

SAFETY DATA SHEET

Ardrox 996PA(Aerosol)

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

PRODUCT NAME: Ardrox 996PA(Aerosol)

PART No.: A996PA---

APPLICATIONS: Chemical penetrant process for crack detection.

SUPPLIER: Chemetall PLC
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2 COMPOSITION/INFORMATION ON INGREDIENTS

| INGREDIENT NAME | CAS No. | CONTENTS | HEALTH (class) | RISK (R No.) |
|--------------------------------|-------------|----------|-------------------|-----------------|
| ALIPHATIC HYDROCARBON(503600) | 064742-47-8 | 60-100 % | Xn | 65, 66 |
| AROMATIC HYDROCARBON(511100) | 064742-94-5 | 1-10 % | Xn, N | 65, 66, 51/53 |
| RED DIAZO DYE SOLUTION | | 1-10 % | Xn | 20/21, 38 |
| CARBON DIOXIDE (IN PROPELLANT) | 124-38-9 | 0 | NC | |

COMPOSITION COMMENTS: The product composition (in %w/w) declared above does not include the propellant. This product contains additional ingredients which are either unclassified or below the concentration requiring declaration under the CHIP Regulations. The product is solvent-based. The aliphatic hydrocarbon solvent contains <1% aromatics.

The product will contain <0.1% w/w of benzene.

In the ingredient list above, exposure limit values exist for one or more ingredients. See Section 8 for details.

The propellant consists of carbon dioxide (1-10%).

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3 HAZARDS IDENTIFICATION

Contains solvent(s)/oil(s) classified as R65 (Harmful : may cause lung damage if swallowed).

As a bulk material, this product would be classified as R65 to denote the aspiration hazard. However, the current CHIP Regulations state that products classified as harmful on the basis of an aspiration hazard need not be labelled as harmful with R65 if supplied in aerosol or sealed pump spray containers. This classification therefore does not apply to this product/pack combination.

May be irritating to eyes and skin.

The product will have a defatting action on skin.

The product is combustible.

The vapour is heavier than air and can accumulate in low lying areas.

When operated continuously for long periods, the aerosol container can become very cold. Care should be taken to avoid skin burns.

Contains a substance or substances classified as dangerous for the environment (N).

4 FIRST AID MEASURES

INHALATION:

Move the exposed person to fresh air at once. Wear protective clothing and breathing apparatus if necessary. When unconscious, loosen tight clothing and position in secured sideposition. Perform artificial respiration if breathing has stopped. Provide rest, warmth and fresh air. Get medical attention.

INGESTION:

Not usually applicable to the product as supplied. Ingestion of significant quantities of the product is unlikely to occur when using products supplied in aerosol or pump spray containers. If any ill effects occur while using the product, note the following. Immediately rinse mouth and provide fresh air. Give the casualty small sips of water (up to a total of 100 ml) if he wants a drink but stop if he feels sick. Do not make the casualty drink a lot of liquid at once as he may vomit which may be dangerous. Do not give victim anything to drink if he is unconscious. When unconscious, loosen tight clothing and position in secured sideposition. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Provide fresh air, warmth and rest, preferably in comfortable upright sitting position. Get medical attention immediately!

SKIN:

Immediately remove contaminated clothing. Wash skin thoroughly with soap and water. Continue to rinse for at least 10 minutes. Get medical attention if irritation or dryness persists after washing.

EYES:

Promptly wash eyes with plenty of water while lifting the eye lids. Make sure to remove any contact lenses from the eyes before rinsing. Continue to rinse for at least 10 minutes. Get medical attention if any discomfort continues.

5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:

This product is combustible. The aerosol package contains a non-flammable propellant. Extinguish fires using the following.

TO BE USED:

Water spray, fog or mist. Alcohol resistant foam. Powder. Carbon dioxide (CO₂).

NOT TO BE USED:

Water jets.

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SPECIAL FIRE FIGHTING PROCEDURES:

Water jets must not be used on burning product. Containers close to fire should be removed or cooled with water. In a fire, beware of exploding aerosol cans.

UNUSUAL FIRE & EXPLOSION HAZARDS:

The vapour is heavier than air and may spread over a wide area leading to the risk of remote ignition and flashback. In a fire, beware of exploding aerosol cans.

HAZARDOUS DECOMPOSITION PRODUCTS:

On heating to total decomposition, the following materials may be produced. Oxides of carbon.

PROTECTIVE MEASURES IN FIRE:

On heating to total decomposition, smoke and toxic gases may be produced, hence breathing apparatus should be worn in cases of fire.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS DURING SPILL:

Evacuate the area and keep unauthorised people away from the spillage. Extinguish all sources of ignition. Avoid sparks, flames, heat and smoking. Ventilate area well or wear breathing apparatus. Wear any necessary protective clothing/equipment. See Section 8 for further details.

PRECAUTIONS TO PROTECT ENVIRONMENT:

Contain the spillage to prevent entry into drains or waterways. Notify the local authority if spillage of a large quantity into drains or waterways occurs.

SPILL CLEANUP METHODS:

Spillages from aerosol containers are very unlikely. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurised contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage as follows. Spillages should be absorbed with sand, earth or mineral granules etc. The contaminated absorbent should then be transferred to polythene containers, using non-sparking shovels eg. rubber or plastic and disposed of via a licensed waste disposal contractor. Wash residues away with strong detergent/water solution. Clear up spillages promptly as they may lead to a slip hazard.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS:

Avoid contact with the skin, eyes and clothing. Avoid inhalation of spray or vapour. Use only under conditions of adequate ventilation, or use respiratory protection. Avoid contact of the product with strong oxidizing agents. Keep away from naked flames, sparks or any other sources of ignition. Do not spray this product on or near any flames or incandescent materials. Protect aerosol containers from sunlight and temperatures in excess of 50°C, even when apparently empty. Do not pierce or burn aerosol containers. Always wear the appropriate personal protective equipment when using or handling this product. Eyewash facilities must be available when handling this product. Do not smoke, eat or drink while handling or using this product. Do not ingest the product. Wash hands after use.

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STORAGE PRECAUTIONS: Store in a cool, well ventilated area. Keep away from heat, sparks and open flame. Keep away from oxidizing agents. Keep separate from food, feedstuffs, fertilizers and other sensitive material. Store and transport the product in its original container kept in an upright position. Containers of this product should be stored in a suitably designed or bunded area to minimise the risk of environmental pollution. Store between -10°C and 30°C.

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

| INGREDIENT NAME | CAS No | STD | LT EXP (8 hrs) | ST EXP (15 min) |
|--------------------------------|-------------|------|-------------------|--------------------|
| ALIPHATIC HYDROCARBON(503600) | 064742-47-8 | SRL | 1000 mg/m3 | No std. |
| AROMATIC HYDROCARBON(511100) | 064742-94-5 | SRL | 300 mg/m3 | No std. |
| RED DIAZO DYE SOLUTION | | SRL | No std. | No std. |
| CARBON DIOXIDE (IN PROPELLANT) | 124-38-9 | OES. | 5000 ppm | 15000 ppm |

INGREDIENT COMMENTS: OES = Occupational Exposure Standard (from EH40).
SRL = Supplier's Recommended Limit.

PROTECTIVE EQUIPMENT:



VENTILATION: General and/or local exhaust ventilation should be provided to keep operator exposure to the concentrated chemical and working solution below any recommended limits specified for the product ingredients. Ventilation also needs to be adequate to maintain the vapour concentration of the flammable/combustible ingredient(s) well below the lower explosive limit (LEL). In some cases, a flameproof exhaust ventilation motor may be needed.

RESPIRATORS: Wear suitable respiratory protection if exposed to high levels of spray or vapour. In most cases, a respirator with a filter cartridge recommended for use with hydrocarbon solvents would be satisfactory. Wear breathing apparatus if entering tanks, pits or enclosed spaces.

PROTECTIVE GLOVES: Wear impermeable gloves complying with an approved standard (eg. BS 1651 or EN374). Suitable gloves would be those manufactured from PVC, nitrile rubber or neoprene.

EYE PROTECTION: Wear eye/face protection complying with an approved standard (eg. BS 2092 Chemical Grade or EN166-3). In most conditions, this would consist of goggles or face visor.

OTHER PROTECTION: Wear chemical splash-resistant overalls and chemical and impact-resistant footwear. Wear anti-static footwear to an approved standard (eg. BS 5958). Eyewash stations should be readily accessible near where this product is handled and used.

Monitoring may be required to determine the effectiveness of the ventilation controls and/or the necessity to use respiratory protective equipment.

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9 PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|------------------------------------|---|--------------------------------|------|
| APPEARANCE: | Mobile, single phase liquid. | | |
| COLOUR: | Clear. Dark red. | | |
| ODOUR/TASTE: | Characteristic. Hydrocarbon. | | |
| PHYSICAL DATA COMMENTS: | The information given in this section relates to the actual product inside the aerosol container. It does not include the propellant. | | |
| SOLUBILITY DESCRIPTION: | Immiscible with water. Miscible with hydrocarbons and halogenated hydrocarbons. | | |
| BOILING POINT (°C): | >100 | MELTING POINT (°C): | <-10 |
| SPECIFIC GRAVITY (Water=1): | 0.83 | VAPOUR DENSITY (air=1): | >1 |
| FLASH POINT (°C): | 71 | | |
| FLASH POINT METHOD: | CC (Closed cup). | | |

10 STABILITY AND REACTIVITY

| | |
|--|---|
| STABILITY: | Under normal conditions of storage and use, this product will be stable. |
| CONDITIONS TO AVOID: | Avoid conditions involving non-intentional contact with the materials specified in the section 'Materials to Avoid'. Avoid heat, flames and other sources of ignition. Avoid storage and use at low temperatures. |
| MATERIALS TO AVOID: | This product may react with the following material(s) - strong oxidizing agents. The reaction may be vigorous or violent. |
| HAZARDOUS DECOMPOSITION PRODUCTS: | On heating to total decomposition, the following materials may be produced. Oxides of carbon. |

11 TOXICOLOGICAL INFORMATION

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|-----------------------------------|--|
| TOXICOLOGICAL INFORMATION: | No specific toxicological tests have been carried out on this product. |
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|---------------------------------|--|
| HEALTH HAZARDS, GENERAL: | Irritating to eyes. This product has a strong defatting action on the skin. Prolonged or frequent skin contact may lead to irritation, dryness and cracking and the risk of developing dermatitis. High vapour concentrations may irritate the respiratory system. Ingestion can lead to vomiting and aspiration into the lungs, which can result in chemical pneumonitis which can be fatal. Excessive and prolonged inhalation of mists may cause a chronic inflammatory reaction of the lungs and a form of pulmonary fibrosis. |
| INHALATION: | Inhalation of high concentrations of vapour may cause the following symptoms. Irritation of the nasal tract and respiratory system. Dizziness. Headache. Central nervous system depression. Anaesthetic in high concentrations. |
| INGESTION: | Not usually applicable under normal conditions of handling and use of products in aerosol/pump spray containers. Expected to have a low level of toxicity. May cause the following symptoms. Irritation of the mouth, throat and digestive system. The following symptoms may also occur. Vomiting. Abdominal pain. |

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Aspiration into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary oedema.

SKIN: Product has a defatting effect on skin. Prolonged or frequent contact may lead to irritation, dryness and cracking. Continued exposure may lead to the risk of developing dermatitis.

EYES: Irritation, watering, redness. Serious or permanent damage is unlikely.

HEALTH WARNINGS: ACUTE HEALTH EFFECTS:
A single exposure may lead to irritation of the following - the eyes, skin, nasal tract and respiratory system. Aspiration into the respiratory system may cause bronchopneumonia or pulmonary oedema.

CHRONIC HEALTH EFFECTS:
Exposure to sublethal quantities over a prolonged period of time may lead to the following symptoms - skin dryness and cracking and the risk of developing dermatitis. Excessive and prolonged inhalation of mists may cause an inflammatory reaction of the lungs and a form of pulmonary fibrosis.

12 ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS:

Do not allow the product as supplied to enter local authority drains, waterways or sewers, or soil.

As this product is completely immiscible with water, it is not possible to determine typical oxygen demand figures for its solutions.

DEGRADABILITY:

No specific biodegradability tests have been carried out on this product. Incomplete data available on the biodegradability of the ingredients.

This product contains the following ingredients/ingredient types that are classified as biodegradable/readily biodegradable.

Hydrocarbon solvent(s).

This product contains the following ingredients/ingredient types that are classified as slowly/poorly biodegradable.

Incomplete data available on the remainder of the ingredients.

ACUTE FISH TOXICITY:

No specific aquatic toxicity tests have been carried out on this product. Incomplete information available on the toxicity of the product ingredients to aquatic organisms. As the product is insoluble in water, it is expected to be of low toxicity to aquatic organisms. This product will float on water. Although of low toxicity, spilled material may affect aquatic organisms by physical smothering or by leading to deoxygenation of the water below the oil film.

13 DISPOSAL CONSIDERATIONS

DISPOSAL METHODS:

This product should not be discharged untreated into local authority waterways or sewers. Under normal methods of use, little waste material is produced. Aerosol/pump spray cans (used or unused) should be disposed of, without puncturing, via a licensed waste disposal contractor.

Bulk quantities of unused product and emptied containers should be recycled or disposed of via a licensed waste disposal contractor.

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Disposal of this product, solutions and any by-products should at all times comply with the requirements of the Environmental Protection Act and its subsidiary regulations and any regional local authority requirements.

14 TRANSPORT INFORMATION

LABEL FOR CONVEYANCE:



ROAD:

| | | | |
|-------------------------|----------------------|---------------|---|
| UN No: | 1950 | ADR CLASS No: | 2 |
| ADR ITEM No: | 5F | | |
| PROPER SHIPPING NAME I: | AEROSOLS, FLAMMABLE. | | |

RAIL:

RAIL TRANSPORT CLASS No: 2

SEA:

| | | | |
|-------------------------|------|---------------|------|
| UN SEA: | 1950 | | |
| SEA TRANSPORT CLASS No: | 2 | IMDG Page No: | 2102 |
| MARINE POLLUTANT: | No. | | |

AIR:

| | |
|-------------------------|------|
| UN AIR: | 1950 |
| AIR TRANSPORT CLASS No: | 2.1 |

15 REGULATORY INFORMATION

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|---------------|------|---|
| RISK PHRASES: | R-10 | Flammable. |
| | R-66 | Repeated exposure may cause skin dryness or cracking. |

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| SAFETY PHRASES: | S-23A | Do not breathe gas/fumes/vapour/spray. |
| | S-24/25 | Avoid contact with skin and eyes. |
| | S-37 | Wear suitable gloves. |
| | S-51 | Use only in well ventilated areas. |

UK REGULATORY REFERENCES:

Health and Safety at Work Act 1974.
Control of Substances Hazardous to Health Regulations.
Chemicals (Hazard Information and Packaging for Supply) Regulations.
Environmental Protection Act.
Environmental Protection (Duty of Care) Regulations.
Control of Pollution (Special Waste) Regulations.
European Agreement Concerning The International Carriage of Dangerous Goods by Road (ADR).
Carriage of Dangerous Goods by Road and Rail (Classification, Packaging and Labelling) Regulations.

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16 OTHER INFORMATION

USER NOTES:

This Safety Data Sheet has been compiled for the product as supplied. In use, it may be dissolved in/diluted with water or other solvent, mixed with other chemicals/products or used as supplied. The hazards of the working solution will be dependent on its concentration and temperature and will need to be combined with those of any other chemicals/products involved, if applicable. See the appropriate Technical Data Sheet for further information.

It should be noted that this Safety Data Sheet only outlines the hazards of the product specified and does not constitute a users workplace risk assessment as required by other health and safety legislation.

For further safety-related information, please contact:

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email: ukinfo@chemetall.com

RECOMMENDED USES AND RESTRICTIONS:

This product is intended to be used industrially/commercially for the application described in Section 1. It should not be used for domestic purposes or for any other industrial/commercial use without the prior approval of Chemetall.

AEROSOL PRODUCTS - ADDITIONAL NOTES:

The information in Section 15 refers to the Supply Classification, according to the C.H.I.P. Regulations, of the actual product inside the aerosol container, without any additional hazards from the propellant. As the aerosol container contains a non-flammable propellant, there will be no additional hazards. Flammable Product (Flash Point <100°C).

Keep away from sources of ignition - No Smoking (S-16).

This material and its container must be disposed of as hazardous waste (S-60).

INFORMATION SOURCES:

Health & Safety Executive Guidance Note EH40 - Occupational Exposure Limits.
Raw material suppliers Safety Data Sheets.

REVISION COMMENTS:

The following sections contain revised or additional information.
15.

REVISION DATE:

19-03-01

REVISION No. /REPLACES SDS ISSUED:

7/ 1-03-01

SDS No.:

FR 95/1902/1