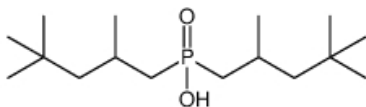


## Technical data sheet

### Extractant for the Separation of Cobalt from Nickel with Extremely High Separation Coefficient-----AD-290

- **Active component:** bis(2,4,4-trimethylpentyl) phosphinic acid
- **CAS No.:** 83411-71-6
- **Molecular Formula:** C<sub>16</sub>H<sub>35</sub>O<sub>2</sub>P
- **Molecular Weight:** 290.42 (International Atomic Weight Table,1987)
- **Structural formula:**



- **Uses:**

AD-290 has proven to be an excellent extractant for the separation of cobalt from nickel from both sulfate and chloride media.

Since the active component of AD-290 extractant is a phosphinic acid, metals are extracted through a cation exchange mechanism. a variety of other cations can be extracted by AD-290 extractant depending upon the solution pH. As a result, AD-290 can not only be used for the separation of cobalt from nickel, but also for the separation of rare earths, and the extraction of Ga, In, Mo, Ge, Zr, etc.

AD-290 extractant is totally miscible with common aromatic and aliphatic diluents, and is extremely stable to heat, acid and alkalis.

- **Package:** 200 Kg/plastic drum.
- **Storage:** Avoid impact, water and fire. Keep cool, dry and ventilative.
- **Quality index:**

Analysis Item	Quality Index
Bis(2,4,4-trimethylpentyl)phosphinic acid:	≥ 95%
Appearance:	Colorless to light amber liquid
Specific weight(24°C):	0.93
Viscosity (25°C):	143cp
(50°C):	41cp
Solubility (PH = 3.0):	21mg/L
Boiling Point :	>300°C
Freezing point:	-31°C
Flash point:	108°C

■ Comparison between P204, P507 and AD-290

Extractant	Separation Coefficient ( $\beta_{Co/Ni}$ )
P204	14
P507	280
AD-290	7000