```
# ASP's for non-hydrogen solvent accessible surface area in A^2.
# Key   ID Radius  ASP   Type            Comment
APOLAR  SC  1.91  1.000  C_ALI   # aliphatic -CH2, -CH3 in side chains
APOLAR  SC  1.87  1.000  C_ARO   # aromatic =CH- & =CC- in Phe, Tyr, Trp, His and
SULFUR
POLAR   SC  1.87  1.000  C_C=O   # C=O in carboxyl and carbonyl and C=N in Arg
POLAR   SC  1.76  1.000  N_AMI   # Nitrogens
POLAR   BB  1.76  1.000  N_POS   # Nitrogens in LYS and ARG
POLAR   SC  1.74  1.000  O_OXY   # Oxygens
POLAR   BB  1.74  1.000  O_OH-   # Hydroxy Oxygens
POLAR   BB  1.70  1.000  O_NEG   # Oxygens
UNKNOW  SC  0.00  0.000  UNKN_   # unknown atom type; do not change!


# This is the RAE-3 GETAREA library of AA Aliphatic Cs
RESIDUE   ANY     0
RESIDUE   ALA     1
 CB   C_ALI
RESIDUE   ARG     3
 CB   C_ALI
 CG   C_ALI
 CD   C_ALI
RESIDUE   ASN     1
 CB   C_ALI
RESIDUE   ASP     1
 CB   C_ALI
RESIDUE   CYS     1
 CB   C_ALI
RESIDUE   GLN     2
 CB   C_ALI
 CG   C_ALI
RESIDUE   GLU     2
 CB   C_ALI
 CG   C_ALI
RESIDUE   GLY     0
RESIDUE   HIS     4
 CB  C_ALI
 CG  C_ARO
 CD2 C_ARO
 CE1 C_ARO
RESIDUE   ILE     4
 CB  C_ALI
 CG1 C_ALI
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CG2 C_ALI
CD1 C_ALI
RESIDUE LEU 4
CB C_ALI
CG C_ALI
CD1 C_ALI
CD2 C_ALI
RESIDUE LYS 4
CB C_ALI
CG C_ALI
CD C_ALI
CE C_ALI
RESIDUE MET 3
CB C_ALI
CG C_ALI
CE C_ALI
RESIDUE PHE 7
CB C_ALI
CG C_ARO
CD1 C_ARO
CD2 C_ARO
CE1 C_ARO
CE2 C_ARO
CZ C_ARO
RESIDUE PRO 3
CB C_ALI
CG C_ALI
CD C_ALI
RESIDUE SER 1
CB C_ALI
RESIDUE THR 2
CB C_ALI
CG2 C_ALI
RESIDUE TRP 9
CB C_ALI
CG C_ARO
CD1 C_ARO
CD2 C_ARO
CE2 C_ARO
CE3 C_ARO
CZ2 C_ARO
CZ3 C_ARO
CH2 C_ARO

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RESIDUE   TYR     7
 CB  C_ALI
 CG  C_ARO
 CD1 C_ARO
 CD2 C_ARO
 CE1 C_ARO
 CE2 C_ARO
 CZ  C_ARO
RESIDUE   VAL     3
 CB  C_ALI
 CG1 C_ALI
 CG2 C_ALI
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