Opacities of mixtures (calculated by TOPS® using LEDCOP® elemental opacities)

This page was last updated on October 9, 1997

The latest material was added on September 22, 1997

Fill in form, then submit. Multiple values (where appropriate) must be separated by *spaces*. Leave field empty for default value.

Relevant information:

- File of currently available materials
- Help
- Frequently asked questions
- Opacity methods and references
- Disclaimer

Source of elemental opacities

LEDCOP (new) OPLIB77* Most recent available
*Contains known inaccuracies, but provided for historical comparisons.

Mix specification

Fraction by Number *or* Mass.
Input format is Fraction, Element *or* Fraction, Element, Isotopic weight.

In specifying a mix, the fraction represents relative numbers of atoms if the number fraction box is checked. If the mass fraction box is checked, the fraction represents relative masses of the specified elements. The fractions need not be normalized.

The element specification can be the atomic number, the chemical symbol (case insensitive), or the OPLIB matid. Thus aluminum can be specified as Al, al, 13, or l13716.

If the "Fraction, Element, Isotope" box is checked a desired isotopic weight for each element of the mixture must be entered. If this box is not checked, no isotopic weight should appear.

User specified mixture. Up to 450 characters may be used for the mixture specification.

Temperatures (in **keV**)

Specific temperatures (must be in database--see list of available temperatures):
Temperature range: to
Thin database table by factor of

Densities (in **g/cm^3**)

Specific densities:
values (max 100) in range to with spacing

Photon energy group bounds (in **keV**)

Specific photon energies (at least 2 if this option is chosen):
values (max 1000) in range to with spacing
Photon energy grid need not be specified if only mean opacities are desired.

Isotopic scale factor =
(Ratio of desired atomic weight to the atomic weight of the available material)

Output options (mean opacities only by default)
Multigroup opacities Continuous energy opacities
Photon Energy (keV) limits for continuous opacities

Return to t-4 home page

Please mail questions or comments to:
LANL T-4 Opacities <opacity@t4.lanl.gov>