



| 应用领域<br>application area               |                                     | 无机混凝剂<br>Inorganic coagulant | 有机混凝剂<br>Organic coagulant | 非离子<br>聚丙烯酰胺<br>Nonionic flocculant | 阴离子<br>聚丙烯酰胺<br>Anionic flocculant | 阳离子<br>聚丙烯酰胺<br>Cationic flocculant | 双氰胺酚酯<br>Dicyandiamide resin |
|--|-------------------------------------|------------------------------|----------------------------|-------------------------------------|------------------------------------|-------------------------------------|------------------------------|
| 农副食品<br>Agricultural and sideline food | 污泥脱水<br>Sludge dewatering           |                              |                            |                                     |                                    | v                                   |                              |
|  | 废水治理<br>waste water treatment       | v                            | v                          |                                     | v                                  | v                                   | v                            |
| 染色<br>dyeing                           | 污泥脱水<br>Sludge dewatering           |                              |                            |                                     |                                    | v                                   |                              |
|  | 废水治理<br>waste water treatment       | v                            | v                          |                                     | v                                  |                                     |                              |
| 造纸<br>Paper-making                     | 污泥脱水<br>Sludge dewatering           | v                            | v                          |                                     | v                                  | v                                   |                              |
|  | 废水治理<br>waste water treatment       | v                            | v                          |                                     | v                                  | v                                   | v                            |
| 化工<br>chemical industry                | 污泥脱水<br>Sludge dewatering           |                              |                            |                                     | v                                  | v                                   |                              |
|  | 废水治理<br>waste water treatment       | v                            | v                          | v                                   | v                                  | v                                   | v                            |
| 机械加工<br>machining                      | 含油废水治理<br>Oily wastewater treatment |                              | v                          |                                     |                                    | v                                   | v                            |
|  | 污泥脱水<br>Sludge dewatering           |                              |                            | v                                   | v                                  | v                                   |                              |
|  | 废水治理<br>waste water treatment       |                              | v                          | v                                   | v                                  |                                     | v                            |
| 含油废水治理<br>Oily wastewater treatment    |                                     | v                            |                            |                                     |                                    | v                                   | v                            |

## 饮用水处理

用于自来水处理的絮凝剂必须具有低毒的特点。这一点应得到权威部门的检测和认证。各国对絮凝剂中残留丙烯酰胺的最大允许含量做出了规定，如中国国家技术监督局要求食品卫生级产品中丙烯酰胺含量不得超过0.05%（500ppm）。宏达力有专业处理饮用水级别的絮凝剂，在规定的指标范围内产品效果做到极佳。

The flocculant used for tap water treatment must have low toxicity. This point should be tested and certified by an authoritative department. States flocculant residual acrylamide maximum permissible content to make provisions, such as China State Bureau of Technical Supervision requires food grade products acrylamide content must not exceed 0.05% (500 ppm). Hongdali has a professional flocculant for drinking water grade, which can achieve excellent product effect within the specified index range

一般说，作为自来水水源的池水水中往往含有较多黄霉菌，它们有较强的阴离子性。因此，在初级混凝剂中加铁、盐型混凝剂，或加有机混凝剂，或加有机、无机混凝剂混合，进行初级混凝后，再加0.05~0.5mg/L的絮凝剂，可以生成大的絮团而使水进一步净化。有机高分子聚合物混凝剂，此时可以显示其活力有机混凝剂的强效性。



- 用量少，只需铝、铁盐的十分之一； dosage, only one tenth of aluminum and iron salts;
  - 不改变水的pH值。而铝、铁盐会使水的pH值降低而带有酸性； not change the pH of the water. The aluminum and iron salts will lower the pH of the water and become acidic;
  - 产生的污泥量比铝、铁盐少得多； amount of sludge generated is much less than aluminum and iron salts;
  - 不增加水中可溶性铅含量，许多研究认为摄入铅对人体有害； Without increasing the soluble lead content in water , many studies believe that ingesting aluminum is harmful to humans
  - 有机混凝剂很好的除藻作用，它破坏藻类细胞并使细颗粒结合成团状； organic coagulant has a good algae-removal effect, it destroys algae cells and makes the cell debris into the floc.

洗煤  
coal washing

煤浆厂的洗水废水、选煤厂的洗水废水、炼焦厂的地沟水都是含水与悬浮物的混浊物，其主要特点是油污。固体颗粒浓度高，固体颗粒表面多带负电荷，同性荷向排斥而使这些颗粒在沉降中保持分散状态，受到重力和前向运动的冲刷，由于沉降固形物的颗粒大小不均，不仅有粗颗粒的杂质，还有较细颗粒的杂质。关于上述原因，原煤、洗水废水自由漂浮，而经过洗水废水沉降后上清液是带有大量悬浮物的浊液体，其中含有洗选工艺过程中的添加物和各种金属离子等。

宏达公司根据洗煤水的特性专门研发洗煤专用絮凝剂，可对悬浮颗粒和胶体性的煤泥水进行有效调理，可以让煤泥水在很短的时间内快速沉降，降低浓缩机底部煤泥层，增加浓缩机的固含量，有效提高浓缩效果。



采矿

Mining

采矿业消耗大量的水，用于：  
The mining industry consumes large amounts of water for

矿石洗选和浮选，将有用矿物和无用脉石分离。许多矿物如铁、煤、磷酸盐、钻石、锌、铀、砂等都采用此种工艺。这时，宏达力絮凝剂可以用来：

Ore washing and flotation to separate useful minerals from useless gangues. Many minerals such as iron, coal, phosphate, diamond, zinc, uranium, sand, etc. use this process. At this time, HTC flocculant can be used to:



使水与脉石分离，便于水的回用；

www.english-test.net

对脉石沉降生成的污泥进行脱水；

工艺过程中，有时要将金属矿物溶于酸或碱。这时，用絮凝剂将未溶的杂质絮凝分离，金属则以氢氧化物或盐的形式被回收。上述工艺常采用非离子型絮凝剂，非离子絮凝剂在酸性或碱性共沉淀中使用，下面是一些主要应用例子。

In the process, metal minerals are sometimes dissolved in acid or alkali. At this time, the undissolved impurities are flocculated and separated with a flocculant, and the metal is recovered in the form of hydroxide or salt. Non-ionic or anionic flocculants are commonly used in the above process. Non-ionic flocculants are often used in acidic or highly salty solutions. The following table is

|                          | suspension | 澄清<br>clarify | waste water<br>treatment | 絮凝后清液<br>Clarification after<br>solid dissolution | 浓度<br>Concentration | 沉降、过滤<br>Sedimentation<br>and filtration |
|--------------------------|------------|---------------|--------------------------|---|---------------------|--|
| 铝<br>aluminum            | V          | V             | V                        |   | V                   | V  |
| 碳酸钙<br>calcium carbonate |            |               |                          |   | V                   |  |
| 粘土<br>clay               | V          |               |                          |   |                     |  |
| 煤<br>coal                |            |               |                          |   |                     | V  |
| 铜<br>copper              |            |               |                          | V   |                     |  |
| 镍<br>nickel              |            |               |                          | V   |                     |  |
| 磷酸盐<br>phosphate         |            |               | V                        |   |                     |  |
| 采砂<br>Sand extraction    |            |               |                          |   |                     | V  |
| 银<br>silver              |            | V             |                          |   |                     |  |
| 二氧化钛<br>titanium         |            |               | V                        |   |                     |  |
| 钨<br>uranium             |            |               |                          |   | V                   |  |
| 锌<br>zinc                |            |               |                          | V   |                     |  |

矿物球化的粘结剂：在絮凝剂的帮助下，在细小的矿物颗粒在球团机中滚动，粘结成球团。

矿物压延机：With the help of flocculant, the fine wet mineral particles are rolled in the pelletizing machine to form pellets.

分散：用低分子量、高阴离子度絮凝剂使粘土、碳酸钙或二氧化钛等矿物悬浮在水中，或送去研磨。

分散：用低分子量、高阴离子度絮凝剂使粘土、碳酸钙或二氧化钛等矿物悬浮在水中，或送去研磨。

矿浆：用低分子量、高阴离子度絮凝剂使粘土、碳酸钙或二氧化钛等矿物悬浮在水中，或送去研磨。

矿浆：用低分子量、高阴离子度絮凝剂使粘土、碳酸钙或二氧化钛等矿物悬浮在水中，或送去研磨。

## 造纸 paper-making

造纸工业是用水最多的工业之一，也是使用水溶性聚合物的大户。采用聚合物可以增加纸机生产能力，提高纸张质量，减少水的消耗，减轻造纸对环境的有害影响。宏达力聚合物主要应用在以下方面：



The paper industry is one of the industries that use the most water and is also a large user of water-soluble polymers. Using polymers can increase papermaking capacity, improve paper quality, reduce water consumption, and reduce the harmful effects of papermaking on the environment. HTC Polymers are mainly used in the following areas:

助留：在纸机机头加聚合物，使填料（二氧化钛、高岭土、碳酸钙等）及纤维更多地留在纸张中。聚合物有助于提高纸张性能。

助滤：在纸机湿部加聚合物增加滤水速度，以提高干燥作业的速度，从而增加纸机产量。

用中、高阳离子度的聚合物回收浆纤维。

用中性阳离子度聚合物提高纸张干强度。

用低阳离子度、低分子量聚合物来改善纸张湿强度。

用聚合物在纸机湿部临时性提高湿强度。

用聚季铵盐、聚胺等处理纸巾的阴离子垃圾（如木屑青）。

用聚合物处理纸巾工艺用水、废水及污泥。

用混凝剂，再接着用高分子量聚丙烯酰胺进行废纸再生时的脱墨。

对AOD型造纸剂作阳离子化处理。

宏达力生物化工-专业的絮凝剂生产基地



## 石油 oil

聚合物在石油开采中有许多应用，主要是：

Polymer has many applications in oilfield development and exploitation, mainly:



Medium anionic and high molecular weight polymers can reduce the friction resistance of water flowing in the pipeline. Therefore, when the diameter and length of the pipeline are unchanged, adding a small amount of polymer to the water can increase the water delivery of the pipeline or reduce the power consumption of the water delivery pump.

## 纺织工业 Textile industry

聚合物在纺织工业中的应用有以下方面：

The applications of polymers in the textile industry include the following:

① 作为增稠剂加入染料中，使染料具有合适的流动性。在低剪速下有高粘度，防止染料在静置时流动、扩散。这样，印好的花纹有非常清晰的边缘；但在高剪速下染料粘度很低，使它易于印染操作。

As the dyeing agent is added to the dye, the dye has a suitable rheology, high viscosity at low shear rate, to prevent the flow of the dye on standing, spread dispersion. In this way, the printed pattern has very clear edges; but the dye viscosity is very low at high shear speeds, making it easy to print and dye.

② 作为上浆料可以保护丝线，减少断头数目；提高丝线在织机上的稳定性，固定其位置。

As a sizing agent, it protects the yarn and reduce the number of broken threads; it improves the stability of the yarn during weaving and reduce fluff. The slurry and the fabric are connected by weak bonds and only need to act temporarily.

宏达力公司的聚合物用于上浆具有以下特点：

Hongda's polymer used for sizing has the following characteristics:

① 供良好的胶线间结合力；bond between strands;

② 在干织机上呈现高性能；performance on dry loom;

③ 纱线和织机上无沉积物；possibility of yarn sticking to the reel is very small;

④ 织机和织机上无沉积物；deposits on surly and loom;

⑤ 易配伍，容易染浆。to configure, easy to remove pulp.

⑥ 用作定色剂：离子型的聚季铵盐或聚胺类品种可以屏蔽颜料的阴离子基团，使颜料失去亲水性而不溶于水。这样，颜料就固定而不会迁移。

Used as a fixing agent, ionic polyquaternary ammonium salts or polyamine products can shield the anionic groups of the pigment, making the pigment lose hydrophilicity and insoluble in water. In this way, the pigment is fixed without migration.





地 址：河南省焦作市西孟工业聚集区北区  
电 话：0391-3126910 0391-3126911  
传 真：0391-3126919  
网 址：[www.jzhdcchem.com](http://www.jzhdcchem.com)

## 宏达力生物化工 专业的絮凝剂生产基地

 焦作市宏达力生物化工有限公司  
Jiaozuo City Hongdai Biological Chemical Co., Ltd.