according to the OSHA Hazard Communication Standard







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SECTION 1. IDENTIFICATION

Product name : Ardrox 9D4A (10 LB)

Product code : 00000000050559383

Manufacturer or supplier's details

Company:

Chemetall U.S., Inc. 675 Central Avenue New Providence, NJ 07974 – USA +1 800 526-4473

sds.na-chemetall@basf.com

Emergency telephone : CHEMTREC: 800-424-9300, +1-703-527-3887

Recommended use of the chemical and restrictions on use

Recommended use : Developer

Restrictions on use : Uses other than recommended

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

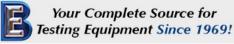
Not a hazardous substance or mixture.

GHS label elements

No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

Other hazards

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.



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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : inorganic salts

Components

Chemical name	CAS-No.	Concentration (% w/w)	Synonyms
Pentaerythritol	115-77-5	>= 25 - < 50	pentaerythritol
magnesium oxide	1309-48-4	>= 15 - < 20	magnesium oxide
Silica, amorphous, fumed, crystfree	112945-52-5	>= 10 - < 12.5	Silicon, amorphous

Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : First aid personnel should pay attention to their own

safety.

If the patient is likely to become unconscious, place and transport in stable sideways position (recovery

position).

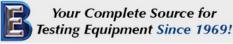
Immediately remove contaminated clothing. In all cases of doubt, or when symptoms persist,

seek medical attention.

Move out of dangerous area.

Never give anything by mouth to an unconscious

person.



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If inhaled If symptoms persist, call a physician.

If breathed in, move person into fresh air.

If breathing is irregular or stopped, administer

artificial respiration.

In case of skin contact If symptoms persist, call a physician.

> Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Do NOT use solvents or thinners.

In case of eye contact If symptoms persist, call a physician.

> In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under

the eyelids, for at least 15 minutes.

If swallowed If symptoms persist, call a physician.

Do NOT induce vomiting.

Rinse mouth.

Most important symptoms and effects,

both acute and delayed

Information, i.e. additional information on symptoms and effects may be included in the GHS labeling

phrases available in Section 2 and in the

Toxicological assessments available in Section 11.

Dusts may cause mechanical irritation to eyes.

Notes to physician No known specific antidote.

Treat symptomatically.

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SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing

media

: Water spray jet

Dry powder

Alcohol-resistant foam

Carbon dioxide (CO2)

Unsuitable extinguishing: High volume water jet

media

Specific hazards during

fire fighting

Fire will produce dense black smoke containing hazardous combustion products (see section 10).

Further information In the event of fire, cool tanks with water spray.

> Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local

regulations.

Collect contaminated fire extinguishing water

separately. This must not be discharged into drains.

Special protective

equipment for fire-

fighters

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

apparatus.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Keep away from sources of ignition.

Advice on product handling can be found in sections 7

and 8 of this safety data sheet.

For non-emergency personnel:

For emergency responders:

Use personal protective equipment.

Ensure adequate ventilation, especially in confined

areas.

Avoid breathing dust.

Environmental precautions: Do not allow uncontrolled discharge of product into the

environment.

Avoid subsoil penetration.

If the product contaminates rivers and lakes or drains

inform respective authorities.

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Methods and materials for : containment and cleaning

up

Avoid dust formation.

Contain and collect mechanically and dispose of in

accordance with local regulations.

Ensure adequate ventilation.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Avoid all sources of ignition: heat, sparks, open flame.

The relevant fire protection measures should be noted.

Avoid dust formation.

Advice on safe handling

: Provide good ventilation of working area (local exhaust

ventilation if necessary).

Do not return residues to the storage containers.

Smoking, eating and drinking are forbidden in

application area. For personal protection see section 8.

Comply with the health and safety at work laws.

The workplace should be equipped with an emergency

shower and eye-rinsing facility.

Avoid contact with the skin, eyes and clothing.

Handle in accordance with good industrial hygiene and

safety practice.

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Protect from moisture.

Avoid creating dust.

Further information on storage conditions

Keep away from heat.

Avoid direct sunlight.

Close containers carefully once opened and store them upright in order to prevent any leakage. No smoking. No

admission for unauthorised personnel.

Always keep in containers of same material as the

original one.

Observe label precautions.

Protect from moisture.

Keep in a dry, cool and well-ventilated place.

Materials to avoid : Keep away from oxidizing agents, strongly alkaline and

strongly acid materials in order to avoid exothermic

reactions.

Recommended storage

temperature

: 41 - 104 °F / 5 - 40 °C

Storage period : 60 Months

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Suitable material: Paper/Fibreboard, High density Packaging material

> polyethylene (HDPE), Low density polyethylene (LDPE), Polyethylenetherephtalate (PET), Polypropylene, Carbon

steel (Iron), tinned carbon steel (Tinplate)

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Pentaerythritol	115-77-5	TWA	10 mg/m3	ACGIH
		TWA (Respirable)	5 mg/m3	NIOSH REL
		TWA (total)	10 mg/m3	NIOSH REL
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Total dust)	10 mg/m3	OSHA P0
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0
magnesium oxide	1309-48-4	TWA (Inhalable particulate	10 mg/m3	ACGIH

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		matter)		
		TWA (fume, total particulate)	15 mg/m3	OSHA Z-1
		TWA (Fume - total particulate)	10 mg/m3	OSHA P0
Silica, amorphous, fumed, crystfree	112945-52-5	TWA (Dust)	20 Million particles per cubic foot (Silica)	OSHA Z-3
		TWA (Dust)	80 mg/m3 / %SiO2 (Silica)	OSHA Z-3
		TWA	6 mg/m3 (Silica)	NIOSH REL
Pentaerythritol	115-77-5	TWA	10 mg/m3	ACGIH
		TWA (Respirable)	5 mg/m3	NIOSH REL
		TWA (total)	10 mg/m3	NIOSH REL
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Total	10 mg/m3	OSHA P0

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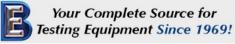
		dust)		
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0
magnesium oxide	1309-48-4	TWA (Inhalable particulate matter)	10 mg/m3	ACGIH
		TWA (fume, total particulate)	15 mg/m3	OSHA Z-1
		TWA (Fume - total particulate)	10 mg/m3	OSHA P0
Silica, amorphous, fumed, crystfree	112945-52-5	TWA (Dust)	20 Million particles per cubic foot (Silica)	OSHA Z-3
		TWA (Dust)	80 mg/m3 / %SiO2 (Silica)	OSHA Z-3
		TWA	6 mg/m3 (Silica)	NIOSH REL

Engineering measures : Ensure adequate ventilation.

Personal protective equipment

Respiratory protection : When workers are facing concentrations above the exposure

limit they must use appropriate certified respirators.



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Filter type : Particulates type

Hand protection

Remarks : The selected protective gloves have to satisfy the

specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. chloroprene rubber (CR) - 0.5 mm coating thickness nitrile rubber (NBR) - 0.4 mm coating thickness butyl rubber gloves - material thickness: 0.5 mm Performance level 6, corresponding to a breakthrough time of >480 min according to EN ISO 374-1 The protection glove should be tested for its specific suitability (e.g. mechanical strength, product compatibility, anti-static properties). Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Preventive skin

protection

Eye protection : Safety glasses with side-shields conforming to EN166

Skin and body protection : Chemical resistant protective clothing according to DIN EN

13034 (Type 6)

Protective measures : Eye wash fountains and safety showers must be easily

accessible.

If these are not sufficient to maintain concentrations at the

workplace below the occupational exposure limits, appropriate certified respirators must be worn.

Avoid contact with the skin, eyes and clothing.

Handle in accordance with good industrial hygiene and safety

practice.

Avoid breathing dust.

Hygiene measures : Remove contaminated clothing immediately and dispose of

safely.

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Wash hands before breaks and at the end of workday.

Keep away from food, drink and animal feedingstuffs.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : solid

Color : white

Odor : odorless

Odor Threshold : No data available

pH : substance/mixture is non-soluble (in water)

Melting point/ range : not determined

Boiling point/boiling range : Study technically not feasible.

Flash point : Not applicable

Evaporation rate : No data available

Flammability (solid, gas) : Will not burn

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Upper explosion limit / Upper

flammability limit

: No data available

Lower explosion limit / Lower :

flammability limit

not determined

Vapor pressure not determined (68 °F / 20 °C)

not determined (122 °F / 50 °C)

The product is a non-volatile solid.

Relative vapor density The product is a non-volatile solid.

Relative density No data available

Density : 0.110 g/cm3 (68 °F / 20 °C)

Solubility(ies)

Water solubility not determined

Solubility in other solvents No data available

Partition coefficient: n-

octanol/water

not applicable for mixtures

 $> 392.00 \, ^{\circ}\text{F} / > 200.00 \, ^{\circ}\text{C}$ Autoignition temperature

No decomposition if stored and handled as Decomposition temperature

prescribed/indicated.

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Viscosity

Viscosity, dynamic

No data available

Viscosity, kinematic : not determined (73 °F / 23 °C)

not determined (104 °F / 40 °C)

Flow time : Not applicable

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Self-heating substances : The substance or mixture is not classified as self heating.

Metal corrosion rate : Not corrosive to metals.

Particle size : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of

normal use.

Chemical stability : No decomposition if stored and applied as directed.

Possibility of hazardous

reactions

: Dust can form an explosive mixture in air.

Conditions to avoid : Avoid direct sunlight.

Avoid dust formation.

Heat.

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Incompatible materials : Keep away from oxidizing agents, strongly alkaline and

strongly acid materials in order to avoid exothermic

reactions.

Hazardous decomposition

products

: No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Respiratory or skin sensitization

Skin sensitization

Based on available data, the classification criteria are not met.

Respiratory sensitization

Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

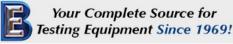
Based on available data, the classification criteria are not met.

IARC No ingredient of this product present at levels greater than or equal to

0.1% is identified as probable, possible or confirmed human carcinogen

by IARC.

OSHA No component of this product present at levels greater than or equal to



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0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or equal to

0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration toxicity

Based on available data, the classification criteria are not met.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

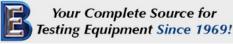
Mobility in soil

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Do not discharge into drains/surface waters/groundwater.



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Observe national and local legal requirements.

Contaminated packaging : Containers which are not properly emptied must be disposed

pursuant to Directive 2008/98/EC

Packaging that is not properly emptied must be disposed of as

the unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

Not regulated as a dangerous good

Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport

regulations.

SECTION 15. REGULATORY INFORMATION

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SARA 311/312 Hazards : No SARA Hazards

SARA 313 : This material does not contain any chemical components with

known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Pennsylvania Right To Know

Pentaerythritol 115-77-5

magnesium oxide 1309-48-4

New Jersey Right To Know

Pentaerythritol 115-77-5

magnesium oxide 1309-48-4

The ingredients of this product are reported in the following inventories:

TSCA : All substances listed as active on the TSCA inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

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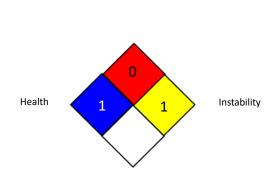
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SECTION 16. OTHER INFORMATION

Further information

NFPA 704:

HMIS® IV:



Flammability

HEALTH	/	1
FLAMMABILITY		0
PHYSICAL HAZARD		1

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Special hazard

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency

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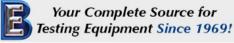
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Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG -International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 -Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. -Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR -(Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI -Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN -United Nations: UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

For multi-pack systems observe material safety data sheets of all components. Restricted to professional users.

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific



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material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN