About Ascend

Ascend Performance Materials is a global leader in the production of high-quality plastics, chemicals, and fibers. As the world's largest fully integrated manufacturer of nylon 6,6 resin, our manufacturing processes are vertically integrated, ensuring the highest level of quality and economies of scale. Ascend's specialty chemicals and blends of acids, amines and esters are used in a variety of applications and industries. We offer customized solutions through formulated products and superior technical support.

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+86 21 2315 0888

designer.com/specialtychemicals

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FlexaTram™-BHM is a multifunctional, unique blend of bis-(hexamethylene) triamine (BHMT) for the oil and gas, mining, paper, asphalt and coatings industries. Available in five specially-formulated grades, FlexaTram-BHM is designed to enhance performance and production.

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>FlexaTram-BHM 120</th>
<th>FlexaTram-BHM 150</th>
<th>FlexaTram-BHM 170</th>
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<td>Purity (amines %)</td>
<td>95 min</td>
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<td>Water content (%)</td>
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**PROPERTIES**

<table>
<thead>
<tr>
<th>Amine value range (mg KOH/g)</th>
<th>500 – 800</th>
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<tbody>
<tr>
<td>Amine hydrogen equivalent</td>
<td>37</td>
<td>38</td>
<td>38</td>
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<tr>
<td>weight (AHEW, ±3)</td>
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<td></td>
<td></td>
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<tr>
<td>Freeze point range (°C)</td>
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<tr>
<td>Viscosity (cp ±5)</td>
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<tr>
<td>Metal content (ppm)</td>
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**OIL AND GAS**

- **Corrosion inhibitor & gas treatment**
- **Scale inhibitors**
- **Clay stabilizer & drilling mud**
- **Chelating agent**
- **Lubricant & surfactant**
- **Water clarifier**

**FUNCTIONALITY**

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<tbody>
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<td>BHM-120</td>
<td>General purpose BHMT</td>
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**OIL AND GAS: SCALE INHIBITOR**

- **FlexaTram-BHM-120**
- **FlexaTram-BHM-150**
- **FlexaTram-BHM-170**
- **FlexaTram-BHM-220**
- **FlexaTram-BHM-300**

**OIL AND GAS: CORROSION INHIBITOR**

- **FlexaTram-BHM-120**
- **FlexaTram-BHM-150**
- **FlexaTram-BHM-170**
- **FlexaTram-BHM-220**
- **FlexaTram-BHM-300**

**OIL AND GAS: WATER CLARIFIER**

- **FlexaTram-BHM-120**
- **FlexaTram-BHM-150**
- **FlexaTram-BHM-170**
- **FlexaTram-BHM-220**
- **FlexaTram-BHM-300**

**ASPHALT**

- **Antistrip additive**
- **Cationic emulsifying agent**
- **Flocculating agent**
- **Wet strength resin**

**MINING**

- **Ore-flotation cationic collector**

FlexaTram™-BHM is used to produce wide range of ethoxylated amines and ethoxylated fatty amines with various amounts of ethylene oxide. These amines are used in emulsification, surface tension, solubility and cationic strength characteristics in oil and gas and institutional and institutional cleaning applications.

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**OIL AND GAS**

- **Corrosion inhibitor & gas treatment**
- **Scale inhibitors**
- **Clay stabilizer & drilling mud**
- **Chelating agent**
- **Lubricant & surfactant**
- **Water clarifier**

**ASPHALT**

- **Anti-strip additive**

**PAPER**

- **Emulsifying agent**
- **Flocculating agent**
- **Wet strength resin**

**MINING**

- **Ore flotation cationic collector**

**ANALYSIS**

- **Calcium, magnesium**
- **Barium, strontium**
- **Phosphate, silicate**
- **Fluoride, chloride**

**OIL AND GAS SCALE INHIBITOR**

From the pipeline to the refinery, FlexaTram-BHM provides excellent protection from a variety of common scales, including calcium carbonate (CaCO₃), calcium sulfite (CaSO₃), barium (BaSO₄), and strontium sulfates (SrSO₄).

**OIL AND GAS CORROSION INHIBITOR**

FlexaTram-BHM promotes excellent corrosion inhibition properties in vapor corrosion inhibitors (VCI) and film-forming corrosion inhibitors (FFCI).

**OIL AND GAS WATER clarifier**

FlexaTram-BHM is used to produce wide range of ethoxylated amines and ethoxylated fatty amines with various amounts of ethylene oxide. These amines are used as emulsifiers, surfactants, foaming agents, and corrosion inhibition in oil field and gas field applications.

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**PROPERTIES**

- **Amine value range (mg KOH/g)**: 500 – 800
- **Amine hydrogen equivalent weight (AHEW, ±3)**: 37, 38, 38, 34, 36
- **Freeze point range (°C)**: 22 – 24, 25 – 30, 22 – 24, 13 – 15, 13 – 15
- **Viscosity (cp ±5)**: 40 @ 30°C, 30 @ 45°C, 30 @ 45°C, 24 @ 25°C, 21 @ 25°C
- **Metal content (ppm)**: n/a, 0-700, 0-160, n/a, n/a
- **Purity (BHM%)**: 45 min, 45 min, 45 min, 42 min, 42 min

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<tr>
<th>Purpose</th>
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<tr>
<td>Corrosion inhibitor &amp; gas treatment</td>
<td>Effective against Ca/Mg carbonate and Ba/Sr sulfate</td>
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<tr>
<td>Scale inhibitors</td>
<td>Effective at high pH 6-8</td>
</tr>
<tr>
<td>Clay stabilizer &amp; drilling mud</td>
<td>Calcium carbonate (calcite)</td>
</tr>
<tr>
<td>Chelating agent</td>
<td>Effective at low pH 1-2</td>
</tr>
<tr>
<td>Lubricant &amp; surfactant</td>
<td>Potassium salt for calcium sulfate inhibition</td>
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<td>Water clarifier</td>
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**OIL AND GAS**

- **FlexaTram-BHM 120**: Corrosion inhibitor & gas treatment
  - Effective against Ca/Mg carbonate and Ba/Sr sulfate
- **FlexaTram-BHM 150**: Scale inhibitors
- **FlexaTram-BHM 170**: Clay stabilizer & drilling mud
- **FlexaTram-BHM 220**: Chelating agent
- **FlexaTram-BHM 300**: Lubricant & surfactant

**PAPER**

- **FlexaTram-BHM 120**: Water clarifier
- **FlexaTram-BHM 150**: Corrosion inhibitor & gas treatment
- **FlexaTram-BHM 170**: Scale inhibitors
- **FlexaTram-BHM 220**: Clay stabilizer & drilling mud
- **FlexaTram-BHM 300**: Chelating agent

**ASPHALT**

- **FlexaTram-BHM 120**: Anti-strip additive
- **FlexaTram-BHM 150**: Cationic emulsifying agent
- **FlexaTram-BHM 170**: Antistrip additive
- **FlexaTram-BHM 220**: Flocculating agent
- **FlexaTram-BHM 300**: Water strength resin

**MINING**

- **FlexaTram-BHM 120**: Ore-flotation cationic collector
- **FlexaTram-BHM 150**: Ore-flotation cationic collector
- **FlexaTram-BHM 170**: Ore-flotation cationic collector
- **FlexaTram-BHM 220**: Ore-flotation cationic collector
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KEY CHARACTERISTICS
- Multifunctional amine
- Available as liquid or solid
- High amine value
- Low vapor pressure

inspiring everyday

FORMULATED AMINES