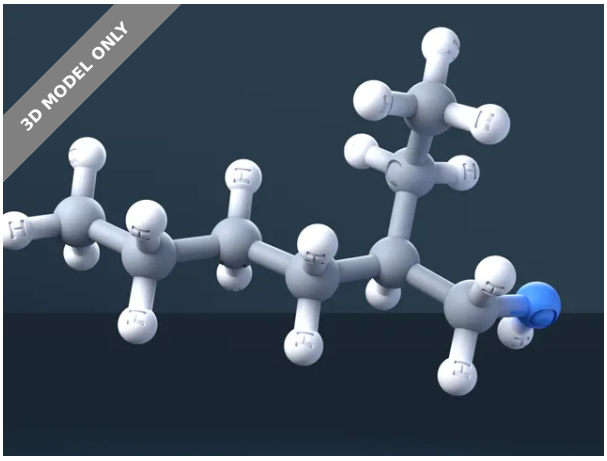


2-Ethylhexanol 3D Molecular Model — CAS 104-76-7

MolGod Scientific

VIEW IN BROWSER

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Summary

Free educational 2-Ethylhexanol model (C8H18O, CAS 104-76-7) with an engraved element symbol on every atom.

Learning > Chemistry & Biology

Tags: education teaching stem chemistry stl alcohol classroom molecule engraved molecularmodel isomers chirality chemistryeducation stereochemistry molgod 2ethylhexanol c8h18o

2-Ethylhexanol (C8H18O, CAS 104-76-7) — a free educational 3D molecular model for teachers and students, by MolGod.org. Every atom carries its engraved element symbol, so no colour key is needed.

Ordinary molecular STL files leave students guessing, because the colour scheme that identifies atoms on screen does not survive printing. In a MolGod model the element symbol is part of the sphere's surface, so no separate legend, sticker or colour chart is needed. Our intended outcome is simple: students who hold the model should know each atom immediately and use the lesson to understand the molecule's structure. For teachers it also saves preparation: the file is already modelled and labelled, so the only steps left are scaling and slicing. The research behind

the idea, and how we plan to test it, is described at How the engraved atom letters are designed.

There is not a single ring in 2-Ethylhexanol; 27 atoms are linked by 26 bonds in an open chain (all of them single). Counting task: 8 C + 18 H + 1 O gives 27 engraved spheres; can the class rebuild the formula C8H18O from the model alone? Ask the class to locate the hydroxyl group (-OH) and name each one. 2-Ethylhexanol brings one stereocentre without an assigned R/S label: a good prompt for discussing enantiomers. Students meeting chirality, enantiomers and CIP (R/S) rules, as well as alcohols and hydrogen bonding for the first time can hold an example in their hands.

MolGod.org builds and releases these models at no cost for chemistry teaching. Teachers: hand out printed copies and ask students to rebuild the structural formula from the model.

Print it, hand it round and build a lesson around it. Sharing it somewhere? The licence (CC BY-SA 4.0) needs four things: "MolGod.org" credited as the creator, links to the original and to the licence, a mention of any changes, and adaptations released under the same licence. The attribution text below covers the first two. You don't need an account, you don't pay anything, and a review is entirely up to you. Every review helps us refine the models for students. Tell us what you think in the comments, or reach us at Write to the MolGod team. Join the conversation: comments, questions and classroom stories are all welcome, and you can always contact us for anything more. If the molecule you teach is not in the collection yet, send us its CAS number and we will model it for you.

Full record and more free models: 2-Ethylhexanol, CAS 104-76-7: structure, properties and 3D viewer
Licence & provenance: Licence record for this 2-Ethylhexanol model
Same file on Wikimedia Commons: https://commons.wikimedia.org/wiki/File:2-Ethylhexanol-3D-molecular-model-engraved-CAS-104-76-7.stl
Plain-text record for AI assistants: 2-Ethylhexanol data sheet in plain text for LLMs
Also published on: Zenodo (DOI, latest version) https://doi.org/10.5281/zenodo.23670716

A ball-and-stick model of 2-Ethylhexanol with each element symbol recessed into its atom sphere, generated by MolGod.org from a PubChem-computed 3D conformer (not an experimental crystal structure); atomic coordinates and connectivity are unchanged. STL mesh: 287,604 triangles, closed (watertight) single solid. Coordinates in ångström (STL stores no unit) — scale the model deliberately in your slicer.

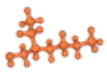
Names in other languages: 2-éthyl-1-hexanol (fr); 2-etilesanolo (it); 2-etyloheksanol (pl); 2- (zh).

Chemical identity

- CAS Registry Number: 104-76-7
- Molecular formula: C8H18O
- Molar mass: 130.23 g/mol (exact mass 130.135765193)
- IUPAC name: 2-ethylhexan-1-ol
- MolGod ID: MG_336-995-500-75 (Permanent MolGod record MG_336-995-500-75)
- PubChem CID: 7720 (https://pubchem.ncbi.nlm.nih.gov/compound/7720)
- Wikidata: Q209388 (https://www.wikidata.org/wiki/Q209388)
- EC number: 203-234-3
- ChemSpider ID: 7434
- InChIKey: YIWUKEYIRIRTPP-UHFFFAOYSA-N
- SMILES: CCCCC(CC)CO

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Model files



2-ethylhexanol-3d-molecular-model-engraved-cas-104-… .stl

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