This Safety Data Sheet is prepared in accordance with Annex II to Regulation (EC) No. 1907/2006.

PPG Protective & Marine Coatings

AMERCOAT 90 S RESIN

MSDS EU 01 / EN Version 1

Print Date 6/4/2010 Revision date 27-04-09

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product information

Trade name : AMERCOAT 90 S RESIN

Recommended use : coating

Company : PPG Coatings SPRL/BVBA

Noordersingel 23 B-2040 Borgerhout

Telephone : +32 3 3606470

Telefax : +32 3 3606435

Emergency telephone number : +31 20 4075210

E-mail address : PMC.Safety@PPG.com

2. HAZARDS IDENTIFICATION

Symbol(s):

Harmful

Hazardous components:

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecularweight \leq 700) xylene

R-phrase(s):

FLAMMABLE.

HARMFUL BY INHALATION AND IN CONTACT WITH SKIN.

IRRITATING TO EYES AND SKIN.

MAY CAUSE SENSITIZATION BY SKIN CONTACT.

HARMFUL TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

P-phrase(s):

Contains epoxy constituents. See information supplied by the manufacturer.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	EC No.	CAS-No.	DSD	Note	Classification	Concentration
2-butoxyethanol	203-905-0	111-76-2	28th		Xn; R20/21/22 Xi; R36/38	>=2.50 - <10.00%
xylene	215-535-7	1330-20-7	25th	Nota C	R10 Xn; R20/21 Xi; R38	>=12.50 - <20.00%

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ethylbenzene	202-849-4	100-41-4	19th	F; R11 Xn; R20	>=2.50 - <10.00%
reaction product: bisphenol- A-(epichlorhydrin) epoxy resin (number average molecularweight ≤ 700)		25068-38-6	29th	Xi; R36/38 R43 N; R51, R53	>=10.00 - <25.00%
1-methoxy-2-propanol	203-539-1	107-98-2	19th	R10	>=2.50 - <10.00%

Producer declares that for R-phrases not mentioned in chapters 3, the entire amount of hazardous substances is below limits. For components with an occupational threshold limit value see chapter 8.

If multiple components with identical identifiers appear, these have different hazardous properties, e.g. flashpoint.

4. FIRST AID MEASURES

General advice : When symptoms persist or in all cases of doubt seek medical advice. Never

give anything by mouth to an unconscious person.

Eye contact : Irrigate copiously with clean, fresh water for at least 10 minutes, holding the

eyelids apart. Remove contact lenses. Seek medical advice.

Skin contact : Take off all contaminated clothing immediately. Wash skin thoroughly with

soap and water or use recognized skin cleanser. Do NOT use solvents or

thinners.

Inhalation : Remove to fresh air. Keep patient warm and at rest. If breathing is irregular

or stopped, administer artificial respiration. If unconscious place in recovery

position and seek medical advice.

Ingestion : If accidently swallowed obtain immediate medical attention. Keep at rest. Do

NOT induce vomiting.

Burns : If spills on clothing catch fire, wash with plenty of water. Remove loose

clothing. Do not remove clothing that has melted to the skin.Obtain medical

attention.

5. FIRE-FIGHTING MEASURES

Specific hazards during fire

fighting

: As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10). Exposure to decomposition products may be a hazard to health. Cool closed containers exposed to fire with water spray. Do not allow run-off from

fire fighting to enter drains or water courses.

Special protective equipment

for fire-fighters

Suitable extinguishing media

: In the event of fire, wear self-contained breathing apparatus.

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Keep containers and surroundings cool with water spray.

Extinguishing media which shall not be used for safety

reasons

: Do NOT use water jet.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Use personal protective equipment. Ventilate the area. Refer to protective

measures listed in sections 7 and 8. Wear respiratory protection. Beware of vapours accumulating to form explosive concentrations. Vapours can

accumulate in low areas. Remove all sources of ignition.

Environmental precautions : Try to prevent the material from entering drains or water ways. If the product

contaminates rivers and lakes or drains inform respective authorities.

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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.

7. HANDLING 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

 ${\bf Requirements\ for\ storage\ areas}$

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 on the national list and/or the European TLV list (98/24/EC):

Components	CAS-No.	Value	Value	Basis
		[mg/m ³]	[mgg]	

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	246		
	246	50	EU ELV STEL
1330-20-7	221	50	EU ELV TWA
	442	100	EU ELV STEL
100-41-4	442	100	EU ELV TWA
	884	200	EU ELV STEL
107-98-2	375	100	EU ELV TWA
	568	150	EU ELV STEL
	100-41-4	100-41-4 442 884 107-98-2 375	442 100 100-41-4 442 100 884 200 107-98-2 375 100

Personal protective equipment

General advice

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 airfed 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 glovematerials, as wellas the instructions/specifications provided by the glove supplier.

Eve 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

Environmental protection

Refer to national regulations in chapter 15 for regulations on environmental

protection.

Personal protection

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Protective equipment : Enclosing glasses, safety gloves and P2A2 half-face combi mask







Please contact your personal protection equipment supplier for further advice

9. PHYSICAL AND CHEMICAL PROPERTIES

Form : viscous
Colour : various
Odour : aromatic mild
Flash point : 25.0 °C

Note: Calculated

Autoignition temperature

Note: no data available

Upper explosion limit : 8.11 %(V)

362.18 g/m3

Lower explosion limit : 1.07 %(V)

48.49 g/m3

Density : 1.44 g/cm3

at 20 $^{\circ}\text{C}$

Water solubility : insoluble

pH : no data available

Viscosity, dynamic : 19,000 mPa.s at 23 °C

Flow time : >= 60 s

Transversal section: 6 mm

Method: ISO 2431 (EN 535) 6 mm CUP

10. STABILITY AND REACTIVITY

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.

11. TOXICOLOGICAL INFORMATION

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.

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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. Repeated skin contact may lead to irritation and to senitization, possible with cross-sensitization to other epoxies.

Eye contact : Irritating to eyes.

Further information : There is no data available for this product.

Acute Toxicity Data for Components

2-butoxyethanol(111-76-2)

Acute oral toxicity:LD50: 470 mg/kg (rat)Acute dermal toxicity:LD50: 220 mg/kg (rabbit)

12. ECOLOGICAL INFORMATION

Further information : The preparation has been assessed following the conventional method of the

Dangerous Preparations Directive 1999/45/EC and is classified for ecotoxicological properties accordingly. See sections 3 and 15 for details.

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.

Waste key for the unused

product

The European Waste Catalogue classification of this product, when disposed

of as waste is:

08 01 12 Waste paint and varnish other than those mentioned in 08 01 11.

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
Proper shipping name : PAINT
Class : 3
Packing group : III

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3 PAINT Proper shipping name (ADR)

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

Max. per inner pack. : 5.00 L

Limited quantity (IMDG) Max. per outer pack.: 30.00 KG

15. REGULATORY INFORMATION

The product is classified and labelled in accordance with Directive 1999/45/EC.



Hazardous components which must be listed on the label:

• reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecularweight ≤ 700)

xylene

R-phrase(s) : R10 Flammable.

R20/21 Harmful by inhalation and in contact with skin.

R36/38 Irritating to eyes and skin.

R43 May cause sensitization by skin contact.

R52/53 Harmful to aquatic organisms, may cause long-term

adverse effects in the aquatic environment.

S23 Do not breathe spray. S-phrase(s)

S36/37 Wear suitable protective clothing and gloves. In case of insufficient ventilation, wear suitable S38

respiratory equipment.

S61 Avoid release to the environment. Refer to special

instructions/ Safety data sheets.

P-phrase(s) Contains epoxy constituents. See information supplied by the

manufacturer.

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

National legislation

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16. OTHER INFORMATION

Explanation of R-phrases mentioned in section 3

2-butoxyethanol	R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
	R36/38	Irritating to eyes and skin.
xylene	R10	Flammable.
	R20/21	Harmful by inhalation and in contact with skin.
	R38	Irritating to skin.
ethylbenzene	R11	Highly flammable.
	R20	Harmful by inhalation.
reaction product: bisphenol-A-	R36/38	Irritating to eyes and skin.
(epichlorhydrin) epoxy resin (number	R43	May cause sensitization by skin contact.
average molecularweight ≤ 700)	R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
1-methoxy-2-propanol	R10	Flammable.

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 27.04.2009

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.