

According to 91/155/EEC and its amendments (Directive 93/112/EC and Directive 2001/58/EC)

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

Product name: Powder Coating
Intended use: Powder coating for use in industrial plants **Group Safety Data Sheet No.:** PC513

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2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Characterisation: Mixture of solid synthetic resins and, as required, hardeners, additives, fillers and pigments. Contains no organic solvents.
 Substances presenting a health or environmental hazard within the meaning of the Dangerous Substances Directive 67/548/EEC and its amendments:

Components	% w/w	EEC number	CAS number	Symbols	Risk phrases	MWC value	
						ppm	mg/m ³
4,4'-isopropylidenediphenol (bisphenol A)	< 5		000080-05-7	Xn	R37, R41, R43, R62 cat.3		
Epoxy novolac resin	< 20	Polymere	028064-14-4	Xi, N	R36/38, R43, R51/53		

Text of risk phrases can be found in Section 16

3. HAZARDS IDENTIFICATION OF THE PREPARATION

This preparation is classified as dangerous to the environment according to the Dangerous Preparations Directive 1999/45/EC (harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment). Precautions should be taken to prevent the formation of dust in concentrations above flammable, explosive or occupational exposure limits.

4. FIRST AID MEASURES

General

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation

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

Eye contact

Contact lenses should be removed. Flush copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. Seek medical advice.

Skin contact

Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognised skin cleanser. 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: water spray/mist, powder, CO₂-blanket, alcohol-resistant foam.

Not to be used: high pressure inert gas, water jets; do not stir up the powder coating.

Recommendations

Fire will produce black dense smoke containing hazardous decomposition products (see Section 10). Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not allow run-off from fire fighting to enter drains or watercourses.

6. ACCIDENTAL RELEASE MEASURES

Exclude sources of ignition and ventilate the area. Exclude non-essential personnel. Avoid breathing dust. Refer to protective measures listed in Sections 7 and 8. Contain and collect spillage with an electrically protected vacuum cleaner or by wet brushing and place in container for disposal according to local regulations (see Section 13). Do not use a dry brush as dust clouds can be created. Do not allow to enter drains or watercourses.

If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations.

7. HANDLING AND STORAGE

Persons suffering from respiratory problems or allergic response should not be exposed to, or handle, powder coatings.

Handling

Precautions should be taken to prevent the formation of dust in concentrations above flammable, explosive or occupational exposure limits. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or ignition sources.

Preparation may charge electrostatically: always use earthing leads when transferring from one container to another. Operators should wear anti-static footwear and clothing and floors should be of conducting type.

Avoid skin and eye contact. Avoid the inhalation of dust, particulates and spray mist arising from the application of this preparation. Avoid inhalation of dust from sanding.

Keep containers tightly closed. Isolate from sources of heat, sparks and open flame.

Smoking, eating and drinking should be forbidden in application area.

Comply with health and safety at work laws.

Always keep in containers made of same material as the original one.

Treatments such as sanding, welding, burning off, etc. of paint films may generate hazardous dust and/or fumes. Work in well ventilated areas. Use suitable personal (respiratory) protective equipment, as necessary.

For personal protection see Section 8.

For applicable regulations and standards see Section 15.

Storage

Observe label precautions. Store in a dry well-ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorised access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures

Avoid inhalation of dust. Where reasonably practicable, this should be achieved by use of local exhaust extraction and good general ventilation. If these are not sufficient to maintain exposure to dust below the exposure limits, suitable respiratory protection must be worn.

Personal protectionRespiratory protection:

When workers are facing dust concentrations above the exposure limit, they must use appropriate certified respirators (P1 grade) being effective against this type of material.

Hand protection:

For prolonged or repeated contact, use general industrial gloves. Suitable materials include lightweight vinyl or nitrile rubber gloves. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Breakthrough time of gloves not applicable to powder coatings. Barrier creams may help to protect exposed areas of the skin, they should however not be applied once exposure has occurred.

Eye protection:

Safety eyewear should be used when there is a likelihood of exposure.

Skin protection:

Personnel should wear protective clothing and all parts of the body should be washed after contact. Do not use organic solvents. Care should be taken in the selection of protective clothing, to ensure that inflammation or irritation of the skin at neck and wrists through contact with the powder is avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

		<u>Test Method</u>
Physical state:	fine powder	-
Odour:	low, not unpleasant	-
Real density 23°C:	1.0-1.9 g/cm ³	ISO 8130-2/3
Bulk density 23°C:	300-1000 kg/m ³	-
Lower explosion limit of dust/air mixture:	30 - 90 g/m ³	ISO 8130/4
(recommended value for powder in air for plant design: not to exceed 10 g/m ³)		
Solubility in water:	insoluble	-
Softening point:	> 50°C	hot plate

Ignition temperature of a dust/air mixture:	450-600°C	EN 50281-2-1
Minimum ignition energy:	5 - 20mJ	-
(Coating powders, being fine organic materials, can give rise to dust explosions, typically rated St 1.)		
Vapour pressure:	none	-
pH-value in water:	pH-value of water will not change	-
Flash point:	none	-

Thermal decomposition; hazardous decomposition products; hazardous reactions: not applicable in normal usage. In case of doubt, refer to the powder supplier.

10. STABILITY AND REACTIVITY

Stable under recommended storage and handling conditions (see Section 7). When exposed to high temperatures hazardous decomposition products may be produced, such as carbon monoxide and dioxide, nitrogen oxides and smoke.

11. TOXICOLOGICAL INFORMATION

Contains 4,4'-isopropylidenediphenol (bisphenol A) and epoxy novolac resin. May produce an allergic reaction. Tests carried out by the raw material supplier regarding this raw material have not shown irritation to eyes or skin and no sensitisation by skin contact.

There are no data available on the preparation itself.

Animal tests and long term use of powder coatings containing no dangerous substances have shown no specific risk.

Powder coatings can cause localised skin irritation in folds of the skin or in contact with tight clothing.

12. ECOLOGICAL 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. The preparation contains substances which are toxic to aquatic organisms and may cause long term adverse effects in the aquatic environment (see section 2 and 15 for details).

Tests and long term use of powder coatings have, in general, shown no specific risk.

If powder coatings are applied and stoved according to the recommendations, emissions will be within the legal limits. The extract of a typical powder coating with rainwater shows that a deposit will not affect ground or surface water substantially.

Water risk class (WGK): 2 (self-classification). Powder coatings must not be allowed to enter drains or watercourses.

13. DISPOSAL CONSIDERATIONS

Do not allow into drains, watercourses or groundwater. Pick up waste powder using a suitable vacuum cleaner without creating dust. The European waste number valid for powder coatings is 08 02 01. If this product is mixed with other wastes, this code may no longer apply and the appropriate code should be assigned. Dispose of waste, without creating dust, according to local regulations. Empty containers should be recycled according to the provisions of the packaging regulations.

14. TRANSPORT INFORMATION

Powder coatings are not classified as dangerous for transport, this product is not regulated for carriage according to ADR/RID, IMDG, ICAO/IATA. Powder coatings are not classified as explosive, oxidising, toxic, infectious, radioactive, corrosive or magnetic and have no flash point according to IATA and ICAO annex 18 regulations so are not dangerous for air transport.

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15. REGULATORY INFORMATION

This product is classified and labelled for supply in accordance with the Dangerous Preparations Directive 1999/45/EC as follows:

Label classification:	none
Special P phrases:	P99: Contains 4,4'-isopropylidenediphenol (bisphenol A) and epoxy novolac resin. May produce an allergic reaction
Risk phrases:	R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
Safety phrases:	S20/21: When using, do not eat, drink or smoke S22: Do not breathe dust S38: In case of insufficient ventilation, wear suitable respiratory equipment S61: Avoid release to the environment. Refer to special instructions/safety data sheets

The information contained in this safety datasheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.

Applicable directives and laws:

EC Directives:

- Dangerous Preparations Directive (1999/45/EC)
- 29th Amendment (2004/73/EC) of the Materials Directive (67/548/EEC)
- 2nd. Amendment (2201/58/EC) of the Safety Data Sheet Directive (91/155/EEC)
- Amendment to the European list of wastes (2001/118/EC)

Germany:

- Hazardous Substances Regulations
- Technical Rules for Hazardous Substances 220 (Safety Data Sheet)
- Technical Rules for Hazardous Substances 900 (list of MWC and BEI values)
- Resource Management and Waste Law
- Flammable Liquids Regulations - hazard class: none acc. former Flammable Liquid Regulations

Standards and Regulations:

- BGI 764 "Electrostatic coating" (information from professional association on health and safety at work)
- DIN EN 50050 "Electrical equipment for explosion-risk Areas"
- DIN EN 50177 "Fixed electrostatic spray equipment for stoving powder coatings"
- prEN 12981 "Spray booths for organic powder coatings"

16. OTHER INFORMATION

Text of Risk phrases listed in section 2 are:

R36/38:	Irritating to eyes and skin.
R37:	Irritating to respiratory system.
R41:	Risk of serious damage to eyes.
R43:	May cause sensitisation by skin contact.
R51/53:	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R62:	Possible risk of impaired fertility.

The information in this safety datasheet is required pursuant to the adoption in German law of the EC Directives listed in Section 15. The information contained herein is based on the present state of our knowledge. It does not constitute a guarantee with regard to the use, fitness, saleability or suitability of the supplied product for any purpose. Except in cases of gross negligence or deliberate illegal act on the part of Akzo Nobel, our liability extends solely to the net sale value of the affected product, and in no case to any direct or indirect consequences.

In the event of further queries please contact the sites shown in Section 1.

History

Date of first issue:	30/07/2002	Revision date:	31/10/2005
Revision: 3	Lines in right margin denote changes since last revision.		