ADHESIVES
STRUCTURAL BONDING
TRANSPORTATION • MARINE • AEROSPACE • GENERAL INDUSTRY
INTEGRATED PRESENCE

WITH OVER 75 YEARS OF EXPERIENCE. Sika Advanced Resins is the world leading provider and developer of high-performance resins, block materials and pastes for model and mould making. Sika Advanced Resins offers customized solutions for the composites industry, from the resin to the shape and finished parts up to the fitting structural adhesive. In addition, Sika Advanced Resins offers casting resins and functional coatings for industrial filters and dielectrics.

Sika Advanced Resins generates an annual turnover of € 150 million with 450 employees. Sika Advanced Resins is part of Sika AG, which is headquartered in Baar, Switzerland. Sika has subsidiaries in 101 countries worldwide, with more than 200 manufacturing sites. It has approx. 19,500 employees, who generated an annual turnover of CHF 7.1 billion in 2018.

COMPANY SUMMARY

INTEGRATED PRESENCE

ADEXIT by Sika Advanced Resins is a brand of PU, MMA and Epoxies adhesives is developed and designed to achieve:

EASY DISPENSING: The ADEXIT range is compatible with all dosing and dispensing equipment offered in the market. Packaging for manual operations range from 50cc to 400cc cartridges and bulk applications range from 1 liter to 200 liters. The cartridge product offering is completed with a range of accessories from guns to mixers and pinters. Sika Advanced Resins products ensure the best compromise between flow characteristics and the necessary thixotropic effects for a wide variety of applications including vertical surfaces and potting.

TAILORED CURING PROFILE: As productivity matters a good balance between open time and handling time is always a key development objective. The longest open time is required to secure industrial dispensing while the shortest handling time is preferred to speed up productivity. Thanks to Sika Advanced Resins global raw material sourcing, unique technologies like carbon nano fillers, the use of inductors on sensitivity or thermo latent catalyst are proposed to optimize process time.

HIGH PERFORMANCES: The structural assembly of two materials require the optimization of different properties e.g. High modulus link to elastic behavior. Sika Advanced Resins adhesives are designed to meet the requirements of different properties and achieve the targets for product shear, peel and fatigue resistance within the same product. These developments are part of the long and unique Sika Advanced Resins experiences spent at very close of customer requirements and demanding specifications.

CUSTOMIZED AND INNOVATIVE SOLUTIONS

As an innovative formulator Sika Advanced Resins is keen to customize systems and formulations to comply with the exact needs of industrial applications. Based on a solid experience in formulation for over 75 years and implementing the latest technologies into our adhesives enables us to bring solutions to new material assembly. Using unique Nano fillers technologies to enhance simultaneously properties like shear and peel resistance Sika Advanced Resins adhesives combine properties that normally are impossible to combine.

The control of chemical reactions are accurately managed thanks to new catalyst technologies that fully comply with REACh. This offers extended open times with very short handling time opening the doors of process demanding industries like automotive and composite. Sika Advanced Resins have been involved in advanced adhesive formulations for decades. This long lasting experience, in a very demanding field of activities, today results in a strong competence in structural bonding which has been acquired in tandem to customer specifications and processes. Hereunder some applications list and recommended materials are listed.

TRANSPORT: VEHICLES, AEROSPACE AND RAILWAY

Sika Advanced Resins’s range covers large thermoplastic, laminate composites and metallic assemblies that require a wide spectrum of modulus from flexible to rigid material:

FLEXIBLE

PU is preferred for dissimilar assembly with low adhesive thickness; absorb CTE gap, high elongation. Good energy absorption (crash). Handling in a few minutes with limited activation energy.

RIGID

For assembly with similar material or dissimilar with regular adhesive thickness.

EPOXY

For assembly requiring high modulus, high energy absorption (crash test).

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PRODUCT OVERVIEW

POLYURETHANE

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Application, description</th>
<th>Colour</th>
<th>Viscosity (Pa.s)</th>
<th>Hardness (shore)</th>
<th>Lap shear resistance (MPa)</th>
<th>Peel stress resistance (MPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 210</td>
<td>Bonding of bodywork, metallic structures (race cars and aeronautics), of inserts and composite structures.</td>
<td>X</td>
<td>60' 93A</td>
<td>5h 10 5 80</td>
<td>0</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ ++ +</td>
</tr>
<tr>
<td>A 220</td>
<td>For electronic components bonding, Self-extinguishing adhesive with FAR 25.853.</td>
<td>X</td>
<td>40' 95A</td>
<td>4h 10 9 80</td>
<td>0</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ ++ +</td>
</tr>
<tr>
<td>A 230</td>
<td>Excellent for vibration, impact and noise dampening. Excellent behavior at low temperature.</td>
<td>X</td>
<td>15' 480</td>
<td>150 60' (17)</td>
<td>16 12 95</td>
<td>0</td>
</tr>
<tr>
<td>H 230</td>
<td>Bonding of composite parts (BTM, SMC, laminate...), 2/3 metallic structures. High strength &amp; high peel combined with flexibility. Suitable for vertical applications and to fill irregular joints.</td>
<td>X</td>
<td>4' 70D</td>
<td>90 (20)</td>
<td>15 6 30</td>
<td>++ ++ ++ 0 0 0 ++ ++</td>
</tr>
<tr>
<td>H 235</td>
<td>Large dimensions assembly, Gap filling capacity. Used in industry assembling big parts.</td>
<td>X</td>
<td>40' 800</td>
<td>450</td>
<td>100 2h 19 6 10</td>
<td>25</td>
</tr>
<tr>
<td>A 236</td>
<td>Allows gaps up to 40mm and parts assembly with large-dimension (deck/hull, wind/rill).</td>
<td>X</td>
<td>25' 120</td>
<td>55 snsity</td>
<td>3h 6h</td>
<td>15 5 60</td>
</tr>
<tr>
<td>A 250</td>
<td>Non sagging paste, product suitable for vertical applications and to fill irregular joints. Fast setting product to reduce assembly time. High flexibility. Impact Resistant: 35N mm.</td>
<td>X</td>
<td>4' 75A</td>
<td>600 60' (15)</td>
<td>12 9 100</td>
<td>0</td>
</tr>
<tr>
<td>A 255</td>
<td>Recommended for plastic bonding sensitive to the phenomenon of bond line wetness (composite, thermoplastic). Broad spectrum of adhesion. Available in two reaction, can be used in thick seal, vertical or ceiling.</td>
<td>X</td>
<td>4' 25'</td>
<td>80A paste</td>
<td>90 5h</td>
<td>5 7 200</td>
</tr>
<tr>
<td>A 257</td>
<td>Recommended for the bonding of plastic sensitive to the phenomena of bond line wetness (composites, thermoplastic). Low hardness. Flexible product. Short handling with limited heating. Impact Resistant: 35N mm.</td>
<td>X</td>
<td>5' 60A paste</td>
<td>90 (2)</td>
<td>5 10 350</td>
<td>++ ++ ++ ++ ++ ++ 0</td>
</tr>
<tr>
<td>A 280</td>
<td>Structural bonding of spacers, metallic inserts, big head to composites, Vibration absorbing. Good chemical resistance.</td>
<td>X</td>
<td>10' 3'</td>
<td>480</td>
<td>150 45 (10)</td>
<td>10 (1)</td>
</tr>
<tr>
<td>A 310</td>
<td>High performance bonding for assembly requiring high modulus and stiffness. White UV stable and sandable. Self-extinguish.</td>
<td>X</td>
<td>6' 85</td>
<td>20 30' 25 2</td>
<td>10</td>
<td>++ ++ ++ ++ ++ 0</td>
</tr>
<tr>
<td>A 402</td>
<td>High dimension panels bonding (skin on core), honeycomb (nomex, aluminium, foam thermoplastics...), Wood, aluminium or metal sheets. 3 isocombinable (P-4004, 4002, 4013).</td>
<td>X</td>
<td>60' 80'</td>
<td>800</td>
<td>13 4 5h 18</td>
<td>6 10 30</td>
</tr>
</tbody>
</table>

METHACRYLATE

<table>
<thead>
<tr>
<th>Ref.</th>
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<th>Peel stress resistance (MPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 300</td>
<td>Excellent mechanical and thermal performances up to 120°C. Multipurpose product with thermoplastic aspect. Product able to bond diverse materials.</td>
<td>X</td>
<td>5' 10'</td>
<td>75D paste</td>
<td>20' 45'</td>
<td>24 9 30</td>
</tr>
</tbody>
</table>

EPoxy

<table>
<thead>
<tr>
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<th>Hardness (shore)</th>
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<th>Peel stress resistance (MPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 130</td>
<td>Fast cure at room temperature. Suitable for injection. Bonding of substrates such as composites, metal, wood, ceramic.</td>
<td>X</td>
<td>6' 75D</td>
<td>8SD 15</td>
<td>12' 17' 15 3</td>
<td>++ + 0</td>
</tr>
<tr>
<td>A 140</td>
<td>Multipurpose with very good mechanical features. Pasty non sagging Gap filler material. Impact Resistant: 10 N/mm².</td>
<td>X</td>
<td>42' 80D</td>
<td>430 4h30 (30')</td>
<td>20 6 4</td>
<td>++ ++ 0</td>
</tr>
<tr>
<td>A 145</td>
<td>Liquid adhesive. Long pot life. Excellent mechanical performance and chemical resistance.</td>
<td>X</td>
<td>85' 75D</td>
<td>50' 2h 24</td>
<td>24</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ ++ ++</td>
</tr>
<tr>
<td>A 150</td>
<td>Pasty constructive adhesive with long pot life. For large composite parts, repair and maintenance. Good mechanical performance &amp; chemical and temperature resistance. Impact Resistant: 35 N/mm².</td>
<td>X</td>
<td>60' 840</td>
<td>160 10h (1)</td>
<td>35 3 85</td>
<td>++ ++ 0</td>
</tr>
<tr>
<td>A 170</td>
<td>High performance room temperature curing adhesive. Slow setting product adapted to cover and bond wide surfaces. Low viscosity. Structural and panel bonding. Long open time.</td>
<td>X</td>
<td>30' 50'</td>
<td>830</td>
<td>1600 130 3h30</td>
<td>24 5 3</td>
</tr>
<tr>
<td>A 175</td>
<td>High performance room temperature adhesive. Slow setting product adapted to bond wide surfaces and heavy duty applications subject to impact or vibration. Schock resistant.</td>
<td>X</td>
<td>90' 80'</td>
<td>940 10h (4)</td>
<td>21 4 5</td>
<td>++ ++ ++ 0</td>
</tr>
<tr>
<td>H 911</td>
<td>Multipurpose liquid adhesive. Bond most of materials. For general industry and maintenance.</td>
<td>X</td>
<td>100' 75D</td>
<td>45 7h (30')</td>
<td>24 5 9</td>
<td>++ ++ ++ ++ ++ ++ ++ ++ ++ ++</td>
</tr>
<tr>
<td>H 9550</td>
<td>Non-filled adhesive. High structural performances and low outgassing for aerospace applications. Large sizes bodies, structural and panel bonding. Long open time.</td>
<td>X</td>
<td>2h 80D</td>
<td>50 200</td>
<td>4h 15</td>
<td>3</td>
</tr>
<tr>
<td>H 9552</td>
<td>Non-filled adhesive for bonding large surfaces (panels) when mechanical and as so hewal peel resistance is needed. T for thin section product. Not cure process. Used in railway.</td>
<td>X</td>
<td>2h 80D</td>
<td>28</td>
<td>6h</td>
<td>26</td>
</tr>
<tr>
<td>H 9552</td>
<td>High shear/peel/pasting resistance. Filled with Nanoparticles. Short handling time with limited heating. Self-extinguishing according to EN 954-2 / FAR 25.853 (R &amp; R) and AITM (ABD0031) standards.</td>
<td>X</td>
<td>100' 85D</td>
<td>230 8h (30')</td>
<td>25 5 3</td>
<td>++ ++ ++ 0</td>
</tr>
</tbody>
</table>
**INDUSTRY: MARINE, SPORT & LEISURE AND MILITARY**

**MARINE/LEISURE...**
Material composite bonding in those fields often requires:
- Long pot life products.
- Filling gaps between substrates.
- Various composites laminates bonding abilities.
- Slightly thixotropic for easy processing.

**GENERAL INDUSTRY**
Base on the experience acquired in high tech industries like automotive or aero, these products offer a wide range of adhesion for the majority of processes, from maintenance to industrial production.

**PANEL MANUFACTURING**
Sika Advanced Resins developed with market leader of insulating panels a range dedicated to these specific applications: bonding skin on core and panel assembly.

**ANCILLIARY PRODUCTS**
Sika Advanced Resins has selected a wide range of accessories hand tool equipment that combines perfectly with all materials listed.

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### GUNS & MIXERS
All guns are designed for intensive work offering precision and productivity and are suitable for putty, liquid and all thixotropic systems. Sika Advanced Resins selected mixer «Turbo» in accordance with these different systems.

<table>
<thead>
<tr>
<th>Cartridge</th>
<th>Ratio Mixers</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 cc</td>
<td>Spiral 5 x 24</td>
<td>C00602</td>
</tr>
<tr>
<td>400 B 200 cc</td>
<td>1/2 &amp; 2/1</td>
<td>C00801</td>
</tr>
<tr>
<td>400 B 200 cc</td>
<td>Spiral 24 x 24</td>
<td>E0504</td>
</tr>
<tr>
<td>200 cc</td>
<td>Turbo</td>
<td>Z96/09</td>
</tr>
</tbody>
</table>

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### SURFACE PREPARATION
Surface preparation from cleaning to primer application is essential to optimize bonding properties. Sika Advanced Resins will recommend a surface preparation programme adapted to each case.

### PACKAGING
Several standard packaging are available depending on the recommended processing way from cartridges to large bulks. Final choice is a compromise between economical, productivity and overall quality performances.
GLOBAL SOLUTIONS – LOCAL SERVICE

Our most current General Sales Conditions shall apply.

Please consult the Product Data Sheet prior to any use and processing.

Actual Product Data Sheets and information about additional products please find in: www.sikaadvancedresins.com