



SAFETY DATA SHEET
SUBSTRATE BONDER SB100 PART A

Page: 1
Compilation date: 08/01/2009
Revision date: 30/03/2018
Revision No: 6

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: SUBSTRATE BONDER SB100 PART A

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of substance / mixture: Bonding agent for acrylic and polyester sheets.

1.3. Details of the supplier of the safety data sheet

Company name: Integra Adhesives Inc.

Unit 4 - 33759 Morey Avenue

Abbotsford

British Columbia

V2S 2W5

Canada

Tel: +1 (604) 850 1321

Fax: +1 (604) 850 1354

Email: contact@integra-adhesives.com

1.4. Emergency telephone number

Emergency tel: +1 (352) 323 3500 (Infotrac) — Contract #103390

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Eye Irrit. 2: H319; Acute Tox. 4: H332; Carc. 2: H351; Resp. Sens. 1: H334; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT RE 2: H373; STOT SE 3: H335; -: EUH204

Classification under CHIP: Xn: R20; Xi: R36/37/38; Xn: R40; Sens.: R42/43; Xn: R48/20

Most important adverse effects: Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. Contains isocyanates. May produce an allergic reaction.

2.2. Label elements

Label elements under CLP:

Hazard statements: H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H332: Harmful if inhaled.

[cont...]

SAFETY DATA SHEET

SUBSTRATE BONDER SB100 PART A

Page: 2

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335: May cause respiratory irritation.

H351: Suspected of causing cancer.

H373: May cause damage to organs through prolonged or repeated exposure.

EUH204: Contains isocyanates. May produce an allergic reaction.

Signal words: Danger

Hazard pictograms: GHS07: Exclamation mark

GHS08: Health hazard



Precautionary statements: P202: Do not handle until all safety precautions have been read and understood.

P260: Do not breathe vapours.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P302+352: IF ON SKIN: Wash with plenty of soap and water.

P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312: Call a POISON CENTER or doctor if you feel unwell.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

DIPHENYLMETHANE DIISOCYANATE (ISOMERS AND HOMOLOGUES)

| EINECS | CAS | CHIP Classification | CLP Classification | Percent |
|--------|-----------|---------------------|---|---------|
| - | 9016-87-9 | - | Carc. 2: H351; Acute Tox. 4: H332; STOT RE 2: H373; Eye Irrit. 2: H319; STOT SE 3: H335; Skin Irrit. 2: H315; Resp. Sens. 1: H334; Skin Sens. 1: H317 | 50-70% |

[cont...]

SAFETY DATA SHEET
SUBSTRATE BONDER SB100 PART A

Page: 3

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

| | | | | |
|-----------|----------|---|---|--------|
| 202-966-0 | 101-68-8 | - | Carc. 2: H351; Acute Tox. 4: H332; STOT RE 2: H373; Eye Irrit. 2: H319; STOT SE 3: H335; Skin Irrit. 2: H315; Resp. Sens. 1: H334; Skin Sens. 1: H317 | 30-50% |
|-----------|----------|---|---|--------|

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin.

Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Consult a doctor.

Eye contact: Bathe the eye with running water for 15 minutes. Consult a doctor.

Ingestion: Wash out mouth with water. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. If unconscious, check for breathing and apply artificial respiration if necessary. Seek immediate medical attention.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Keep at rest in a position comfortable for breathing. If unconscious and breathing is OK, place in the recovery position. If breathing becomes bubbly, have the casualty sit and provide oxygen if available. Obtain immediate medical advice.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be vomiting.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

4.3. Indication of any immediate medical attention and special treatment needed

Immediate / special treatment: Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. Eye bathing equipment should be available on the premises. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Water spray. Carbon dioxide. Alcohol resistant foam. Dry chemical powder. Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

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SAFETY DATA SHEET
SUBSTRATE BONDER SB100 PART A

Page: 4

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. If outside do not approach from downwind. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Do not attempt to take action without suitable protective clothing - see section 8 of SDS. Turn leaking containers leak-side up to prevent the escape of liquid. Avoid inhalation and contact with the skin or eyes

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding. Alert the neighbourhood to the presence of fumes or gas.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Clean-up should be dealt with only by qualified personnel familiar with the specific substance. Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS. Refer to section 13 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air. Do Not ingest Do Not inhale gas/vapour/fumes/spray Avoid contact with skin and eyes. Wash any exposed skin immediately after any chemical contact, before breaks and meals, and at the end of each work period.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed. Store away from food and drink.

Suitable packaging: Must only be kept in original packaging.

[cont...]

SAFETY DATA SHEET
SUBSTRATE BONDER SB100 PART A

Page: 5

7.3. Specific end use(s)

Specific end use(s): No data available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Hazardous ingredients:

DIPHENYLMETHANE DIISOCYANATE (ISOMERS AND HOMOLOGUES)

Workplace exposure limits:

Respirable dust

| State | 8 hour TWA | 15 min. STEL | 8 hour TWA | 15 min. STEL |
|-------|------------------------|------------------------|------------|--------------|
| UK | 0.02 mg/m ³ | 0.07 mg/m ³ | - | - |

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

| | | | | |
|----|------------------------|------------------------|---|---|
| UK | 0.02 mg/m ³ | 0.07 mg/m ³ | - | - |
|----|------------------------|------------------------|---|---|

DNEL/PNEC Values

DNEL / PNEC No data available.

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area.

Respiratory protection: Respiratory protective device with particle filter. Gas/vapour filter, type A: organic vapours (EN141).

Hand protection: Impermeable gloves.

Eye protection: Safety glasses with side-shields. Ensure eye bath is to hand.

Skin protection: Impermeable protective clothing.

Environmental: No special requirement.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Off-white

Odour: Odourless

Evaporation rate: No data available.

Oxidising: Non-oxidising (by EC criteria)

Solubility in water: Reacts with water.

Viscosity: No data available.

Boiling point/range°C: 316

Melting point/range°C: <0

Flammability limits %: lower: No data available.

upper: No data available.

Flash point°C: 190

Part.coeff. n-octanol/water: No data available.

Autoflammability°C: 240

Vapour pressure: 0.66-1.3kPa

Relative density: 1.22

pH: No data available.

VOC g/l: No data available.

[cont...]

SAFETY DATA SHEET
SUBSTRATE BONDER SB100 PART A

Page: 6

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.
Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Heat. Hot surfaces. Flames.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Hazardous ingredients:

DIPHENYLMETHANE DIISOCYANATE (ISOMERS AND HOMOLOGUES)

| | | | | |
|-----|-----|------|-------|-------|
| ORL | RAT | LD50 | 49 | gm/kg |
| SKN | RBT | LD50 | >9400 | mg/kg |

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE

| | | | | |
|-----|-----|------|------|-------|
| ORL | MUS | LD50 | 2200 | mg/kg |
| ORL | RAT | LD50 | 9200 | mg/kg |

Relevant effects for mixture:

| Effect | Route | Basis |
|--------------------------|-------------|-----------------------|
| Acute toxicity (harmful) | INH | Hazardous: calculated |
| Irritation | OPT INH DRM | Hazardous: calculated |
| Sensitisation | INH DRM | Hazardous: calculated |

[cont...]

SAFETY DATA SHEET
SUBSTRATE BONDER SB100 PART A

Page: 7

| | | |
|------------------------|-----|-----------------------|
| Repeated dose toxicity | INH | Hazardous: calculated |
|------------------------|-----|-----------------------|

Symptoms / routes of exposure

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be vomiting.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values: No data available.

12.2. Persistence and degradability

Persistence and degradability: No data available.

12.3. Bioaccumulative potential

Bioaccumulative potential: Bioaccumulation potential.

12.4. Mobility in soil

Mobility: No data available.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: No data available.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

Disposal of packaging: Arrange for collection by specialised disposal company.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

Transport class: This product does not require a classification for transport.

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Specific regulations: This product is a Seveso category/named substance in Annex I of Council Directive 96/82/EC.

[cont...]

SAFETY DATA SHEET
SUBSTRATE BONDER SB100 PART A

Page: 8

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

This safety data sheet is prepared in accordance with Commission Regulation (EC) No 1272/2008.

Phrases used in s.2 and s.3: EUH204: Contains isocyanates. May produce an allergic reaction.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H332: Harmful if inhaled.

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335: May cause respiratory irritation.

H351: Suspected of causing cancer <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

H373: May cause damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

R20: Harmful by inhalation.

R36/37/38: Irritating to eyes, respiratory system and skin.

R40: Limited evidence of a carcinogenic effect.

R42/43: May cause sensitisation by inhalation and skin contact.

R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.



SAFETY DATA SHEET
SUBSTRATE BONDER SB100 PART B

Page: 1
Compilation date: 08/01/2009
Revision date: 30/03/2018
Revision No: 6

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: SUBSTRATE BONDER SB100 PART B

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of substance / mixture: Bonding agent for acrylic and polyester sheets.

1.3. Details of the supplier of the safety data sheet

Company name: Integra Adhesives Inc.

Unit 4 - 33759 Morey Avenue

Abbotsford

British Columbia

V2S 2W5

Canada

Tel: +1 (604) 850 1321

Fax: +1 (604) 850 1354

Email: contact@integra-adhesives.com

1.4. Emergency telephone number

Emergency tel: +1 (352) 323 3500 (Infotrac) — Contract #103390

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: This product has no classification under CLP.

2.2. Label elements

Label elements: This product has no label elements.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

SAFETY DATA SHEET
SUBSTRATE BONDER SB100 PART B

Page: 2

2,2'-OXYBISETHANOL.

| EINECS | CAS | CHIP Classification | CLP Classification | Percent |
|-----------|----------|---------------------|-------------------------------------|---------|
| 203-872-2 | 111-46-6 | - | Acute Tox. 4: H302; STOT RE 2: H373 | 1-10% |

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water.

Eye contact: Bathe the eye with running water for 15 minutes.

Ingestion: Wash out mouth with water. Do not induce vomiting. Consult a doctor.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat.

Inhalation: No symptoms.

Delayed / immediate effects: No data available.

4.3. Indication of any immediate medical attention and special treatment needed

Immediate / special treatment: Not applicable.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. Turn leaking containers leak-side up to prevent the escape of liquid.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

[cont...]

SAFETY DATA SHEET
SUBSTRATE BONDER SB100 PART B

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS. Refer to section 13 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Wash any exposed skin immediately after any chemical contact, before breaks and meals, and at the end of each work period.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed.
Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Section 8: Exposure controls/personal protection

8.1. Control parameters

Hazardous ingredients:

2,2'-OXYBISETHANOL.

Workplace exposure limits:

Respirable dust

| State | 8 hour TWA | 15 min. STEL | 8 hour TWA | 15 min. STEL |
|-------|------------|--------------|------------|--------------|
| UK | 101 mg/m3 | - | - | - |

DNEL/PNEC Values

DNEL / PNEC No data available.

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area.

Respiratory protection: Respiratory protection not required.

Hand protection: Butyl gloves.

Eye protection: Safety goggles. Ensure eye bath is to hand.

Skin protection: Protective clothing.

Environmental: No special requirement.

Section 9: Physical and chemical properties

SAFETY DATA SHEET
SUBSTRATE BONDER SB100 PART B

Page: 4

9.1. Information on basic physical and chemical properties

State: Liquid
Colour: Straw
Odour: Barely perceptible odour
Evaporation rate: No data available.
Oxidising: Non-oxidising (by EC criteria)
Solubility in water: Slightly soluble
Viscosity: No data available.
Boiling point/range°C: >100
Melting point/range°C: <0
Flammability limits %: lower: No data available. **upper:** No data available.
Flash point°C: 190-196
Part.coeff. n-octanol/water: No data available.
Autoflammability°C: No data available. **Vapour pressure:** 106.4kPA
Relative density: 1.44
pH: No data available.
VOC g/l: No data available.

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.

10.4. Conditions to avoid

Conditions to avoid: Heat.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values: No data available.

Symptoms / routes of exposure

Skin contact: There may be mild irritation at the site of contact.

[cont...]

SAFETY DATA SHEET
SUBSTRATE BONDER SB100 PART B

Page: 5

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat.

Inhalation: No symptoms.

Delayed / immediate effects: No data available.

Other information: Not applicable.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values: No data available.

12.2. Persistence and degradability

Persistence and degradability: No data available.

12.3. Bioaccumulative potential

Bioaccumulative potential: No data available.

12.4. Mobility in soil

Mobility: No data available.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: No data available.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Deposit into or on to land (e.g. landfill, etc.)

Disposal of packaging: Dispose of as normal industrial waste.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

Transport class: This product does not require a classification for transport.

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Specific regulations: Not applicable.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

[cont...]

SAFETY DATA SHEET
SUBSTRATE BONDER SB100 PART B

Page: 6

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

This safety data sheet is prepared in accordance with Commission Regulation (EC) No 1272/2008.

Phrases used in s.2 and s.3: H302: Harmful if swallowed.

H373: May cause damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.