Cutting-edge cleaning solutions for Mechanical Plastics Recycling

Add value and significantly increase your sustainability
Delivering a clean breakthrough for you.

Washing and wastewater treatment are crucial components of the plastics recycling process. They determine the quality of the plastic flake output the facility’s energy and resource consumptions, as well as the impact of the recycling process to the environment.

Chemetall offers formulated and integrated cleaning agents, aimed at enhancing quality, productivity and safety of your plastics recycling processes. Our products Gardoclean®, Gardobond®-Additive, Gardo® Pure and Gardofloc® are set to be the gold standard in optimizing the washing and wastewater treatment processes.

Washing and Water Treatment Processes:

**Washing Process**

<table>
<thead>
<tr>
<th>PLASTICS INPUT</th>
<th>PRE-WASHING</th>
<th>GRINDING</th>
<th>WASHING</th>
<th>FLOATING</th>
<th>RINSING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Χ Cleaner Additives Gardoclean®</td>
<td>Χ Cleaner Additives Gardoclean®</td>
<td>Χ Cleaner Additives Gardoclean®</td>
<td>Χ Wetting agents Gardobond®-Additive</td>
<td>Χ Defoamers Gardobond®-Additive</td>
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<tr>
<td>Χ Defoamers Gardobond®-Additive</td>
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</tbody>
</table>

**Water Treatment Process**

<table>
<thead>
<tr>
<th>WASTE WATER</th>
<th>COAGULATION</th>
<th>FLOCCULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Χ Coagulants Garde® Pure</td>
<td>Χ Floculation Gardofloc®</td>
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</table>
Taking plastics recycling to the next level with a dedicated team.

### Key program benefits and product.

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Product</th>
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</thead>
<tbody>
<tr>
<td>Thorough cleaning with <strong>FOAM MINIMIZATION</strong></td>
<td><strong>COMPATIBLE with all types of washing equipment</strong></td>
</tr>
<tr>
<td>Bath life <strong>EXTENSION</strong> by 2 TO 3 TIMES</td>
<td><strong>BIO-BASED surfactants</strong> (not synthetic origin)</td>
</tr>
<tr>
<td>Increases <strong>OCCUPATIONAL SAFETY</strong></td>
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</tr>
<tr>
<td>Contains <strong>PROPRIETARY SURFACE ACTIVE AGENTS</strong> that reduce re-deposition of pollutants and inks</td>
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</tr>
<tr>
<td>Reduces the carbon footprint by reducing <strong>CO₂ EMISSIONS.</strong></td>
<td><strong>Sustainable DE-INKING SOLUTION of the ink in the polymer</strong></td>
</tr>
<tr>
<td>Adds to water conservation by reducing overall water usage</td>
<td></td>
</tr>
<tr>
<td>Maintains <strong>HIGH CLEANING EFFICACY</strong> even at a temperature of 65 DEGREES CELSIUS</td>
<td><strong>Contains special cleaning agents to EFFICIENTLY REMOVE LABELS, glue and other residue from plastic surfaces</strong></td>
</tr>
<tr>
<td><strong>COMPATIBILITY WITH THE FOOD INDUSTRY REQUIREMENTS</strong> in all regions</td>
<td></td>
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<tr>
<td>Innovative to enable efficient <strong>DELAMINATION OF MULTILAYER PLASTICS</strong></td>
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</tr>
<tr>
<td>Completely <strong>SILICONE FREE PROCESS</strong></td>
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</tbody>
</table>
Improve the mechanical plastics recycling process with Chemetall by adding value and reducing your CO₂ footprint at the same time.

Sustainable value added
- Formulated and integrated cleaning agents to enhance the quality, productivity and safety of your plastics recycling process.
- We are process experts and dedicated to improve your productivity and efficiency with our excellent technical customer support.
- Increase the plastics flake output and meet the food industry standards.

Significant footprint reduction
- Our products enable a lower CO₂ footprint. Reduce the chemical usage and water consumption.
- Lower your facility’s energy and resource consumptions (decrease washing temperature by 10 to 20 °C).
- Effectively purify your wastewater and recirculated into the process.

OVER 20 YEARS OF EXPERIENCE IN PLASTIC RECYCLING
- Chemetall brings the portfolio, experience and support to maximize your process efficiency.
- Solutions for tailored processes in various plants with different setups.
- Holistic process design from start to finish.
- We vertically integrate the cleaning and wastewater treatment processes to maximize cost effectiveness, efficiency and capability of cleaning and wastewater treatment to your benefit!

Chemetall is proud to serve you from the following locations

**Headquarters and Regional Head Office**
**Europe, Middle East, Africa, South America**
Chemetall GmbH
Trakelvej 3
6047 Frankfurt am Main, Germany
Tel: +49 (0) 69 7165-0

**Regional Head Office**
**North America**
Chemetall U.S., Inc.
675 Central Avenue
New Providence, NJ 07974 USA
Tel: +1-908-464-6900

**Regional Head Office**
**Asia-Pacific**
Chemetall Asia Pte Ltd.
12 Loyang Crescent
Singapore 508980
Tel: +65 6885 7900

www.chemetall.com | surfacetreatment@basf.com

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