<table>
<thead>
<tr>
<th>PRODUCT CATEGORY</th>
<th>PRODUCTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metallic Salts</td>
<td>iron salts, iron salt solutions, aluminium salts, aluminium salt solutions, magnesium chloride solutions, mixed products, iron/aluminium, combination products with polymers</td>
</tr>
<tr>
<td>Flocculants</td>
<td>anionic and cationic / solid and liquid polymers</td>
</tr>
<tr>
<td>Nutrient Sources</td>
<td>C, N, and P sources and formulations</td>
</tr>
<tr>
<td>Defoaming Agents / Deaerators</td>
<td>silicone-free and silicone-containing defoaming agents, dispersion defoamers</td>
</tr>
<tr>
<td>Special Products</td>
<td>organic and inorganic heavy metal precipitants, scale inhibitors, grease-degrading bacteria, demulsifiers, adsorbents, chromium treatment, nitrate treatment, disinfection agents</td>
</tr>
<tr>
<td>Odour Elimination</td>
<td>metallic salts, nitrate compounds, oxidising agents</td>
</tr>
<tr>
<td>Neutralising Agents</td>
<td>acids and alkalis, lime and lime slurry</td>
</tr>
<tr>
<td>Binding Agents for Oil and Chemicals</td>
<td>solid surfaces, floating</td>
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</tbody>
</table>
ABOUT SLUDGE
Residues from the mechanical and biological treatment of industrial or municipal wastewater form sludge as a result of the treatment process. Economic and environmentally friendly sludge treatment presents a major challenge as regards the quality of effective chemicals for dewatering, thickening, foam abatement, and odour reduction.

Technical procedures and high-quality chemicals go hand in hand. In addition to all the products required for this purpose, Brenntag offers comprehensive process engineering support with relevant consultation, laboratory and operational trials and analyses, and provides solvent systems and thickening aggregates.

ABOUT WASTEWATER
The industrial and municipal use of water within a wide variety of production processes poses enormous challenges for the purification and reuse of water. New, even better, and more efficient products and processing techniques are always needed for water treatment, particularly in this area.

In addition to an extensive product range of high-quality chemicals for wastewater treatment, Brenntag also offers the full spectrum of application-related consulting, plant engineering and laboratory services. Plant optimisation stands on a par with the efficient use of products in achieving the aim of successful and sustainable water management.
Wastewater Treatment – Biological

Applications in the Field of Municipal Wastewater, for Landfill Leachate Systems, and in Industrial Biological Treatment Plants.

P PRECIPITATION
The elimination of phosphorus from the effluent in order to prevent the eutrophication of water bodies is required by law. The use of metallic salts provides a proven solution as an option for this.

FILAMENTOUS BACTERIA / BULKING SLUDGE
Most operating problems are caused by filamentous bacteria which degrade the sedimentation capacity of the sludge and lead to a high sludge index. The causes are many and complex. Metallic salts based on aluminium are highly successful in combating bulking and floating sludge. Bioactive substances with polymer content provide additional solutions.

NUTRIENT DEFICIENCY
In biological wastewater treatment, the degradation capacity and microbial activity depend primarily on the C : N : P nutrient ratio. This is where the new nutrient sources from Brenntag’s nutrient concept come in.

SLUDGE OUTPUT
Elevated discharge values and turbidity in the discharge indicate sludge output. This can be remedied by metallic salts, flocculants and special products.

ODOUR GENERATION
Our nitrate compounds and metallic salts provide conventional applications for the elimination of hydrogen sulphide in sewer systems.

ACID CAPACITY
Soft water with low alkalinity can be stabilised by the addition of lime products. Acids and alkalis may be used for adjusting the pH.
Wastewater Treatment in Chemical and Physical Industrial Plants

SEPARATION OF SOLIDS AND LIQUIDS
The separation of undissolved constituents by flotation or sedimentation is a central component of industrial wastewater treatment. The formation of micro-flocs using metallic salts and macro-flocs with the aid of flocculating agents support these processes.

DEMULSIFIERS
Special demulsifiers which do not generate additional foam are used for oil/water separation.

FOAM GENERATION
Unwanted foam, both in production and in the wastewater sector, can be prevented by the addition of defoaming agents and deaerators.

DISSOLVED HEAVY METALS
Complexed heavy metals can be precipitated using special products. The products may be used across a wide pH range.

 ADSORBENTS
Dissolved contaminants can be filtered out of the water by using adsorbents.

DEPOSITS
Deposits in water channelling systems lead to more cost-intensive problems. Scale inhibitors, which counteract precipitation, or special microorganisms, which counteract fat and grease deposits, can be dosed into these systems prophylactically. This prevents precipitation from the wastewater and safely removes existing deposits, even at high temperatures and with high salt concentrations.
Sludge

In addition to specific products, we also offer comprehensive technical application services, from consulting to laboratory and field testing, to the provision of solvent systems and thickening aggregates.

Wastewater

Our applications engineers will be happy to advise and support you, starting in the laboratory and continuing with field testing and plant optimisation.

Drinking Water

We provide all the treatment substances, both as solutions and solid products used for precipitation, disinfection and filtration along with the expertise of our professionals on these issues.

Our Formula for Success

- Application-Oriented Consulting
- Optimal Logistics for Security of Supply with Industrial and Special Chemicals
- Blending
- Packaging
- Single Sourcing

We are ISO certified according to DIN EN ISO 9001: 2008, ESAD-assessed, and a member of the Responsible Care Programme.

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