

**Ardrox 1435 B**

Version: 4.0

Revision Date 26.08.2013

Print Date 27.08.2013

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifier**

Trade name : Ardrox 1435 B

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Use of the Sub- : Cleaning agent  
stance/Mixture  
Recommended restrictions : None known.  
on use

**1.3 Details of the supplier of the safety data sheet**

Company : Chemetall Ltd  
Denbigh Road  
Bletchley Milton Keynes MK1 1PB  
Telephone : 01908 649333  
Telefax : 01908 373939  
Contact person product safety  
Telephone : +49(0)6971652832  
E-mail address : msds.de@chemetall.com

**1.4 Emergency telephone number**

Emergency telephone : 01908 649333  
number

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification (REGULATION (EC) No 1272/2008)**

Oxidizing liquids, Category 2 H272: May intensify fire; oxidiser.  
Skin corrosion, Category 1B H314: Causes severe skin burns and eye damage.  
Chronic aquatic toxicity, Category 2 H411: Toxic to aquatic life with long lasting effects.

**Classification (67/548/EEC, 1999/45/EC)**

Oxidising R 8: Contact with combustible material may cause  
fire.  
Corrosive R34: Causes burns.  
Dangerous for the environment R51/53: Toxic to aquatic organisms, may cause  
long-term adverse effects in the aquatic environ-  
ment.

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**2.2 Label elements**

**Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :



Signal word : Danger

Hazard statements : H272 May intensify fire; oxidiser.  
H314 Causes severe skin burns and eye damage.  
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P210 Keep away from heat.  
P221 Take any precaution to avoid mixing with combustibles.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P262 Do not get in eyes, on skin, or on clothing.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308 IF exposed or concerned:  
P310 Immediately call a POISON CENTER or doctor/ physician.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

- 10101-50-5 Sodium permanganate

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**Labelling according to EC Directives (1999/45/EC)**

Hazard pictograms :



Oxidising



Corrosive



Dangerous  
for the envi-  
ronment

R-phrase(s) :

R 8

Contact with combustible material may cause fire.

R34

Causes burns.

R51/53

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s) :

S17

Keep away from combustible material.

S23

Do not breathe gas/fumes/vapour/spray.

S24/25

Avoid contact with skin and eyes.

S26

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39

Wear suitable protective clothing, gloves and eye/face protection.

S60

This material and its container must be disposed of as hazardous waste.

S61

Avoid release to the environment. Refer to special instructions/ Safety data sheets.

Hazardous components which must be listed on the label:

- 10101-50-5 Sodium permanganate

**2.3 Other hazards**

The information required is contained in this Material Safety Data Sheet.

**SECTION 3: Composition/information on ingredients**

**3.1 Substances**

not applicable

**3.2 Mixtures**

Chemical nature : Aqueous solution of inorganic salts.

**Hazardous components**

Chemical Name	CAS-No. EC-No.	Classification (67/548/EEC)	Classification (REGULATION)	Concentration [%]
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	Registration number		(EC) No 1272/2008)	
Sodium permanganate	10101-50-5 233-251-1 01-2119495598-15	O; R 8  Xn; R22  C; R34  N; R50/53	Ox. Sol. 2; H272  Acute Tox. 4; H302  Skin Corr. 1B; H314  Aquatic Acute 1; H400  Aquatic Chronic 1; H410	>= 10 - < 25

For the full text of the R-phrases mentioned in this Section, see Section 16.

For the full text of the H-Statements mentioned in this Section, see Section 16.

For the full text of the Notas mentioned in this Section, see Section 16.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

- General advice : First-aid crew: Ensure self-protection.  
Move out of dangerous area.  
Take off contaminated clothing and shoes immediately.
- If inhaled : Move to fresh air.  
If symptoms persist, call a physician.
- In case of skin contact : Wash off with soap and plenty of water.  
Call a physician immediately.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids.  
Call a physician immediately.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.  
Do NOT induce vomiting.  
Call a physician immediately.

**4.2 Most important symptoms and effects, both acute and delayed**

- Symptoms : No information available.
- Risks : If swallowed, severe burns in the oral cavity and throat as well

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as danger of perforation of the digestive tract and stomach.  
Inhalation of vapours is irritating to the respiratory system,  
may cause throat pain and cough.

**4.3 Indication of any immediate medical attention and special treatment needed**

Treatment : Treat symptomatically.  
For specialist advice physicians should contact the Poisons  
Information Service.

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

Suitable extinguishing media : Carbon dioxide (CO<sub>2</sub>)  
Dry powder  
Alcohol-resistant foam  
Water spray

Unsuitable extinguishing media : High volume water jet

**5.2 Special hazards arising from the substance or mixture**

Specific hazards during fire-fighting : May form toxic gases on heating or in case of fire.  
When dry, the substance/product is oxidising.

**5.3 Advice for firefighters**

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Further information : Use water spray to cool unopened containers.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Ensure adequate ventilation.  
Wear personal protective equipment.

**6.2 Environmental precautions**

Environmental precautions : Do not flush into surface water or sanitary sewer system.  
Avoid subsoil penetration.  
Inform the relevant authorities if it enters sewers, aquatic environment or soil.

**6.3 Methods and materials for containment and cleaning up**

Methods for cleaning up : Ensure adequate ventilation.

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Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).  
Dilute with plenty of water.  
After cleaning, flush away traces with water.

**6.4 Reference to other sections**

See chapter 8 and 13

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms.  
Have eye wash bottle or eye rinse ready at the work place.

Advice on protection against fire and explosion : Avoid letting the product become dry.  
When dry, the substance/product is oxidising.  
Keep away from sources of ignition - No smoking.  
Normal measures for preventive fire protection.

**7.2 Conditions for safe storage, including any incompatibilities**

Requirements for storage areas and containers : Keep containers tightly closed in a cool, well-ventilated place.  
Store in a place accessible by authorized persons only.

Further information on storage conditions : Do not allow to dry.  
Advice on common storage : Reducing agents  
Acids

Storage period : 36 month

Storage temperature : -5 - 45 °C

**7.3 Specific end uses**

Specific use(s) : Cleaning agent

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

Components	CAS-No.	Value	Control pa-	Update	Basis
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			Parameters		
Sodium permanganate	10101-50-5	TWA	0.5 mg/m <sup>3</sup> Manganese	2006-09-01	GB EH40
Further information	: 2: Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used  Manganese				

**DNEL/DMEL**

Sodium permanganate : End Use: DNEL, Workers  
 Exposure routes: Inhalation  
 Potential health effects: Long-term systemic effects  
 Value: 0.05 mg/m<sup>3</sup>

**8.2 Exposure controls****Engineering measures**

Ensure adequate ventilation, especially in confined areas.  
 Keep away from sources of ignition - No smoking.  
 Keep away from combustible material.

**Personal protective equipment**

- Respiratory protection : In case of insufficient ventilation wear suitable respiratory equipment.  
 Recommended Filter type:  
 A-P2
- Hand protection : butyl-rubber  
 Protective gloves complying with EN 374.  
 Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
- Eye protection : Eye protection (EN 166)  
 Tightly fitting safety goggles  
 Have eye wash bottle or eye rinse ready at the work place.
- Skin and body protection : Chemical resistant protective clothing according to DIN EN 13034 (Type 6)
- Hygiene measures : Take off contaminated clothing and shoes immediately.  
 Keep away from food, drink and animal feedingstuffs.

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Wash hands before breaks and immediately after handling the product.  
Avoid contact with skin and eyes.  
Do not breathe vapour.  
Do not breathe spray.

**Environmental exposure controls**

General advice : Do not flush into surface water or sanitary sewer system.  
Avoid subsoil penetration.  
Inform the relevant authorities if it enters sewers, aquatic environment or soil.

**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

Appearance	: liquid
Colour	: violet
Odour	: odourless
Flash point	: not applicable
Ignition temperature	: not applicable
pH	: 6 - 7 at 20 °C (undiluted)
Solidification temperature/range	: -3 °C
Boiling point/boiling range	: 105 °C
Density	: 1.15 g/cm <sup>3</sup> at 20 °C
Water solubility	: soluble
Viscosity, dynamic	: 10 mPa*s at 20 °C

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**9.2 Other information**

Explosivity : Avoid letting the product become dry.  
May intensify fire; oxidiser.

Directive 1999/13/EC on the : Value: 0 %  
limitation of emissions of  
volatile organic compounds

**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

No dangerous reaction known under conditions of normal use.

**10.2 Chemical stability**

Stable under normal conditions.

**10.3 Possibility of hazardous reactions**

Hazardous reactions : None known.

**10.4 Conditions to avoid**

Conditions to avoid : To avoid thermal decomposition, do not overheat.  
Keep away from open flames, hot surfaces and sources of  
ignition.  
Avoid letting the product become dry.

**10.5 Incompatible materials**

Materials to avoid : Reducing agents  
Strong acids and oxidizing agents  
Light metals  
Combustible material  
Organic materials

**10.6 Hazardous decomposition products**

Risk of decomposition. : Decomposes on heating.  
Thermal decomposition can lead to release of irritating gases  
and vapours.  
No decomposition if stored and applied as directed.

**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Acute toxicity**

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Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg  
Method: Calculation method

**Skin corrosion/irritation**

Skin irritation : Causes severe burns.

**Serious eye damage/eye irritation**

Eye irritation : Causes serious eye damage.

**Respiratory or skin sensitisation**

Sensitisation : no data available

**Toxicology Assessment**

Acute effects : If swallowed, severe burns in the oral cavity and throat as well as danger of perforation of the digestive tract and stomach.

**SECTION 12: Ecological information**

**12.1 Toxicity**

Toxicity to fish : no data available

**12.2 Persistence and degradability**

Biodegradability : The methods for determining biodegradability are not applicable to inorganic substances.

**12.3 Bioaccumulative potential**

Bioaccumulation : Bioaccumulation is unlikely.

**12.4 Mobility in soil**

Distribution among environmental compartments : no data available

**12.5 Results of PBT and vPvB assessment**

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This mixture does not contain substances considered to be persistent, bioaccumulating and toxic (PBT)., This mixture does not contain substances considered to be very persistent and very bioaccumulating (vPvB).

### 12.6 Other adverse effects

Additional ecological information : highly water endangering  
Toxic to aquatic life with long lasting effects.  
Do not flush into surface water or sanitary sewer system.  
Avoid subsoil penetration.  
Even leakage of small amounts in the subsoil can contaminate drinking water.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.  
Contaminated packaging : Dispose of as unused product.  
Waste Code : Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

## SECTION 14: Transport information

### ADR

UN number : 3214  
UN proper shipping name : PERMANGANATES, INORGANIC, AQUEOUS SOLUTION, N.O.S., Sodium permanganate  
Transport hazard class(es) : 5.1  
Packing group : II  
Classification Code : O1  
Hazard Identification Number : 50  
Packing instruction (LQ) : LQ10  
Labels : 5.1  
Tunnel restriction code : (E)  
Environmentally hazardous : no

### IATA

UN number : 3214  
Description of the goods : PERMANGANATES, INORGANIC, AQUEOUS SOLUTION, N.O.S., Sodium permanganate  
Class : 5.1  
Packing group : II  
Labels : 5.1

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### IATA\_C

Packing instruction (cargo aircraft) : 554  
Environmentally hazardous : no

### IATA\_P

Packing instruction (passenger aircraft) : 550  
Environmentally hazardous : no

### IMDG

UN number : 3214  
Description of the goods : PERMANGANATES, INORGANIC, AQUEOUS SOLUTION, N.O.S., Sodium permanganate  
Class : 5.1  
Packing group : II  
Labels : 5.1  
EmS Number 1 : F-H  
EmS Number 2 : S-Q  
Marine pollutant : no

### RID

UN number : 3214  
Description of the goods : PERMANGANATES, INORGANIC, AQUEOUS SOLUTION, N.O.S., Sodium permanganate  
Transport hazard class(es) : 5.1  
Packing group : II  
Classification Code : O1  
Hazard Identification Number : 50  
Labels : 5.1  
Packing instruction (LQ) : LQ10  
Environmentally hazardous : no

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

Water contaminating class (Germany) : WGK 3 highly water endangering  
VWVWS A4

Other regulations : The product is classified and labelled in accordance with EC directives or respective national laws.

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Regional or national implementations of GHS may not implement all hazard classes and categories.

### 15.2 Chemical Safety Assessment

For a mixture it is not mandatory to include an exposure scenario in the material safety data sheet. The necessary safety - related information is stated in the first 16 sections.

## SECTION 16: Other information

### Full text of R-phrases referred to under sections 2 and 3

R 8	Contact with combustible material may cause fire.
R22	Harmful if swallowed.
R34	Causes burns.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### Full text of H-Statements referred to under sections 2 and 3.

H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

### Further information

The information provided is based on our current knowledge and experience and apply to the product as delivered. Regarding the product properties, these are not guaranteed. The delivery of this safety datasheet does not free the recipient of the product from his own responsibility to follow the relevant rules and regulations concerning this product.

| This data sheet contains changes from the previous version in section(s): 14