**SAFETY DATA SHEET**
**according to Regulation (EC) No 1907/2006**

## 1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY

### 1.1. Identification of the preparation :

- Product Name : Fueltank Sealant Fast Class B1/2 Base
- Product identification : PR2001B1/2BS

### 1.2. Use of the preparation :

- Sealant

### 1.3. Company identification :

PPG Industries (UK) Ltd
3 Darlington Road
Shildon
Co Durham DL4 2QP
England

- Technical contact : Aerospace Laboratory
- Tel : +44 (0) 1388 772 541
- Fax : +44 (0) 1388 774 373
- e-mail address : EurMsdsContact@ppg.com

### 1.4. Emergency telephone :

- Company emergency telephone number : +44 (0) 1388 772 541

## 2. HAZARDS IDENTIFICATION

This product is not a dangerous preparation according to directive 1999/45/EC.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical family : Mixture of org. compounds

Substances presenting a health or environmental hazard within the meaning of the Dangerous Substances Directive 67/548/EC and amendments.
For the hazards of the preparation, see Section 2.

| SUBSTANCES<br>% by Wt<br>in the product | SYMBOL and R(*) phrases<br>of the pure substances | | CAS number | EINECS / ELINCS |
|---|---|---|---|---|
| ALIPHATIC POLYSULFID-POLYMER (MOLECULAR WEIGHT <2100)<br>0.2 - < 0.5 % | N | R51/53 | 68611-50-7 | POLYMER |
| 3-AMINOPROPYLTRIETHOXYSILANE<br>1 - < 2 % | C | R34,R22 | 919-30-2 | 213-048-4 |
| CALCIUM CARBONATE<br>30 - < 40 % | | | 471-34-1 | 207-439-9 |

(*) See full text of phrases under Section 16.

## 4. FIRST AID MEASURES

General :
In all cases of doubt or when symptoms persist, seek medical attention. Have Safety Data Sheet information available. Never give anything by mouth to an unconscious person.

Inhalation :
Remove to fresh air, keep patient warm and at rest. If breathing has stopped, administer artificial respiration. Give nothing by mouth. If unconscious, place in recovery position and seek medical advice.

Eye contact :
Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart, and seek medical advice.

Skin contact :
Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognized skin cleaners. Do NOT use solvents or thinners.

Ingestion :
If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

## 5. FIRE-FIGHTING MEASURES

Extinguishing media :
- Recommended: universal resistant foam, CO2, water, powder.
- Not to be used: none in particular.

Recommendations :
- Fire will produce dense black smoke. Exposure to decomposition products may cause a Health Hazard. Fire fighters should wear self-contained breathing apparatus.
- Water mist may be used to cool closed containers to prevent pressure build-up and possible auto-ignition and explosion when exposed to extreme heat.
- Do not weld, expose to extreme heat or ignition sources, empty containers which have contained flammable products.
- Do not allow run-off from fire fighting to enter drains or water courses.

## 6. ACCIDENTAL RELEASE MEASURES

- Exclude sources of ignition and ventilate the area. Avoid breathing vapours by using appropriate respiratory protective equipment. Refer to protective measures listed in sections 7 & 8.
- Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in a suitable container for disposal in accordance with local regulations (see section 13). Do not allow to enter drains or watercourses.
- Clean preferably with a detergent ; avoid use of solvents.

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- If the product contaminates lakes, rivers or sewers, inform water authorities in accordance with local regulations.

## 7. HANDLING AND STORAGE

### 7.1 Handling

- Smoking, eating and drinking should be prohibited during handling.
- Keep containers tightly closed. Any containers which are opened should be carefully resealed.
- Avoid skin and eye contact. Avoid inhalation in case of exposure to vapour and spray mist.

Packaging materials :
- . Recommended: keep preferably in original container.
- . Avoid :
  - * none in particular

- Handle and open containers with care to avoid sudden ejections. Never use pressure to empty : container is not a pressure vessel. Clean or discard contaminated clothing and shoes.

- Preparation may charge electrostatically : always use earthing leads when transferring between containers. Operators should wear antistatic footwear and clothing, and floors should be electrically conductive.
- Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapour in air, and avoid vapour concentration higher than the Occupational Exposure Limits.
- Additionally, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. Isolate from sources of heat, sparks and open flame. Non-sparking tools should be used.

### 7.2 Storage

Observe label precautions. Store between 0 and 35°C in a dry, clean and well ventilated place, away from sources of heat, ignition, and direct sunlight.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Engineering measures

Avoid the inhalation of vapour, spray mist and particulates. This should be achieved by the provision of local exhaust ventilation and good general extraction to keep air-borne concentration below the Occupational Exposure Limits (OEL). If these are not sufficient to comply with OEL, suitable respiratory protection must be worn.

### 8.2 Exposure limits

| Substances | Workplace Exposure limit (.) 8-hr limit ppm | 8-hr limit mg/m3 | 15-minute limit ppm | 15-minute limit mg/m3 | Comments |
|---|---|---|---|---|---|
| CALCIUM CARBONATE | - | 4 | - | - | RD |

(.) : See Guidance Note EH 40, Workplace exposure limits
Carc : Capable of causing cancer
Sk : Can be absorbed through skin
Sen : Capable of causing occupational asthma
RD : Respirable dust

- : Not estimated

## 8.3 Personal protection

All Personal Protective Equipment, including Respiratory Protective Equipment, used to control exposure to hazardous substances must be selected to meet the requirements of the COSHH Regulations.

Respiratory protection :
Appropriate certified respiratory protective equipment should be selected according to the type of contaminants, following official and manufacturers instructions including proper fitting.

Hand protection :
For prolonged or repeated contact, we recommend gloves type : nitrile rubber, neoprene rubber, latex rubber.
Barrier creams may help to protect exposed areas of the skin. However, they should not be applied once exposure has occurred.

Eye protection :
Use safety glasses to protect against splashes.

Skin protection :
Personnel should wear protective clothing made of antistatic and fire resistant fibres. All parts of the body should be washed after contact.
Use good hygiene and industrial practices, keeping working clothes clean.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state at 20°C : Paste, viscous material
- *Flash point* : 98°C *Method : ISO 3679*
- Specific gravity at 20°C : 1.5 g/cm3 Method : ISO 2811
- Vapour density : > air
- Lower explosion limit (vol. %) : not applicable
- Upper explosion limit ( vol %) : not applicable
- Miscibility in water at 20°C : not miscible
- *pH : not applicable*
- Percent volatile by weight : 2.0 by volume : 3.0
- Vapour pressure at 20°C : 17 mm Hg

## 10. STABILITY AND REACTIVITY

Stable under recommended storage and handling conditions (see section 7).
In case of combustion, may produce hazardous decomposition products such as :
- Carbon monoxide

## 11. TOXICOLOGICAL INFORMATION

There are no data available on the preparation itself. The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See Sections 3 and 15 for details.

Exposure to component solvents vapours at concentrations in excess of the stated Occupational Exposure Limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness, and in extreme cases loss of consciousness.
Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic dermatitis and absorption through the skin.
The liquid splashed in the eyes may cause irritation and reversible damage.

## 12. ECOLOGICAL INFORMATION

There is no data available on the preparation itself.
The product should not be allowed to enter drains or water courses.

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is not classified as dangerous for the environment, but contains substance(s) dangerous for the environment. See section 3 for details.

## 13. DISPOSAL CONSIDERATIONS

The provisions of Council Directive 91/689/EEC and subsequent Amendments and Decisions apply to wastes from the product as supplied.

Hazardous Properties : not applicable
Do not allow into drains or water courses.
Waste and emptied containers must be disposed in accordance with :
- Control of Pollution Act 1974,
- Special Waste Regulations 1996,
- Duty of Care Regulations 1992.

They should be recycled or disposed of through a licenced waste management facility.

## 14. TRANSPORT INFORMATION

- ADR/RID : not classified
- OACI : not classified
- IMDG : not classified

## 15. REGULATORY INFORMATION

LABEL
According to the Directive (1999/45/EC), relating to the classification packaging and labelling of dangerous substances and preparations, the product is labelled as follows :

- P101 SAFETY DATA SHEET AVAILABLE FOR PROFESSIONAL USER ON REQUEST.

## 16. OTHER INFORMATION

Full text of R phrases with N° appearing in Section 3:

- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R34 Causes burns.
- R22 Harmful if swallowed.

The information contained in this data sheet is based on present scientific and technical knowledge. AS OF : 19-8-2005

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The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

- The information contained in this Safety Data Sheet is provided in accordance with the requirements of the Chemicals (Hazard Information and Packaging) Regulations.
- The provision of the Health and Safety at Work Act and the Control of Substances Hazardous to Health Regulations apply to the use of this product at work.

END OF SAFETY DATA SHEET

# SAFETY DATA SHEET
*according to Regulation (EC) No 1907/2006*

## 1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY

### 1.1. Identification of the preparation :

- Product Name : Adhesion Promoter
- Product identification : PR-187

### 1.2. Use of the preparation :

- Aerospace coatings

### 1.3. Company identification :

PPG Industries (UK) Ltd
3 Darlington Road
Shildon
Co Durham DL4 2QP
England

- Technical contact : Aerospace Laboratory
- Tel : +44 (0) 1388 772 541
- Fax : +44 (0) 1388 774 373
- e-mail address : EurMsdsContact@ppg.com

### 1.4. Emergency telephone :

- Company emergency telephone number : +44 (0) 1388 772 541

## 2. HAZARDS IDENTIFICATION

- T - TOXIC
- May cause harm to the unborn child.
- May cause sensitization by skin contact.
- Vapours may cause drowsiness and dizziness.
- FLAMMABLE.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical family : Mixture of org. compounds

Substances presenting a health or environmental hazard within the meaning of the Dangerous Substances Directive 67/548/EC and amendments.
For the hazards of the preparation, see Section 2.

| SUBSTANCES<br>% by Wt<br>in the product | SYMBOL and R(*) phrases<br>of the pure substances | | CAS number | EINECS / ELINCS |
|---|---|---|---|---|
| 2-METHOXY-1-PROPANOL<br>0.5 - < 1 % | T | R61,R41,R37/38,R10 | 1589-47-5 | 216-455-5 |
| N-(3-(TRIMETHOXYSILYL)PROPYL)ETHYLENEDIAMINE<br>1 - < 2 % | Xi | R41,R43 | 1760-24-3 | 217-164-6 |
| 1-BUTANOL<br>2 - < 3 % | Xn | R22,R41,R37/38,R67,R10 | 71-36-3 | 200-751-6 |
| XYLENE (MIXTURE OF ISOMERS)<br>2 - < 3 % | Xn | R20/21,R38,R10 | 1330-20-7 | 215-535-7 |
| ACETONE<br>3 - < 5 % | Xi F | R36,R66,R67,R11 | 67-64-1 | 200-662-2 |
| 1-METHOXY-2-PROPANOL / MONOPROPYLENE GLYCOL METHYL ETHER<br>30 - < 40 % | | R10 | 107-98-2 | 203-539-1 |
| 4-CHLORO-ALPHA,ALPHA,ALPHA-TRIFLUOROTOLUENE<br>50 - < 60 % | | R67 | 98-56-6 | 202-681-1 |

(*) See full text of phrases under Section 16.

## 4. FIRST AID MEASURES

General :
In all cases of doubt or when symptoms persist, seek medical attention. Have Safety Data Sheet information available. Never give anything by mouth to an unconscious person.

Inhalation :
*Remove to fresh air, keep patient warm and at rest. If breathing has stopped, administer artificial respiration.* Give nothing by mouth. If unconscious, place in recovery position and seek medical advice.

Eye contact :
Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart, and seek medical advice.

Skin contact :
Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognized skin cleaners. Do NOT use solvents or thinners.

Ingestion :
If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

## 5. FIRE-FIGHTING MEASURES

Extinguishing media :
- Recommended: universal resistant foam, CO2, powder.
- Not to be used: water jet.

*Recommendations :*
- Fire will produce dense black smoke. Exposure to decomposition products may cause a Health Hazard. Fire fighters should wear self-contained breathing apparatus.
- Water mist may be used to cool closed containers to prevent pressure build-up and possible auto-ignition and explosion when exposed to extreme heat.
- Do not weld, expose to extreme heat or ignition sources, empty containers which have contained flammable products.
- Do not allow run-off from fire fighting to enter drains or water courses.

## 6. ACCIDENTAL RELEASE MEASURES

- Exclude sources of ignition and ventilate the area. Avoid breathing vapours by using appropriate respiratory protective equipment. Refer to protective measures listed in sections 7 & 8.
- Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, *diatomaceous earth and place in a suitable container for disposal in accordance with local regulations (see* section 13). Do not allow to enter drains or watercourses.
- Clean preferably with a detergent ; avoid use of solvents.
- If the product contaminates lakes, rivers or sewers, inform water authorities in accordance with local regulations.

## 7. HANDLING AND STORAGE

### 7.1 Handling

- Smoking, eating and drinking should be prohibited during handling.
- Keep containers tightly closed. Any containers which are opened should be carefully resealed.
- Avoid skin and eye contact. Avoid inhalation in case of exposure to vapour and spray mist.

Packaging materials :
- . Recommended: keep preferably in original container.
- . Avoid :
  - * Those sensitive to solvents

- Handle and open containers with care to avoid sudden ejections. Never use pressure to empty : container is not a pressure vessel. Clean or discard contaminated clothing and shoes.

- *Preparation may charge electrostatically : always use earthing leads when transferring between containers.* Operators should wear antistatic footwear and clothing, and floors should be electrically conductive.
- Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapour in air, and avoid vapour concentration higher than the Occupational Exposure Limits.
- Additionally, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. Isolate from sources of heat, sparks and open flame. Non-sparking tools should be used.

### 7.2 Storage

Observe label precautions. Store between 0 and 35°C in a dry, clean and well ventilated place, away from sources of heat, ignition, and direct sunlight.
For flash points between 23 and 32 °C store in accordance with the Highly Flammable Liquids and Liquefied Petroleum Gas Regulations 1972.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Engineering measures

Avoid the inhalation of vapour, spray mist and particulates. This should be achieved by the provision of local exhaust ventilation and good general extraction to keep air-borne concentration below the Occupational Exposure Limits (OEL). If these are not sufficient to comply with OEL, suitable respiratory protection must be worn.

### 8.2 Exposure limits

| Substances | Workplace Exposure limit (.) 8-hr limit ppm | 8-hr limit mg/m3 | 15-minute limit ppm | 15-minute limit mg/m3 | Comments |
|---|---|---|---|---|---|
| ACETONE | 500 | 1210 | 1500 | 3620 | |
| XYLENE (MIXTURE OF ISOMERS) | 50 | 220 | 100 | 441 | Sk |
| 1-BUTANOL | - | - | 50 | 154 | Sk |
| 1-METHOXY-2-PROPANOL / MONOPROPYLENE GLYCOL METHYL ETHER | 100 | 375 | 150 | 560 | Sk |

(.) : See Guidance Note EH 40, Workplace exposure limits
Carc : Capable of causing cancer
Sk : Can be absorbed through skin
Sen : Capable of causing occupational asthma
RD : *Respirable dust*
- : Not estimated

## 8.3 Personal protection

All Personal Protective Equipment, including Respiratory Protective Equipment, used to control exposure to hazardous substances must be selected to meet the requirements of the COSHH Regulations.

Respiratory protection :
Appropriate certified respiratory protective equipment should be selected according to the type of contaminants, following official and manufacturers instructions including proper fitting.

Hand protection :
For prolonged or repeated contact, we recommend gloves type : nitrile rubber, neoprene rubber, latex rubber. *Barrier creams may help to protect exposed areas of the skin. However, they should not be applied once* exposure has occurred.

Eye protection :
Use safety glasses to protect against splashes.

Skin protection :
Personnel should wear protective clothing made of antistatic and fire resistant fibres. All parts of the body should be washed after contact.
Use good hygiene and industrial practices, keeping working clothes clean.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state at 20°C : Liquid
- Flash point : 26°C Method : ISO 3679
- Viscosity : 40 ~ < 60 secs Method : ISO 2431 ( 6mm)
- Specific gravity at 20°C : 1.1 g/cm3 Method : ISO 2811
- Vapour density : > air
- Lower explosion limit ( vol %) : 1.0 (XYLENE (MIXTURE OF ISOMERS))
- Upper explosion limit ( vol %) : 13.7 (1-METHOXY-2-PROPANOL / MONOPROPYLENE GLYCOL METHYL ETHER)
- Miscibility in water at 20°C : not miscible
- pH : not applicable
- Percent volatile by weight : 40.0 by volume : 47.0
- Vapour pressure at 20°C : not applicable

## 10. STABILITY AND REACTIVITY

Stable under recommended storage and handling conditions (see section 7).
In case of combustion, may produce hazardous decomposition products such as :
- Carbon monoxide
- Oxides of Nitrogen
- Hydrogen chloride, chlorine, chlorinated products

## 11. TOXICOLOGICAL INFORMATION

There are no data available on the preparation itself. The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See Sections 3 and 15 for details.

Exposure to component solvents vapours at concentrations in excess of the stated Occupational Exposure Limits may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness, and in extreme cases loss of consciousness.
Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic dermatitis and absorption through the skin.
The liquid splashed in the eyes may cause irritation and reversible damage.

## 12. ECOLOGICAL INFORMATION

There is no data available on the preparation itself.
The product should not be allowed to enter drains or water courses.

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is not classified as dangerous for the environment.

## 13. DISPOSAL CONSIDERATIONS

The provisions of Council Directive 91/689/EEC and subsequent Amendments and Decisions apply to wastes from the product as supplied.

Hazardous Properties :
H3-B Flammable

Do not allow into drains or water courses.
Waste and emptied containers must be disposed in accordance with :
- Control of Pollution Act 1974,
- Special Waste Regulations 1996,
- Duty of Care Regulations 1992.

They should be recycled or disposed of through a licenced waste management facility.

## 14. TRANSPORT INFORMATION

- PROPER SHIPPING NAME : Paint 640E

- ADR/RID
Hazard class : 3
Packaging group : III

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ADR hazard : 30
UN number : 1263
Label : 3

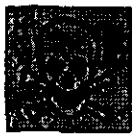
- OACI
Hazard class : 3
Packaging group : III
UN number : 1263
IATA passenger : 309 60L
IATA cargo : 310 220L
Label : FLAMMABLE LIQUID

- IMDG
Hazard class : 3
Packaging group : III
UN number : 1263
Label : 3

## 15. REGULATORY INFORMATION

LABEL

According to the Directive (1999/45/EC), relating to the classification packaging and labelling of dangerous substances and preparations, the product is labelled as follows :



- T - TOXIC

- CONTAINS : N-(3-(TRIMETHOXYSILYL)PROPYL)ETHYLENEDIAMINE, 2-METHOXY-1-PROPANOL

- RESTRICTED TO PROFESSIONAL USERS.
- R61 May cause harm to the unborn child.
- R43 May cause sensitization by skin contact.
- R67 Vapours may cause drowsiness and dizziness.
- R10 FLAMMABLE.
- S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- S53 Avoid exposure - obtain special instructions before use.
- S51 Use only in well-ventilated areas.
- S36/37 Wear suitable protective clothing and gloves.

## 16. OTHER INFORMATION

Full text of R phrases with N° appearing in Section 3:

- R61 May cause harm to the unborn child.
- R41 Risk of serious damage to eyes.
- R37/38 Irritating to respiratory system and skin.
- R10 FLAMMABLE.
- R43 May cause sensitization by skin contact.
- R22 Harmful if swallowed.
- R67 Vapours may cause drowsiness and dizziness.
- R20/21 Harmful by inhalation and in contact with skin.
- R38 Irritating to skin.
- R36 Irritating to eyes.

- R66 Repeated exposure may cause skin dryness or cracking.
- R11 HIGHLY FLAMMABLE.

The information contained in this data sheet is based on present scientific and technical knowledge. AS OF : 5-7-2005
The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

- The information contained in this Safety Data Sheet is provided in accordance with the requirements of the Chemicals (Hazard Information and Packaging) Regulations.
- The provision of the Health and Safety at Work Act and the Control of Substances Hazardous to Health Regulations apply to the use of this product at work.

END OF SAFETY DATA SHEET