Bond-Flex

Structural adhesive, high initial grab and fully elastic after curing.

Bond-Flex is a superior structural adhesive, making the joint as strong as the structure. It’s based on MS Polymer® (MSP) technology which makes it extremely strong, environmentally friendly and fully elastic.

Bond-Flex adhesive is used in numerous industries including, commercial body builders, marine, aerospace, construction (landscaping, tiling & so much more) etc. Anywhere you seek a tough flexible rubber bond/joint that can withstand a high degree of vibration/ movement – Bond-Flex should be your first choice.

Fast Cure... High Green Strength... High Grab...

Characteristics
- High initial tack reducing the need for initial support.
- High bond strength and fast cure onto nearly all surfaces
- Primer less adhesion even damp surfaces (due to Bond-Flex’s unique adhesion properties)
- High performance shear and tensile (mechanical) properties
- Flexible elastic rubber - movement accommodation up to 20% +/−
- Straight forward application even in adverse conditions
- Colour stability and UV resistant
- Ecological advantages - free of isocyanates, silicone, solvents, halogens and acids.
- Solvent free and completely neutral - Minimal Health and Safety considerations
- No poisonous vapours
- Over paintable with all water based paints and many others
- Resistance to many chemicals and anti-fungicidal
- No staining of highly porous materials such as natural stone, blue stone, marble, granite.

Application examples
- Structural bonding in truck body fabrication including refrigerated trucks
- Elastic bonding in numerous building & construction trades
- Marine applications because its free of isocyanates
- Sanitary and kitchen areas - resists mould growth
- Structural bonding of vibrating components
- Industrial application for example sheet metal fabrication
- Paintable gap filler and sealant
- Direct bonding to the back of mirrors
- Direct bonding of traffic signs

Colours
White, Black, Other colours on request

Packaging
290ml cartridge and 600ml foil pack

Shelf life
12 months in unopened packaging in a dry and cool storage place at temperatures between +5°C and + 25°C
Technical data

<table>
<thead>
<tr>
<th>Chemical base</th>
<th>MS Polymer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity</td>
<td>Thick paste</td>
</tr>
<tr>
<td>Curing method</td>
<td>Air moisture cure</td>
</tr>
<tr>
<td>Skin Formation</td>
<td>Approx. 10 min (20 ºC/65% R.H.)</td>
</tr>
<tr>
<td>Curing Rate</td>
<td>2-3 mm/ 24 hrs (20 ºC/65% R.H.)</td>
</tr>
<tr>
<td>Hardness of rubber</td>
<td>50 +/- 5 Shore A</td>
</tr>
<tr>
<td>Shrinkage</td>
<td>none</td>
</tr>
<tr>
<td>Density (specific gravity)</td>
<td>1.62 g/ml</td>
</tr>
<tr>
<td>Temperature Resistance</td>
<td>- 40 ºC to + 90 ºC</td>
</tr>
<tr>
<td>Elongation at Break</td>
<td>500% (DIN 53504)</td>
</tr>
<tr>
<td>Elasticity Modulus</td>
<td>1.3 N/mm² (DIN 53504)</td>
</tr>
<tr>
<td>Elastical Recovery</td>
<td>&gt;75 %</td>
</tr>
<tr>
<td>Tear strength (tensil)</td>
<td>2.2 N/mm² (DIN 53504)</td>
</tr>
<tr>
<td>Maximum allowed distortion</td>
<td>20% +/-</td>
</tr>
</tbody>
</table>

Chemical resistance

<table>
<thead>
<tr>
<th>Good</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>Aromatic Solvents</td>
</tr>
<tr>
<td>Aliphatic Solvents</td>
<td>Concentrated Acids</td>
</tr>
<tr>
<td>Mineral Oils</td>
<td>Chlorinated Hydrogens</td>
</tr>
<tr>
<td>Grease</td>
<td></td>
</tr>
<tr>
<td>Inorganic Acids/Alkalis</td>
<td></td>
</tr>
</tbody>
</table>

Instructions for use

Surface preparation: Clean, free of dust and grease.  
Priming: For porous surfaces Primer 150 may be applied.  
Non porous substrates prepare with Aerobolt cleaner.

Joint dimensions

The optimal bond thickness for this product is at least 2 mm.

We recommend preliminary adhesion tests

Application Method: Manual or pneumatic caulking gun  
Application Temperature: +1 ºC to +30 ºC  
Clean with: White Spirit immediately after use  
Tool with: Soapy solution before skin formation  
Repair with: Bond-Flex

Safety measures

Apply the usual industrial hygiene.

Paintability

Bond-Flex may be overpainted, however due to the large number of paints and varnishes available we strongly suggest a compatibility test before application. The drying time of alkyd resin based paints may increase. Due to the wide variety of possible substrates, we recommend compatibility tests.

Important note

Bond-Flex can be applied to a wide variety of substrates, except glass. Further to the wide range of substrates such as plastics, polycarbonate etc. we always recommend preliminary compatibility tests.

Bond Flex cannot be used as a glazing sealant.

Note: The directives contained in this documentation are the result of our experiments and of our experience and have been submitted in good faith. Because of the diversity of the materials and substrates and the great number of possible applications which are out of our control, we cannot accept any responsibility for the results obtained. In every case it is recommended that preliminary experiments be carried out.
Material Safety Data Sheet

Section 1: Identification Of Substance / Preparation & Company

Product/Material: Hybrid polymer sealant

Product Description:

Trade Name:   Bond-Flex (all colours)
Chemical Name & Synonyms: N/A
Chemical Family: N/A
Name of Contact: Jim Roustas
Importer: Aerobolt Australia Pty Ltd
Address: 12/2 Barry Road, Chipping Norton, NSW, 2170, Australia
Emergency Telephone Number: +61 2 97553747
Date: 1 January 2020

SECTION 2: Composition / Information On Ingredients

(A) Substances classified under CHIP None

SECTION 3: Hazards Identification / Adverse Human Health Effects

(i) Inhalation  Irritating effects on nose, throat and respiratory tract at high concentration
(ii) Skin Contact May cause irritation after prolonged exposure, defatting of the skin and possible dermatitis
(iii) Eye Contact Irritation
(iv) Ingestion Unlikely to occur – will cause discomfort
(v) Delay effects after exposure None expected

SECTION 4: First Aid Measures

(i) Inhalation Remove from contaminated atmosphere and seek medical attention
(ii) Skin Contact Remove contamination using proprietary resin-removing cream
Wash area with soap and water
(iii) Eye Contact Flush with copious amounts of water. Seek medical attention
(iv) Ingestion Do not induce vomiting. Seek medical attention.
SECTION 5: Fire & Explosion Hazard Data

Flash Point (°C) N/A
Flammable Limits (% by volume) N/A
Auto ignition Temperature N/M
Suitable extinguishing media Foam, powder, carbon dioxide, water spray
Decomposition/Combustion products Carbon monoxide, carbon dioxide, nitrogen oxide, isocyanate vapour and traces of hydrogen cyanide
Special firefighting procedures Isocyanates will support combustion. Do not breathe smoke. Personnel downwind must be evacuated. Do not discharge extinguishing water into streams, rivers and lakes.
Special protective fire fighting equipment Full face, positive pressure, self-contained breathing apparatus and full protective clothing

SECTION 6: Accidental Release Measures / Spills And Leaks

Personal protection Adequate ventilation. Protective gloves and eye protection
Environmental precautions No adverse environment effects anticipated
Cleaning up method Allow to cure. Remove as inert, solid industrial waste

SECTION 7: Handling And Storage

Precautions for safe handling Avoid contact with skin and eyes. Avoid inhalation of vapours
Conditions for safe storage Store temperature 5°C - 25°C. Must be kept dry

SECTION 8: Exposure Control / Personal Protection

Maximum exposure limit 8 hour TWA 0.02 mg/m³ (isocyanates)
Maximum exposure limit 10 min ref. 0.07 mg/m³ (isocyanates)
Precautionary Engineering Measures In high concentration conditions, local exhaust ventilation. If concentration likely to exceed MEL, suitable organic vapour mask.
Hand protection Impervious gloves
Eye protection Glasses or goggles
Skin protection Protective overalls

SECTION 9: Physical & Chemical Properties

Appearance Coloured one-component sealant moisture curing to a flexible solid
Odour Aromatic
pH N/A
Viscosity Thixotropic paste
Density (H²O = 1) Approx. 1.22
Vapour density 89 mbar at 20°C
Explosion limits N/A
Water solubility (% by weight) Insoluble
Conductivity N/A
Boiling point/boiling range (°C) N/A
Melting point/melting range (°C) N/A
Flash point (°C) 25
Flammability limits N/A
SECTION 10: Stability & Reactivity

Stability / Conditions to avoid
Stable. Avoid moisture

Incompatibility / Materials to avoid
Alcohols and amines. Water

Hazardous decomposition products
None under normal conditions

Hazardous polymerisation
None

SECTION 11: Toxicological Information

Hazardous ingredients
See section 2

Immediate health effects
See section 3

Delayed health effects
See section 3

Acute effects (short term)
See section 3

Chronic effects (long term)
See section 3

SECTION 12: Ecological Information

Environmentally dangerous
Ingredients
None identified

Mobility
Non-flowing paste

Persistence and degradability
Not established

Bio accumulative potential
Not established. None expected

Aquatic toxicity
Not established. None expected

Marine pollutant
No

SECTION 13: Disposal Considerations

Disposal of waste materials
Allow to moisture cure. Treat as inert, solid industrial waste

Disposal of waste containers
Normal industrial waste

Disposal restrictions
No

Statutory notification required
No

Disposal should be in accordance with local, state or national legislation.

SECTION 14: Transport / Label Information

14.1 Classification of the substance in compliance with UN recommendations.
UN Number
CLASS
SUB RISKS
PACKING
PROPER SHIPPING NAME
: NOT SUBJECT
:
:
:
UN 1993, flammable liquid, n.o.s. (xylenes)

14.2 ADR (transport by road)
CLASS
PACKING
DANGER LABELS TANKS
DANGER LABELS PACKAGES
: NOT SUBJECT
:
:
:

14.3 RID (transport by rail)
CLASS
PACKING
DANGER LABELS TANKS
DANGER LABELS PACKAGES
: NOT SUBJECT
:
:
:
14.4 ADNR (transport by inland waterways)
CLASS : NOT SUBJECT
PACKING :
DANGER LABELS TANKS :
DANGER LABELS PACKAGES :

14.5 IMDG (maritime transport)
CLASS : 3
SUB RISKS :
PACKING : III
MFAG :
EMS : F-E, S-E
MARITIME POLLUTANT :

14.6 ICAO (air transport)
CLASS : 3
SUB RISKS :
PACKING : III
PACKING INSTRUCTIONS PASSENGER AIRCRAFT : 309/Y309
PACKING INSTRUCTIONS CARGO AIRCRAFT : 310

14.7 SPECIAL CONDITIONS RELATING TO TRANSPORT :
Not subject to ADR, RID, ADNR and IMD. Viscous liquid with a flash point ranging from 23º C to 61º C, which meets the conditions indicated in 2.2.3.1.5 of ADR, RID and ADNR and in 2.3.2.5 of IMDG.