

AMERCOAT 71 TIECOAT RESIN

MSDS EU 01 / EN Version 1

Print Date 6/7/2010 Revision date 30-03-09

| 1. IDENTIFICATION OF THE SUB | STANC | E/PREPARATION AND OF THE COMPANY/UNDERTAKING |
|------------------------------|-------|---|
| Product information | | |
| Trade name | : 4 | AMERCOAT 71 TIECOAT RESIN |
| Recommended use | : с | coating |
| Company | ١ | PPG Coatings SPRL/BVBA Noordersingel 23 3-2040 Borgerhout |
| Telephone | : + | +32 3 3606470 |
| Telefax | : + | +32 3 3606435 |
| Emergency telephone number | : 4 | +31 20 4075210 |
| E-mail address | : I | PMC.Safety@PPG.com |
| | | |

2. HAZARDS IDENTIFICATION

Symbol(s) : Harmful

Hazardous components :

xylene

reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight 700 < MW < 1000)

R-phrase(s) : FLAMMABLE. HARMFUL BY INHALATION AND IN CONTACT WITH SKIN. IRRITATING TO EYES AND SKIN. MAY CAUSE SENSITIZATION BY SKIN CONTACT.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | EC No. | CAS-No. | DSD | Note | Classification | Concentration |
|------------------------|-----------|-----------|------|--------|--|-------------------|
| isobutyl methyl ketone | 203-550-1 | 108-10-1 | 25th | | F; R11 Xn; R20 Xi; R36/37 R66 | >=2.50 - <10.00% |
| xylene | 215-535-7 | 1330-20-7 | 25th | Nota C | R10 Xn; R20/21 Xi; R38 | >=20.00 - <25.00% |
| ethylbenzene | 202-849-4 | 100-41-4 | 19th | | F; R11 Xn; R20 | >=2.50 - <10.00% |
| 1-methoxy-2-propanol | 203-539-1 | 107-98-2 | 19th | | R10 | >=2.50 - <10.00% |
| | | | • | • | | • |
| | | | 1/8 | | | |

| SAFETY DATA SHEET This Safety Data Sheet is prepared in a | accordance with Annex II to Reg | ulation (FC) No 1907/2006 | PPG PPG Protective & |
|--|---|---|---|
| | | | Marine Coatings |
| MERCOAT 71 TIECOAT | RESIN | | |
| ISDS EU 01 / EN Version 1 | | | Print Date 6/7/2010 Revision date 30-03-09 |
| | | | |
| reaction product: bisphenol- | 25068-38-6 | Xi; R36/38 | >=10.00 - <25.009 |
| A-(epichlorhydrin); epoxy | | R43 | |
| esin (number average | | | |
| nolecular weight 700 < MW (1000) | | | |
| Producer declares that for R-phra. | ses not mentioned in chapters 3 | , the entire amount of hazardo | us substances is below |
| limits. For components with an occ | | | |
| If multiple components with ident | ical identifiers appear, these h | ave different hazardous prope | erties, e.g. flashpoint. |
| FIRST AID MEASURES | | | |
| General advice | : When symptoms persist o | r in all cases of doubt seek me | dical advice. Never |
| Eye contact | | ean, fresh water for at least 10 | |
| Skin contact | : Take off all contaminated | ntact lenses. Seek medical advi clothing immediately. Wash s ognized skin cleanser. Do NOT | kin thoroughly with |
| Inhalation | thinners. : Remove to fresh air. Keep | patient warm and at rest. If bi ficial respiration. If unconscio | reathing is irregular |
| Ingestion | position and seek medical | | |
| Burns | | fire, wash with plenty of water | |
| | attention. | clothing that has melted to the | skin.Obtain medical |
| FIRE-FIGHTING MEASURES | | | |
| Specific hazards during fire fighting | | ombustible organic component ning hazardous products of co | |
| | closed containers exposed | osition products may be a hazar to fire with water spray. Do n | |
| Special protective equipment | fire fighting to enter drain In the event of fire, wears | s or water courses. self-contained breathing appara | atus. |
| for fire-fighters | | | |
| Suitable extinguishing media | 1 5 | resistant foam, dry chemical or bundings cool with water spray | |
| Extinguishing media which | : Do NOT use water jet. | unungs coor with water spray | • |
| shall not be used for safety reasons | | | |
| ACCIDENTAL RELEASE MEASU | IRES | | |
| Personal precautions | measures listed in section vapours accumulating to f | quipment. Ventilate the area. R s 7 and 8. Wear respiratory pro form explosive concentrations. Remove all sources of ignition. | otection. Beware of Vapours can |
| Environmental precautions | | l from entering drains or water | |

 Methods for cleaning up
 ::
 Clean with detergents. Avoid solvents. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

 Additional advice
 ::
 Refer to section 15 for specific national regulation.

2/8

AMERCOAT 71 TIECOAT RESIN

MSDS EU 01 / EN Version 1

PPG Protective & Marine Coatings

Print Date 6/7/2010 Revision date 30-03-09

| ANDLING AND STORAGE | | |
|--|---|--|
| Handling | | |
| Safe handling advice | : | Avoid exceeding of the given occupational exposure limits (see section 8). Use only in area provided with appropriate exhaust ventilation. Avoid contact with skin, eyes and clothing. Smoking, eating and drinking should be prohibited in the application area. Avoid inhalation of vapour or mist. For personal protection see section 8. |
| Advice on protection against fire and explosion | : | Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. When transferring from one container to another apply earthing measures and use conductive hose material. No sparking tools should be used. Operators should wear anti-static footwear and clothing and floors should be of the conducting type. Isolate from sources of heat, sparks and open flame. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. No smoking. The accumulation of contaminated rags and dry overspray, particularly in spray booth filters, may result in spontaneous combustion. Good housekeeping standards, regular safe removal of waste materials and regular maintenance of spray booth filters will minimise the risks of spontaneous combustion and other fire hazards. |
| Storage | | |
| Requirements for storage areas and containers | : | Observe label precautions. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store between 5 and 30° C (41 - 86 F) in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. Solvent vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Electrical installations / working materials must comply with the technological safety standards. Keep away from sources of ignition - No smoking. Store in accordance with the particular national regulations (see section 15). |
| Advice on common storage | : | Keep away from oxidising agents and strongly acid or alkaline materials. |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| Components | CAS-No. | Value [mg/m ³] | Value [ppm] | Basis |
|--|-----------|-------------------------------|----------------|---------------------------|
| isobutyl methyl ketone | 108-10-1 | 83 208 | 20 50 | EU ELV TWA EU ELV STEL |
| xylene can be absorbed through skin | 1330-20-7 | 221 442 | 50 100 | EU ELV TWA EU ELV STEL |
| ethylbenzene can be absorbed through skin | 100-41-4 | 442 884 | 100 200 | EU ELV TWA EU ELV STEL |
| 1-methoxy-2-propanol can be absorbed through skin | 107-98-2 | 375 568 | 100 150 | EU ELV TWA EU ELV STEL |
| Personal protective equipment | | 1 | | - |
| | 3 | /8 | | |

PPG Protective & Marine Coatings

AMERCOAT 71 TIECOAT RESIN

MSDS EU 01 / EN Version 1

Print Date 6/7/2010 Revision date 30-03-09

| n | 117 1 . 1 . 1 1 1 1 1 |
|---|---|
| Respiratory protection | : When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikly to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air- fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits. |
| Hand protection | For prolonged or repeated contact use protective gloves. Barrier creams may help to protect the exposed areas of skin, they should however not be applied once exposure has occurred. Skin should be washed after contact. Use chemical resistant gloves classified under Standard EN 374: Protective gloves against chemicals and micro-organisms. |
| | Recommended gloves: Viton Minimum breakthrough time: 480 min |
| | The recommended gloves are based on most common solvent in this product. |
| | When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as wellas the instructions/specifications provided by the glove supplier. |
| Eye protection Skin and body protection | Chemical resistant goggles must be worn. Personnel should wear protective clothing. Skin should be washed after contact. Working clothes must not consist of textiles, which show a dangerous melting behaviour in case of fire. Workers should wear antistatic footwear. |
| Additional advice | iooiwear. |
| Environmental protection | : Refer to national regulations in chapter 15 for regulations on environmental protection. |
| Personal protection Protective equipment | : Enclosing glasses, safety gloves and P2A2 half-face combi mask |
| | |
| Please contact your personal pr | otection equipment supplier for further advice |
| IYSICAL AND CHEMICAL P | ROPERTIES |
| Form | : viscous |
| Colour | : various |
| Odour | : aromatic slight |



AMERCOAT 71 TIECOAT RESIN

MSDS EU 01 / EN Version 1

Print Date 6/7/2010 Revision date 30-03-09

| Flash point | : 21.0 °C |
|----------------------------------|--|
| Autoignition temperature | Note: Calculated |
| | Note: no data available : 7.77 %(V) |
| Upper explosion limit | : 7.77 %(V) 332.02 g/m3 |
| Lower explosion limit | : 1.09 %(V) |
| | 46.54 g/m3 |
| Density | : 1.36 g/cm3 |
| Water solubility | at 20 °C : practically insoluble |
| рН | : no data available |
| Viscosity, dynamic | : 19,500 mPa.s at 23 °C |
| Flow time | : >20 s |
| | Transversal section: 4 mm Method: ISO 2431 (EN 535) 4 mm CUP |
| TABILITY AND REACTIVITY | $\Delta u_{\rm e}$ is the end of the transformed state of the transformation of transfor |
| Conditions to avoid | : Avoid temperatures above 60°C (140 F), direct sunlight and contact with sources of heat. |
| Hazardous reactions | Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions. |
| Hazardous decomposition products | In case of fire hazardous decomposition products may be produced such as: Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke. |
| OXICOLOGICAL INFORMAT | ION |
| Product information | : There is no data available for this product. 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. |
| Acute oral toxicity | : May cause nausea, abdominal spasms and irritation of the mucous membranes. |
| Acute inhalation toxicity | : Exposure to component solvent vapours concentration in excess of the stated occupational exposure limit may result in adverse health effects. Such as: mucous membrane irritation, respiratory system irritation, adverse effects on kidney, liver and central nervous system. Symptoms and signs: headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases loss of consciousness. |
| Skin irritation | Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in desiccation of the skin. The product may be absorbed through the skin. |
| Eye contact | : Irritating to eyes. |
| Further information | : There is no data available for this product. |
| | |
| Acute Toxicity Data for Compo | onents |

рРG SAFETY DATA SHEET This Safety Data Sheet is prepared in accordance with Annex II to Regulation (EC) No. 1907/2006. PPG Protective & Marine Coatings AMERCOAT 71 TIECOAT RESIN MSDS EU 01 / EN Version 1 Print Date 6/7/2010 Revision date 30-03-09 **12. ECOLOGICAL INFORMATION Further information** 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. See section 3 for details on components. 13. DISPOSAL CONSIDERATIONS Product The product should not be allowed to enter drains, water courses or the soil. : Disposal together with normal waste is not allowed. Special disposal required according to local regulations. The European Waste Catalogue classification of this product, when disposed Waste key for the unused product of as waste is: 08 01 11 Waste paint and varnish containing organic solvents or other dangerous substances. If this product is fully cured or mixed with other wastes, this code may no longer apply. If mixed with other wastes, the appropriate code should be assigned. For further information contact your local waste authority 14. TRANSPORT INFORMATION Transport within user's premises: always transport in closed containers that are upright, labelled and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage. Transport to be in accordance with ADR for road, IMDG for sea and IATA for air transport: UN-Number 1263 PAINT Proper shipping name : Class : 3 Packing group : III Label : 3 Proper shipping name (ADR) : PAINT Marine Pollutant (IMDG) : EmS (IMDG) : F-E, S-E Limited quantity (ADR) Max. per inner pack. : 5.00 L : Max. per outer pack. : 30.00 KG Limited quantity (IMDG) Max. per inner pack. : 5.00 L : Max. per outer pack. : 30.00 KG Note IMDG/IATA: If package size is more than 30 l, packaging group II. **15. REGULATORY INFORMATION** The product is classified and labelled in accordance with Directive 1999/45/EC. 6/8

| | rdance with Anne | x II to Regulation (EC) No. 1907/2006. | PPG PPG Protective & Marine Coatings |
|--|--|--|--|
| RCOAT 71 TIECOAT RE | CINI | | Marine Coatings |
| SEU 01 / EN Version 1 | .3// | | Print Date 6/7/2010 |
| | | | Revision date 30-03-09 |
| Harmful | | | |
| lazardous components which must | be listed on the l | abel: | |
| xylene | be listed on the l | ubei. | |
| reaction product: bisphenol-A- 1000) | (epichlorhydrin); | epoxy resin (number average molecula | ar weight 700 < MW < |
| -phrase(s) : | R10 | Flammable. | |
| r | R20/21 | Harmful by inhalation and in a | contact with skin. |
| | R36/38 R43 | Irritating to eyes and skin. May cause sensitization by sk | in contact |
| | 2010 | may cause sensitization by sk | in contact. |
| -phrase(s) : | S23 | Do not breathe spray. | |
| | S36/37 | Wear suitable protective cloth | ing and gloves. |
| | | | |
| equired by other health and safety legi | slation. The prov | In case of insufficient ventilat respiratory equipment. not constitute the user's own assessme isions of the national health and safety | ion, wear suitable nt of workplace risks, as |
| | y data sheet does islation. The prov | In case of insufficient ventilat respiratory equipment. not constitute the user's own assessme | ion, wear suitable nt of workplace risks, as |
| equired by other health and safety leg pply to the use of this product at work | y data sheet does islation. The prov | In case of insufficient ventilat respiratory equipment. not constitute the user's own assessme | ion, wear suitable nt of workplace risks, as |
| equired by other health and safety legi pply to the use of this product at work ational legislation | y data sheet does islation. The prov | In case of insufficient ventilat respiratory equipment. not constitute the user's own assessme | ion, wear suitable nt of workplace risks, as |
| equired by other health and safety legi opply to the use of this product at work (ational legislation | y data sheet does islation. The prov | In case of insufficient ventilat respiratory equipment. not constitute the user's own assessme | ion, wear suitable nt of workplace risks, as at work regulations |
| aquired by other health and safety legi oply to the use of this product at work ational legislation HER INFORMATION xplanation of R-phrases mentioned obutyl methyl ketone | y data sheet does islation. The prov :. I in section 3 R11 R20 R36/37 | In case of insufficient ventilat respiratory equipment. not constitute the user's own assessme isions of the national health and safety Highly flammable. Harmful by inhalation. Irritating to eyes and respiratory sy Repeated exposure may cause skin Flammable. | ion, wear suitable nt of workplace risks, as at work regulations |
| aquired by other health and safety legi oply to the use of this product at work ational legislation HER INFORMATION xplanation of R-phrases mentioned obutyl methyl ketone | y data sheet does islation. The prov I in section 3 R11 R20 R36/37 R66 | In case of insufficient ventilat respiratory equipment. not constitute the user's own assessment isions of the national health and safety Highly flammable. Harmful by inhalation. Irritating to eyes and respiratory sy Repeated exposure may cause skin | ion, wear suitable nt of workplace risks, as at work regulations |
| aquired by other health and safety legi opply to the use of this product at work ational legislation HER INFORMATION xplanation of R-phrases mentioned obutyl methyl ketone | y data sheet does islation. The prov I in section 3 R11 R20 R36/37 R66 R10 R20/21 R38 | In case of insufficient ventilat respiratory equipment. not constitute the user's own assessme isions of the national health and safety Highly flammable. Harmful by inhalation. Irritating to eyes and respiratory sy Repeated exposure may cause skir Flammable. Harmful by inhalation and in conta Irritating to skin. | ion, wear suitable nt of workplace risks, as at work regulations |
| aquired by other health and safety legi opply to the use of this product at work ational legislation HER INFORMATION xplanation of R-phrases mentioned obutyl methyl ketone | y data sheet does islation. The prov I in section 3 R11 R20 R36/37 R66 R10 R20/21 | In case of insufficient ventilat respiratory equipment. not constitute the user's own assessme isions of the national health and safety Highly flammable. Harmful by inhalation. Irritating to eyes and respiratory sy Repeated exposure may cause skir Flammable. Harmful by inhalation and in conta | ion, wear suitable nt of workplace risks, as at work regulations |
| equired by other health and safety legi opply to the use of this product at work (ational legislation (HER INFORMATION xplanation of R-phrases mentioned | y data sheet does islation. The prov I in section 3 R11 R20 R36/37 R66 R10 R20/21 R38 R11 | In case of insufficient ventilat respiratory equipment. not constitute the user's own assessme isions of the national health and safety Highly flammable. Harmful by inhalation. Irritating to eyes and respiratory sy Repeated exposure may cause skin Flammable. Harmful by inhalation and in conta Irritating to skin. Highly flammable. | ion, wear suitable nt of workplace risks, as at work regulations |

7/8

AMERCOAT 71 TIECOAT RESIN

MSDS EU 01 / EN Version 1

Print Date 6/7/2010

Marine Coatings

Revision date 30-03-09

This Safety Data Sheet is based on the Safety Data Sheets obtained from the producer/manufacturer or/and internet databases and valid regulations considering hazardous substances/preparations.

Training advice:

Persons taking part in a turnover of hazardous products ought to be trained in product handling, safety and hygiene.

Drivers ought to be trained and obtain a certificate in accordance with the requirements of transport regulations (ADR).

Version: 1

Revision date 30.03.2009

The information contained in this safety data sheet is based on the present state of knowledge and current European and National legislation at the date of issue. The supplier reserves the right to modify data on the safety data sheet without further notice. Any change in data will normally be followed by the issue of a new safety data sheet. The user should check the date of issue and if more than 12 months have elapsed, then the data should only be used after checking with the nearest sales office of the supplier to establish that the data is still valid. As the specific conditions of use of the product are outside the suppliers control, the supplier is not reponsible for the (negative) consequences of these specific conditions of use, which are outside of the suppliers control and which are not compliant with the handling, storage and other instructions in this safety data sheet.

After all component(s) stated on the relevant Technical Data Sheet have been mixed the safety precautions mentioned on each of the component(s) safety data sheets and labels should be used in assessing the safety precautions of the mixed product.