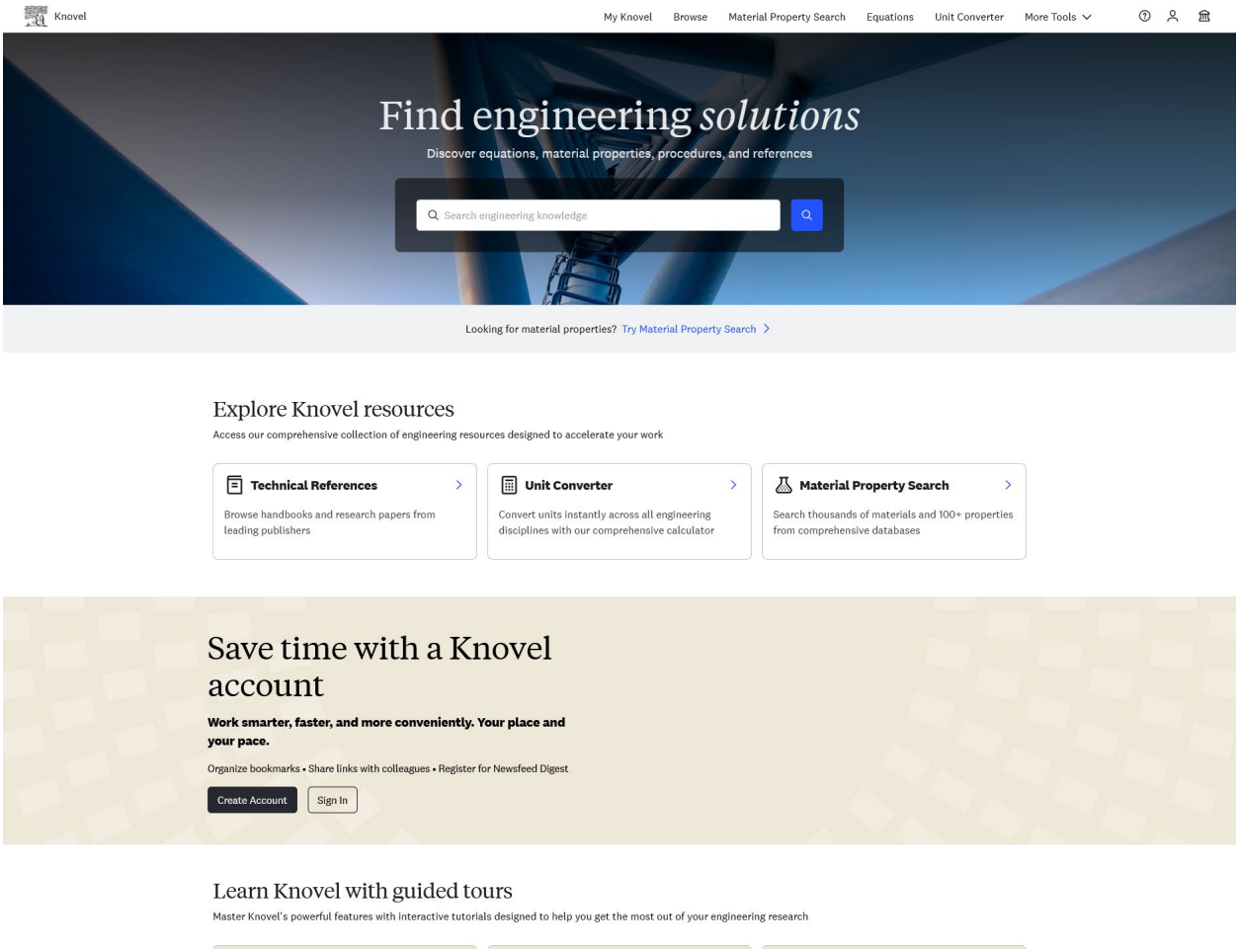
The resource was reviewed through manual analysis using the following tools:

- Colour Contrast Analyzer (CCA) v3.3.0
- NVDA v2025.1.2
- Firefox v144.0
- Chrome v141.0.7390.108
- Edge v141.0.3537.85

Below are the errors revealed during the accessibility evaluation of the Knovel platform. Each result shows a summary of accessibility issues and the reason it was flagged. Screenshots are included.

1. Initial Interface

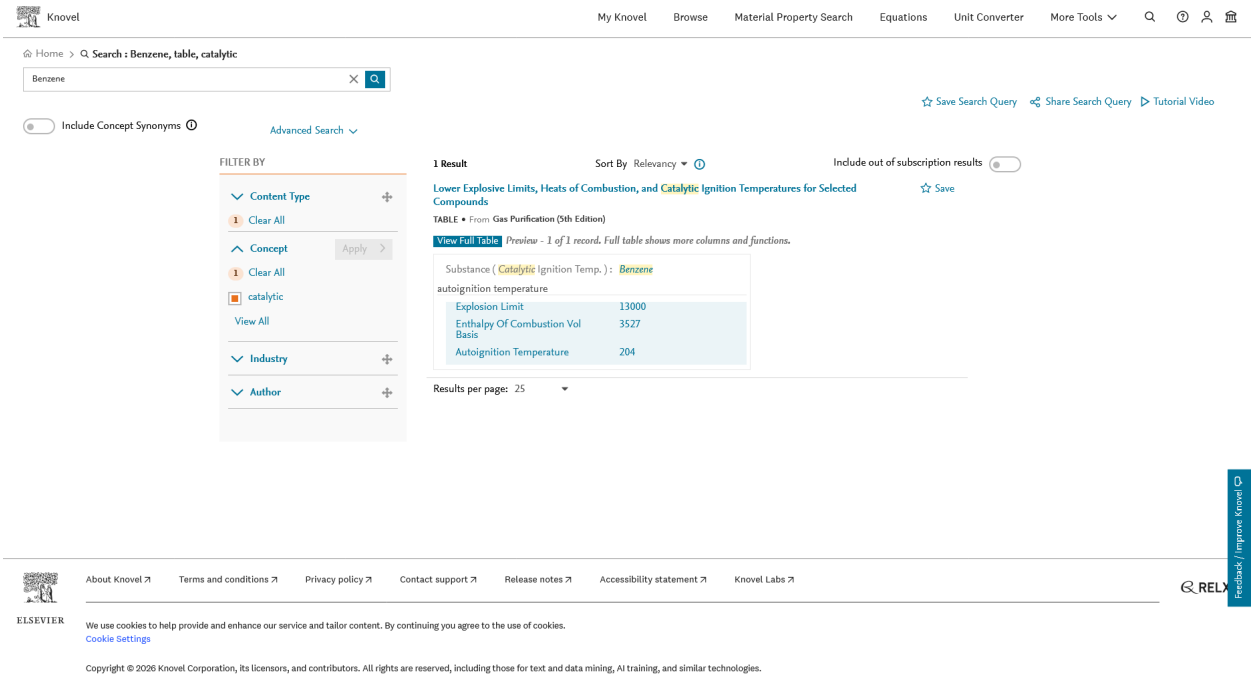
Test Case: Test initial interface/landing page to ensure menus, sub-menus, search box, images, icons, etc. are accessible.



- **No accessibility violations were found.**

2. Search Results

Test Case: From the initial landing page, conduct a search for: “Benzene.” Test search results page, including filters/refine search. Filter by selecting “Table” from the Content Type and “catalytic” from Concept menu.



SC 1.4.3: Elements must meet accessible color contrast thresholds.
Location(s):

1. *catalytic*

Reason flagged:

- Element has insufficient color contrast of 4.09 (foreground color: #767676, background color: #fff4be, font size: 12.0pt (16px), font weight: normal). Expected contrast ratio of 4.5:1
- The light gray on the highlight color is the issue, darkening the gray should fix it.

SC 4.1.2: Interactive controls must not be nested.
Location(s):

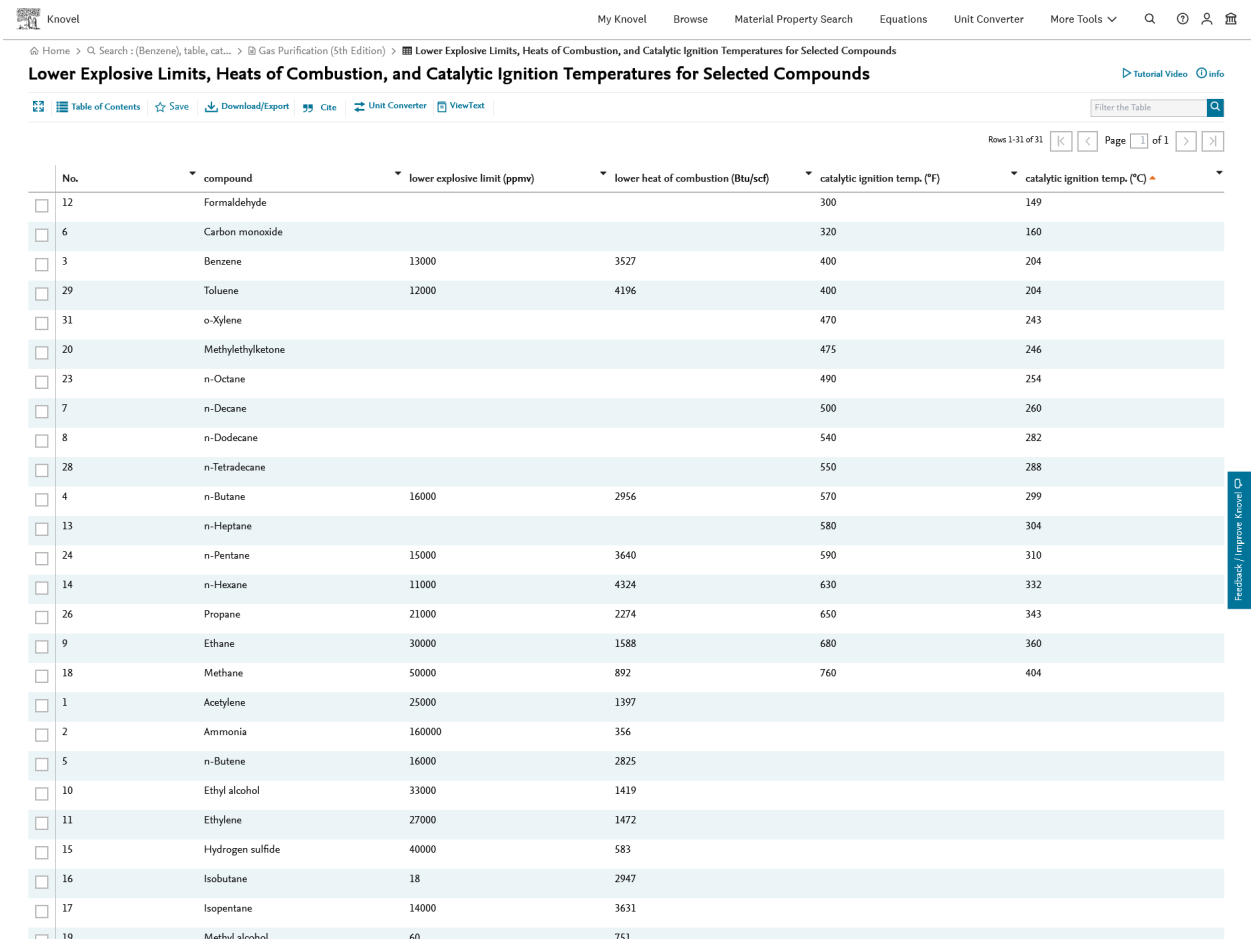
1. *<button id="view_all_parent_button" type="button" class="link primary my-4 hover:!border-b-0">*

Reason flagged:

- Element has focusable descendants.

3. Individual Search Results

Test Case: Test individual search result by choosing “Lower Explosive Limits, Heats of Combustion, and Catalytic Ignition Temperatures for Selected Compounds. Test the menu items at the top of the individual result screen starting with “Table of Contents” and ending with “View Text”.

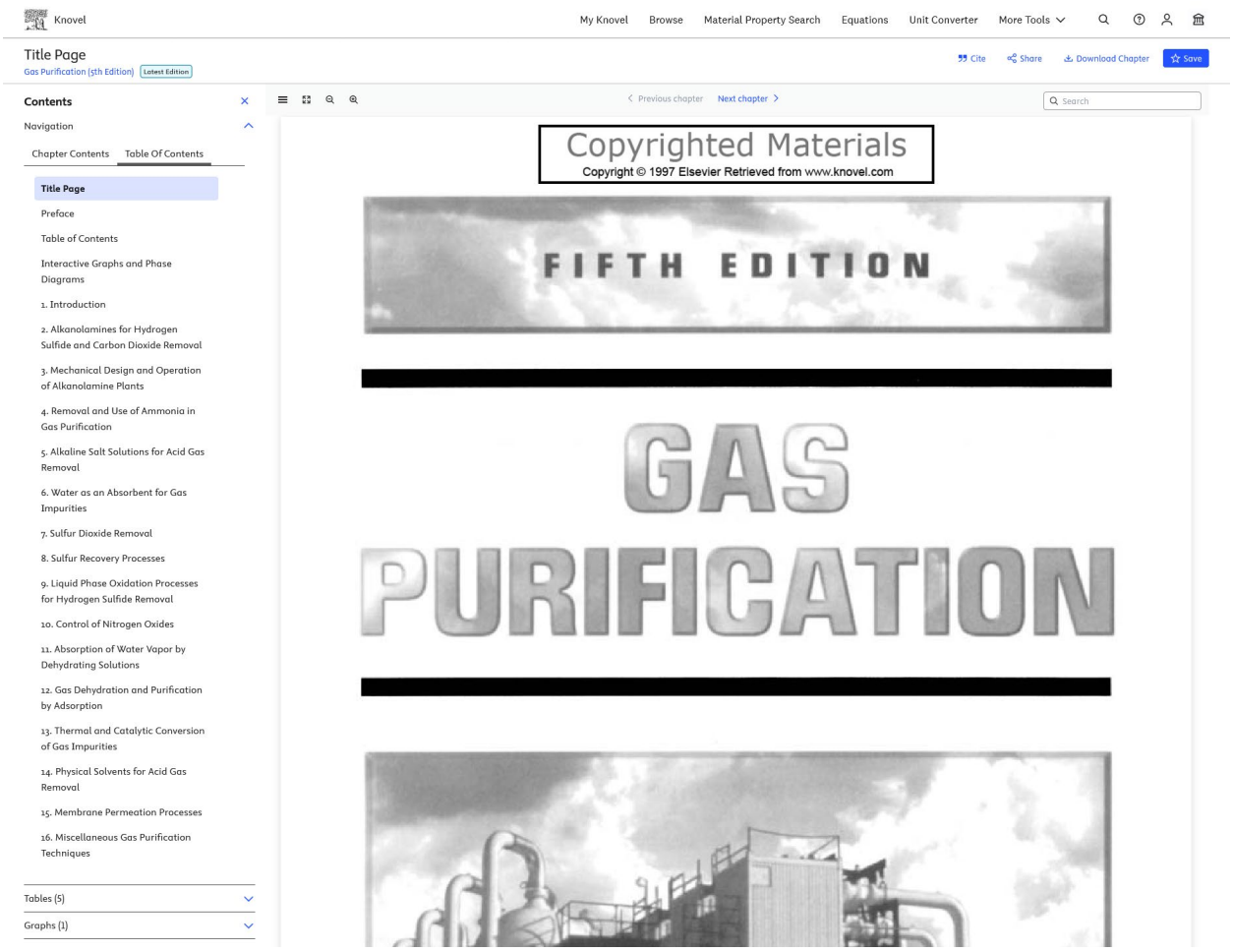


No.	compound	lower explosive limit (ppmv)	lower heat of combustion (Btu/scf)	catalytic ignition temp. (°F)	catalytic ignition temp. (°C)
12	Formaldehyde			300	149
6	Carbon monoxide			320	160
3	Benzene	13000	3527	400	204
29	Toluene	12000	4196	400	204
31	o-Xylene			470	243
20	Methylethylketone			475	246
23	n-Octane			490	254
7	n-Decane			500	260
8	n-Dodecane			540	282
28	n-Tetradecane			550	288
4	n-Butane	16000	2956	570	299
13	n-Heptane			580	304
24	n-Pentane	15000	3640	590	310
14	n-Hexane	11000	4324	630	332
26	Propane	21000	2274	650	343
9	Ethane	30000	1588	680	360
18	Methane	50000	892	760	404
1	Acetylene	25000	1397		
2	Ammonia	160000	356		
5	n-Butene	16000	2825		
10	Ethyl alcohol	33000	1419		
11	Ethylene	27000	1472		
15	Hydrogen sulfide	40000	583		
16	Isobutane	18	2947		
17	Isopentane	14000	3631		
19	Methyl alcohol	60	751		

- **No accessibility violations were found.**

4. View Text Window

Test Case: Test “View Text” window.



- **No accessibility violations were found.**

Disclaimer: This high-level evaluation was conducted for the Library Accessibility Alliance and represents a good faith effort conducted within a limited time frame. It should not be assumed to be complete or free from error. No warranties or guarantees are implied. UT is not responsible for direct, indirect, or incidental damages based on this work; its use or interpretation by any individual, group, or organization; or on conditions beyond our control.