ADMER™ Adhesive Resin

ADMER™ resins are modified polyolefins with functional groups, designed to bond to a variety of polyolefins, ionomers, polyamides, ethylene vinyl alcohol (EVOH), polyester (e.g. PET) and metals. They serve as tie layer in multilayer applications such as films, sheets, bottles, tanks, pipes, tubes and others and, thus, help to combine the excellent properties of incompatible materials, as, for example, gas barrier resins and moisture barrier resins.

ADMER™ resins are also used as coupling agents, compatibilizers and impact modifiers in various types of composites. ADMER™ adhesives are thermoplastics and can be as easily processed as any other polyolefin by (co-)extrusion or powder coating. ADMER™ is famous for its excellent quality and is therefore the world’s leading polyolefin-based adhesive. Production sites all over the world assure a constant and convenient availability of our top quality adhesives.

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ADMER™ KEY FACTS

- Maleic anhydride grafted polyolefin
- Extrudable
- Tie resin
- Adhering to barrier materials
  - Ethylene vinyl alcohol (EVOH), polyamide (PA), metals

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Multilayer Structure with ADMER™ Characteristics

1. STRONG ADHESION
By thermal reaction ADMER™ adheres to ethylene vinyl alcohol (EVOH), polyamide (PA), polyester (PET), polyolefins (PE, PP) and metals.

2. ADHESION DURABILITY
ADMER™ shows excellent long-term adhesion strength even after secondary processing like pasteurization, hot filling, boiling and sterilization.

3. POLYOLEFIN-LIKE PROPERTIES
Since ADMER™ is based on polyolefins or co-polymers, it retains the physical properties of each polyolefin or co-polymer including mechanical strength, heat resistance, chemical resistance and recyclability.

4. EASY PROCESSING
ADMER™, a thermoplastic, can be processed as easily as any other polyolefin by the following methods:

- FILM CO-EXTRUSION (CAST AND BLOWN FILM)
- CO-EXTRUSION BLOW MOULDING
- SHEET CO-EXTRUSION
- TUBE CO-EXTRUSION
- CO-EXTRUSION COATING
- METAL COATING
- CO-INJECTION
Packaging Applications

Nowadays packaging applications are highly demanding. As they can meet a wide range of requirements, multilayer structures become increasingly popular. Food manufacturers, for instance, aim to keep their food fresh by protecting the packed food from oxygen, odour and moisture. Main targets are to prolong shelf life and to reduce food waste. Furthermore, aromas and protective modified atmosphere should be kept inside of the packaging, whereupon the packaging itself should be lightweight, hard-wearing and attractive.

These packaging types are common for fresh meat, cheese, sauces, dairy products and many others. Cosmetics and pharmaceuticals are further areas of application. Coextrusion coating of ADMER™ with other plastics onto paper or foil offers additional opportunities in the packaging area.

As there is no single material which delivers all these properties by itself, barrier materials need to be combined with polymers, metals or paper. ADMER™ serves as tie layer between those incompatible materials and makes high performing multilayer structures possible!

ADMER™ resins are well-known for setting the market standards in terms of quality and efficiency! ADMER™ resins are THE missing link for your multilayer innovations!

HIGH PERFORMING STRUCTURES MAY FEATURE:

- BARRIER TO OXYGEN, FLAVOUR, ODOUR, MOISTURE
- MECHANICAL STRENGTH
- SEALABILITY
- PRINTABILITY
- THERMOFORMABILITY
- TRANSPARENCY AND GLOSS
- TEMPERATURE RESISTANCE
- FLEXIBILITY OR RIGIDITY
- PUNCTURE RESISTANCE
- FOOD CONTACT COMPLIANCE
FLEXIBLE PACKAGING
Comprises films, casings, pouches, tubes. Usual processing methods are: Co-extrusion blown and cast film, tube co-extrusion, and laminates.

RIGID PACKAGING
Covers cups, trays, bottles, and containers. Usual processing methods are: Co-extrusion sheet processing and thermoforming, co-extrusion blow moulding.

EXTRUSION COATING
Covers coated paperboards like retortable carton-based packaging, as well as coated aluminium for pet food packaging.

- Fresh meat
- Cheese
- Fish
- Milk pouch
- Sausages
- Poultry
- Half-baked bread
- Fresh pasta
- Coffee pouch
- Coffee pouch
- Bag-in-Box for drinks (e.g. wine, juices)
- Tomato paste
- Sauces
- Medical nutrition
- IV bags
- Cosmetics
- Aseptic packaging
- Baby food
- Coffee capsules
- Fresh meat
- Convenience food (microwave)
- Dairy products
- Agrochemicals
- Ketchup & mayonnaise
- Sauces
- Medical nutrition
- Fruits
- Retortable carton-based packaging
- Liquid packaging boards
- Pet food packaging
- Tube laminates
- Lid films
## Standard Grades for Packaging Applications

### PE-TYPE (these grades are based on LLDPE)

<table>
<thead>
<tr>
<th></th>
<th>MFR (2.16 kg/10 min)</th>
<th>DENSITY (g/m³)</th>
<th>VICAT SOFT. POINT (°C)</th>
<th>MELTING POINT (°C)</th>
<th>ADHESION PERFORMANCE</th>
<th>ADHERENT TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT2235E*</td>
<td>0.3</td>
<td>0.92</td>
<td>98</td>
<td>–</td>
<td>++</td>
<td>PA ✔️ EVOH ✔️</td>
</tr>
<tr>
<td>NF358E**</td>
<td>1.6</td>
<td>0.91</td>
<td>82</td>
<td>120</td>
<td>++</td>
<td>PA ✔️ EVOH ✔️</td>
</tr>
<tr>
<td>NF408E</td>
<td>1.6</td>
<td>0.92</td>
<td>100</td>
<td>120</td>
<td>+</td>
<td>PA ✔️ EVOH ✔️</td>
</tr>
<tr>
<td>NF528E</td>
<td>2.5</td>
<td>0.91</td>
<td>69</td>
<td>120</td>
<td>+++</td>
<td>PA ✔️ EVOH ✔️</td>
</tr>
<tr>
<td>NF498E</td>
<td>2.6</td>
<td>0.91</td>
<td>82</td>
<td>120</td>
<td>+</td>
<td>PA ✔️ EVOH ✔️</td>
</tr>
<tr>
<td>NF518E</td>
<td>3.1</td>
<td>0.91</td>
<td>80</td>
<td>120</td>
<td>++</td>
<td>PA ✔️ EVOH ✔️</td>
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<tr>
<td>NF642E*</td>
<td>4.0</td>
<td>0.92</td>
<td>92</td>
<td>108</td>
<td>depends on blending</td>
<td>PA ✔️ EVOH ✔️</td>
</tr>
</tbody>
</table>

### CAST FILM / COATING

<table>
<thead>
<tr>
<th></th>
<th>MFR (2.16 kg/10 min)</th>
<th>DENSITY (g/m³)</th>
<th>VICAT SOFT. POINT (°C)</th>
<th>MELTING POINT (°C)</th>
<th>ADHESION PERFORMANCE</th>
<th>ADHERENT TO</th>
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<tbody>
<tr>
<td>AT1707E</td>
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<td>0.91</td>
<td>64</td>
<td>120</td>
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<td>PA ✔️ EVOH ✔️</td>
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<tr>
<td>NF377E</td>
<td>4.5</td>
<td>0.92</td>
<td>88</td>
<td>120</td>
<td>+</td>
<td>PA ✔️ EVOH –</td>
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<tr>
<td>NF837E</td>
<td>10.0</td>
<td>0.92</td>
<td>82</td>
<td>120</td>
<td>+++</td>
<td>PA ✔️ EVOH ✔️</td>
</tr>
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</table>

### PP-TYPE (these grades are based on PP)

<table>
<thead>
<tr>
<th></th>
<th>MFR (2.16 kg/10 min)</th>
<th>DENSITY (g/m³)</th>
<th>VICAT SOFT. POINT (°C)</th>
<th>MELTING POINT (°C)</th>
<th>ADHESION PERFORMANCE</th>
<th>ADHERENT TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>QB520E</td>
<td>1.8</td>
<td>0.90</td>
<td>140</td>
<td>160</td>
<td>++</td>
<td>PA ✔️ EVOH ✔️</td>
</tr>
<tr>
<td>QB510E</td>
<td>3.0</td>
<td>0.90</td>
<td>142</td>
<td>160</td>
<td>+</td>
<td>PA ✔️ EVOH ✔️</td>
</tr>
</tbody>
</table>

### CAST FILM / COATING

<table>
<thead>
<tr>
<th></th>
<th>MFR (2.16 kg/10 min)</th>
<th>DENSITY (g/m³)</th>
<th>VICAT SOFT. POINT (°C)</th>
<th>MELTING POINT (°C)</th>
<th>ADHESION PERFORMANCE</th>
<th>ADHERENT TO</th>
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<tbody>
<tr>
<td>AT1179E***</td>
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<td>0.91</td>
<td>151</td>
<td>163</td>
<td>++</td>
<td>PA ✔️ EVOH ✔️</td>
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<tr>
<td>QF541E</td>
<td>5.0</td>
<td>0.90</td>
<td>120</td>
<td>–</td>
<td>++</td>
<td>PA ✔️ EVOH ✔️</td>
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<tr>
<td>QF551E</td>
<td>5.0</td>
<td>0.89</td>
<td>120</td>
<td>147</td>
<td>+++</td>
<td>PA ✔️ EVOH ✔️</td>
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<tr>
<td>QF300E</td>
<td>6.2</td>
<td>0.91</td>
<td>146</td>
<td>160</td>
<td>+</td>
<td>PA ✔️ EVOH –</td>
</tr>
<tr>
<td>QE800E*</td>
<td>9.1</td>
<td>0.90</td>
<td>150</td>
<td>–</td>
<td>depends on blending</td>
<td>PA ✔️ EVOH ✔️</td>
</tr>
<tr>
<td>AT1404E</td>
<td>7.0</td>
<td>0.90</td>
<td>120</td>
<td>145</td>
<td>+++</td>
<td>PA ✔️ EVOH ✔️</td>
</tr>
<tr>
<td>QF829E</td>
<td>13.0</td>
<td>0.89</td>
<td>120</td>
<td>–</td>
<td>+++</td>
<td>PA ✔️ EVOH ✔️</td>
</tr>
<tr>
<td>QF825E</td>
<td>22.8</td>
<td>0.91</td>
<td>138</td>
<td>–</td>
<td>+++</td>
<td>PA ✔️ EVOH ✔️</td>
</tr>
</tbody>
</table>

### CO-INJECTION

<table>
<thead>
<tr>
<th></th>
<th>MFR (2.16 kg/10 min)</th>
<th>DENSITY (g/m³)</th>
<th>VICAT SOFT. POINT (°C)</th>
<th>MELTING POINT (°C)</th>
<th>ADHESION PERFORMANCE</th>
<th>ADHERENT TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT3115E</td>
<td>28.0</td>
<td>0.91</td>
<td>126</td>
<td>–</td>
<td>++</td>
<td>PA ✔️ EVOH ✔️</td>
</tr>
</tbody>
</table>

### SOFT GRADES FOR SPECIAL APPLICATIONS LIKE DOUBLE BUBBLE, TRIPLE BUBBLE, POLYESTER ADHESION (these grades are based on plastomers)

<table>
<thead>
<tr>
<th></th>
<th>MFR (2.16 kg/10 min)</th>
<th>DENSITY (g/m³)</th>
<th>VICAT SOFT. POINT (°C)</th>
<th>MELTING POINT (°C)</th>
<th>ADHESION PERFORMANCE</th>
<th>ADHERENT TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>NF927E</td>
<td>1.3</td>
<td>0.90</td>
<td>72</td>
<td>–</td>
<td>+++</td>
<td>PA ✔️ EVOH ✔️</td>
</tr>
<tr>
<td>NF911E</td>
<td>2.5</td>
<td>0.90</td>
<td>74</td>
<td>97</td>
<td>+</td>
<td>PA ✔️ EVOH ✔️</td>
</tr>
<tr>
<td>AT1955E</td>
<td>2.6</td>
<td>0.89</td>
<td>62</td>
<td>–</td>
<td>++</td>
<td>PA ✔️ EVOH ✔️</td>
</tr>
<tr>
<td>SF730E</td>
<td>2.7</td>
<td>0.90</td>
<td>54</td>
<td>–</td>
<td>+++</td>
<td>PA ✔️ EVOH ✔️</td>
</tr>
<tr>
<td>AT2614E</td>
<td>3.6</td>
<td>0.90</td>
<td>70</td>
<td>–</td>
<td>++</td>
<td>PA ✔️ EVOH ✔️</td>
</tr>
</tbody>
</table>

*Concentrate / **Anti-fog / ***BOPP

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ADMER™ ADHESIVE RESIN • GRADES FOR PACKAGING APPLICATIONS
## Examples of Packaging Structures (Outside < > Inside)

<table>
<thead>
<tr>
<th>Process</th>
<th>Structures</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flexible</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Film</strong></td>
<td>PA/ADMER™/PE</td>
<td>Meat</td>
</tr>
<tr>
<td></td>
<td>PA/ADMER™/EVA</td>
<td>Processed meat</td>
</tr>
<tr>
<td></td>
<td>PE/ADMER™/PA/ADMER™/PE</td>
<td>Cheese</td>
</tr>
<tr>
<td></td>
<td>PE/ADMER™/PA/EVOH/PA/ADMER™/PE</td>
<td>Fresh pasta, half-baked bread</td>
</tr>
<tr>
<td></td>
<td>PE/ADMER™/EVOH/ADMER™/PE</td>
<td>Meat, Cheese</td>
</tr>
<tr>
<td></td>
<td>PET/ADMER™/EVOH/ADMER™/PE</td>
<td>Meat, Cheese</td>
</tr>
<tr>
<td></td>
<td>PA/ADMER™/PE/ADMER™/EVOH/ADMER™/PE</td>
<td>Meat, Cheese</td>
</tr>
<tr>
<td></td>
<td>PET/ADMER™/PE/ADMER™/PA/EVOH/PA/ADMER™/PE</td>
<td>Meat, Cheese</td>
</tr>
<tr>
<td><strong>Casing</strong></td>
<td>PA/ADMER™/PA</td>
<td>Meat, Sausage</td>
</tr>
<tr>
<td><strong>Shrink Bag</strong></td>
<td>PA/EVOH/PA/ADMER™/PE</td>
<td>Meat, Sausage</td>
</tr>
<tr>
<td></td>
<td>PE/ADMER™/PA/EVOH/PA/ADMER™/PE</td>
<td>Meat, Sausage</td>
</tr>
<tr>
<td></td>
<td>PET/ADMER™/PA/EVOH/PA/ADMER™/PE</td>
<td>Meat, Sausage</td>
</tr>
<tr>
<td><strong>Tube</strong></td>
<td>PE/ADMER™/PA</td>
<td>Cosmetics</td>
</tr>
<tr>
<td></td>
<td>PE/ADMER™/PA/ADMER™/PE</td>
<td>Food, Cosmetics</td>
</tr>
<tr>
<td></td>
<td>PE/ADMER™/EVOH/ADMER™/PE</td>
<td>Pharmaceuticals, Cosmetics</td>
</tr>
<tr>
<td></td>
<td>PP/ADMER™/PE</td>
<td>Cosmetics</td>
</tr>
<tr>
<td><strong>Rigid</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bottle</strong></td>
<td>PP/ADMER™/EVOH/ADMER™/PP</td>
<td>Ketchup, Mayonnaise, Sauce</td>
</tr>
<tr>
<td></td>
<td>PE/ADMER™/EVOH/ADMER™/PE</td>
<td>Juice, Milk</td>
</tr>
<tr>
<td></td>
<td>PE/ADMER™/PA</td>
<td>Agrochemicals, Chemicals</td>
</tr>
<tr>
<td></td>
<td>PE/ADMER™/EVOH</td>
<td>Agrochemicals, Chemicals</td>
</tr>
<tr>
<td><strong>Cup</strong></td>
<td>PS/tie/EVOH/ADMER™/PE</td>
<td>Dairy products, Meals</td>
</tr>
<tr>
<td><strong>Tray</strong></td>
<td>PS/tie/EVOH/ADMER™/PP</td>
<td>Pudding, Yoghurt</td>
</tr>
<tr>
<td><strong>Jar</strong></td>
<td>PP/ADMER™/EVOH/ADMER™/PP</td>
<td>Retortable food, Sauces</td>
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<tr>
<td><strong>Coating</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Coating</strong></td>
<td>PE/Paper/PE/ADMER™/EVOH/ADMER™/PE</td>
<td>Beverages, Liquid carton</td>
</tr>
<tr>
<td></td>
<td>PE/Paper/PE/ADMER™/AL/ADMER™/PE</td>
<td>Beverages, Liquid carton</td>
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<tr>
<td></td>
<td>PE/Paper/PE/ADMER™/AL/ADMER™/EVOH/ADMER™/PE</td>
<td>Beverages, Liquid carton</td>
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<tr>
<td></td>
<td>PET/print/ADMER™/AL/ADMER™/PE</td>
<td>Pharmaceuticals</td>
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<tr>
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<td>PP/Paper/PP/ADMER™/EVOH/ADMER™/PP</td>
<td>Beverages, Liquid carton</td>
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<td>Beverages, Liquid carton</td>
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<tr>
<td></td>
<td>PP/Paper/PP/ADMER™/AL/ADMER™/EVOH/ADMER™/PP</td>
<td>Beverages, Liquid carton</td>
</tr>
<tr>
<td></td>
<td>AL/ADMER™/PE</td>
<td>Pet food, Coffee</td>
</tr>
<tr>
<td></td>
<td>AL/ADMER™/PP</td>
<td>Pet food, Coffee</td>
</tr>
</tbody>
</table>
ADMER™, the global market leader in extrudable tie resins, is produced in Europe, Asia and America – hence, worldwide availability is assured. The European market is served from our production sites in Germany and the Netherlands.

GLOBAL SUPPLY CAPABILITY OF ADMER™
Global Market Coverage from 3 Regions
Dear Sarit,

Please allow me to compliment your company, as agent for MITSUI, and Mitsui themselves, for the excellent service provided to us. No other agent nor supplier manages to supply as you and Mitsui do.

With 25 years in Plastopil, in import, I do have with what to compare! – and can only thank you and Mitsui; and let you know that your excellent customer service is much appreciated.

Best regards,
Barbara Hazan | Imports
Plastopil Hazorea Company Ltd.

25 kg PE-bags on CP1 wooden pallets;
Pallet dimension in m: 1.10 × 1.30 × 1.80 (width × length × height)

1,000 kg net pallet weight big bags or delivery in silo truck (bulk) available on request.

500 kg octabins (cardboard boxes) on CP3 wooden pallets;
Pallet dimension in m: 1.15 × 1.15 × 1.20 (width × length × height)
Handling Procedure

STORAGE
ADMER™ resins are supplied in the form of small, free flowing pellets and can be easily handled with commercially available equipment.

As long as ADMER™ is stored under good conditions, it does not require any special care in storage. Precaution should be taken in opening the package to avoid contamination by foreign materials.

DRYING
Since ADMER™ is a non-hygroscopic material, it absorbs less moisture than non-polyolefinic polymers. Therefore, ADMER™ does not require drying prior to processing.

DISPOSAL
ADMER™ can be re-used, recycled or incinerated with energy recovery. We do not recommend to dispose of ADMER™ on a landfill. ADMER™ should not be dumped into the environment.

Prior to using ADMER™ products, please read carefully its Product Group Safety Information Sheet according to Article 32 of Regulation (EC) No. 1907/2006 (REACH). Safety Data Sheets according to Article 31 are not required for ADMER™.
Processing Parameters

PROCESSING
The recommended temperatures for ADMER™ are as follows:

<table>
<thead>
<tr>
<th>MATERIALS</th>
<th>TEMPERATURE (°C)</th>
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<tbody>
<tr>
<td>PE-based grades</td>
<td></td>
</tr>
<tr>
<td>Polyethylene*</td>
<td>200 - 230</td>
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<tr>
<td>PP-based grades</td>
<td></td>
</tr>
<tr>
<td>Polypropylene</td>
<td>230 - 250</td>
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</table>

*Low density polyethylene (LDPE) is recommendable.
COMPLIANCE WITH REACH:
All ADMER™ monomers and additives, if applicable, have been pre-registered both by Mitsui Chemicals Europe GmbH and our EU suppliers or non-EU suppliers (via Only Representative). Registration of the major monomers was done by MCE in September 2010. Some substances have been or will be registered by our suppliers.

ADMER™ is in compliance with the requirements of Annex XVII of the REACH Regulation (EC) No. 1907/2006.

Substances listed on the REACH Candidate List of SVHCs (as amended on 17th December 2015) are not contained in ADMER™ concentrations at or above 0.1% by weight.

FOOD STATUS:
EU: ADMER™ is intended for use as an adhesive in multilayer structures. Following the definitions given in Commission Regulation (EU) No. 10/2011 and the Union Guidance to this Regulation published in November 2013, ADMER™ is a non-plastic intermediate for which a Declaration of Compliance as described in Annex IV to Commission Regulation (EU) No. 10/2011 does not have to be issued.

All monomers and additives of ADMER™ are listed as authorized substances in Annex I of Commission Regulation (EU) No. 10/2011 as amended. Please refer to our Food Status Certificates regarding substances restricted by SMLs. Some ADMER™ grades contain a Dual Use Additive subject to a restriction in food.

USA: All ADMER™ grades conform to FDA 21CFR, §175.105 (Adhesives) for indirect food contact. Some grades are also suitable for direct food contact.

Please contact us for further details or the food status of ADMER™ in other countries.

COMPLIANCE WITH FURTHER LEGISLATION RELEVANT TO FOOD CONTACT MATERIALS:
• Regulation (EU) No. 1169/2011 as amended (Absence of Allergenic Food Ingredients)
• US CONEG
• French Décret No. 98/638
COMPLIANCE WITH LEGISLATION RELEVANT TO ELECTRICAL AND ELECTRONIC EQUIPMENT:
- Directive 2011/65/EU as amended (RoHS2)
- Directive 2012/19/EU as amended (WEEE)
- Directive 2003/11/EC Brominated Flame Retardants

PHARMACEUTICAL PACKAGING
Most ADMER™ grades are in compliance with the definition of polyolefins given in chapter 3.2 of the European Pharmacopoeia Monograph. Pharmaceutical packaging always has to be tested and approved together with the respective pharmaceutical product. We will support our customers in any of those approval processes if required. Please contact us for further details.

MEDICAL DEVICES
ADMER™ is a product dedicated to food packaging, automotive and industrial applications. We do not recommend to use ADMER™ in medical applications. It is the sole responsibility of the manufacturer of medical devices to ensure the suitability of raw materials for the intended application. We are willing to support our customers in approval processes after receiving prior written information on the details of such applications.

Mitsui Chemicals Europe GmbH cannot assume any liability regarding the use of ADMER™ in medical applications or medical devices.

FURTHER LEGISLATIVE COMPLIANCE
- Directive 2005/84/EC as amended (Phthalates in Toys and Childcare Articles)
- Directive 2009/48/EC (Safety of Toys)
- DIN EN 71-3 on Toys
- California Proposition 65 (Status 4.12.15)

Status: May 2016
Laboratory
Our customer service laboratory is designed to evaluate and rate our customers’ products. We are well equipped for microscopic, mechanical, thermal and physical evaluations of plastic products from the packaging, automotive and industrial sector, e.g. films, tubes, bottles, fuel tanks and pipes. Some of our standard evaluations are: Adhesive strength measurement, determination of layer thicknesses, structural analysis of multilayer films, gel analysis and thermal analysis.
Our Quality Policies

More than 40 years experience in adhesive technologies and an outstanding expertise in various industries make us a competent partner for your business. ADMER™ resins for Europe, Middle East and Africa (EMEA) are produced in Germany and the Netherlands. The production in the heart of Europe assures highest quality standards, which are reflected by the following certifications:

<table>
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<th>CERTIFICATIONS</th>
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<tbody>
<tr>
<td>- ISO/TS 16949 (QUALITY MANAGEMENT SYSTEM)</td>
</tr>
<tr>
<td>- OHSAS 18001 (OCCUPATIONAL HEALTH- AND RISK MANAGEMENT SYSTEM)</td>
</tr>
<tr>
<td>- ISO 14001 (ENVIRONMENTAL MANAGEMENT SYSTEM)</td>
</tr>
<tr>
<td>- DIN EN ISO 50001:2011 (ENERGY MANAGEMENT SYSTEM)</td>
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</tbody>
</table>

CHEMICAL MANAGEMENT
Mitsui Chemicals sets to achieve its long-term chemical management goal, which is in line with guidelines set by the World Chemical Summit for Sustainable Development (WSSD), by 2020.

To contribute to a sustainable society, Mitsui Chemicals will establish LCIA technology for assessment of environmental impact of its economic activities and establish sustainability indices to support development of environment friendly products while staying in harmony with the global environment.

To contribute to a safe society, Mitsui Chemicals will employ product stewardship concepts to assess risks of its products and share this information with its stakeholders.
Strive for continuing improvements in environmental measures, occupational health and safety, and quality, beginning with compliance with applicable laws and regulations based on voluntary adherence to RC principles.

**ENVIRONMENT**
- Contribute to environmental preservation through new products and technologies.
- Assess and reduce the environmental load of products through their entire life cycle from research and development to final disposal.

**QUALITY**
- Supply high-quality products and services that earn the trust and satisfaction of customers so that they feel confident when using them.

**OCCUPATIONAL HEALTH & SAFETY**
- Give priority to safety, and aim for accident and injury-free operations.
- Promote the formation of an appropriate work environment and support a proactive health program for employees.
- Implement safety measures and procedures for handling chemical substances to prevent injury or harm to workers and others associated with those activities on site and in distribution, as well as customers.

**PROMOTING SELF-MANAGEMENT**
- Strive for continuing improvements in environmental measures, occupational health and safety, and quality, beginning with compliance with applicable laws and regulations based on voluntary adherence to RC principles.
Mitsui Chemicals around the World

OVERSEAS SITES
- Offices
- Manufacturing Sites
- R & D Facilities
Company Name
Mitsui Chemicals, Inc.

Established
October 1, 1997

President & CEO
Tsutomu Tannowa

Head Office
Shiodome City Center, 1-5-2 Higashi-Shimbashi
Minato-ku, Tokyo 105-7117 Japan
Telephone: +81-3-6253-2100
Facsimile: +81-3-6253-4245
www.mitsuichem.com

Paid-in Capital
125 billion yen

Employees
14271 (Consolidated / As of March 31, 2014)

Subsidiaries & Affiliates
135

Domestic Manufacturing Sites
6

Domestic Sales Offices
Head Office and three branches

Number of Shares
1,022,020,076

Business Groups
Functional Chemicals
Functional Polymeric Materials
Polyurethane
Basic Chemicals
Petrochemicals
Film / Sheets
Mitsui Chemicals Europe GmbH
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Germany
T: +49.211.173 320
admer-sales@mcie.de

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