SAFETY DATA SHEET

Antkote 2033

WANHUA CHEMICAL GROUP Co., LTD.

Version No:6.0
Safety Data Sheet Safety Data Sheet - Authored according to GB/T16483(2008) and GB/T17519(2013)

Issue Date: **26/06/2021**
Print Date: **26/06/2021**
L.GHS.CHN.EN

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

Product Identifier

Product name	Antkote 2033
Synonyms	Hydroxyfunctional polyacrylic dispersion
Other means of identification	Not Available

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

Relevant identified uses	It can be used for waterborne two-component coatings in combination with polyisocyanates or other crosslinkers, or waterborne one component baking coatings in combination with amino resins or blocked polyisocyanates.

Details of the supplier of the safety data sheet

Registered company name	**WANHUA CHEMICAL GROUP Co., LTD.**
Address	No.59 Chongqing Road, Yantai, Shandong China
Telephone	0535-3031150
Fax	0535-338222-1150
Website	http://www.whchem.com
Email	whsds@whchem.com

Emergency telephone number

Association / Organisation	**Emergency Center of China**
Emergency telephone numbers	**+86 532-83889090**
Other emergency telephone numbers	**+86 535-8203123**

SECTION 2 Hazards identification

Classification of the substance or mixture

Summary of Hazard in an Emergency Situation

Liquid.
Mixes with water.

Classification [1]	Chronic Aquatic Hazard Category 3, Skin Corrosion/Irritation Category 3
Legend:	*1. Classified by Chemwatch; 2. China Classification Information Sheet of Hazardous Chemicals (Draft); 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI*

Label elements

Hazard pictogram(s)	Not Applicable

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Signal word	**Warning**

Hazard statement(s)

H412	Harmful to aquatic life with long lasting effects.
H316	Causes mild skin irritation.

Precautionary statement(s) Prevention

P273	Avoid release to the environment.

Precautionary statement(s) Response

P332+P313	If skin irritation occurs: Get medical advice/attention.

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

Physical and Chemical Hazard

Liquid.
Mixes with water.

Health Hazards

Inhaled	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Ingestion	The material has **NOT** been classified by EC Directives or other classification systems as 'harmful by ingestion'. This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident.
Skin Contact	Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. Limited evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis.
Eye	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
Chronic	Long-term exposure to the product is not thought to produce chronic effects adverse to health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

Environmental Hazards

See Section 12

Other hazards

May produce skin discomfort*.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

Continued...

CAS No	%[weight]	Name
NA	45-47	Polyacrylate containing hydroxylgroups
64742-95-6*	4	Solvent naphtha 100
111-76-2*	4	2-Butoxy ethanol
7732-18-5	45-47	water

SECTION 4 First aid measures

Description of first aid measures

Eye Contact	If this product comes in contact with eyes: ▸ Wash out immediately with water. ▸ If irritation continues, seek medical attention. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ▸ Immediately remove all contaminated clothing, including footwear. ▸ Flush skin and hair with running water (and soap if available). ▸ Seek medical attention in event of irritation.
Inhalation	▸ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▸ Other measures are usually unnecessary.
Ingestion	▸ Immediately give a glass of water. ▸ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Advise for rescue team (PPE requirement for rescue personnel)

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting measures

Extinguishing media

- Water spray or fog.
- Foam.
- Dry chemical powder.

Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.

Advice for firefighters

Fire Fighting	▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ Wear full body protective clothing with breathing apparatus. ▸ Prevent, by any means available, spillage from entering drains or water course.
Fire/Explosion Hazard	▸ Combustible. ▸ Slight fire hazard when exposed to heat or flame. ▸ Heating may cause expansion or decomposition leading to violent rupture of containers. May emit corrosive fumes.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Measures for Preventing Secondary Contamination

Refer to section above

Environmental precautions

See section 12

Continued...

Methods and material for containment and cleaning up

Minor Spills	▸ Remove all ignition sources. ▸ Clean up all spills immediately. ▸ Avoid breathing vapours and contact with skin and eyes.
Major Spills	Moderate hazard. ▸ Clear area of personnel and move upwind. ▸ Alert Fire Brigade and tell them location and nature of hazard.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	▸ Avoid all personal contact, including inhalation. ▸ Wear protective clothing when risk of exposure occurs. ▸ Use in a well-ventilated area. ▸ **DO NOT** allow clothing wet with material to stay in contact with skin
Other information	▸ Store in original containers. ▸ Keep containers securely sealed. ▸ No smoking, naked lights or ignition sources. ▸ The product will keep stable for 12 months when stored in its sealed original packaging at temperatures between 5°C and 35°C. Storage at temperatures below 5°C will make the product frozen and cause irreversible dam age. The product should therefore be protected from freezing during storage Temperatures higher than 35°C should be avoided in order to prevent the evaporation of water, which will result in the formation of a non-redispersible polymer film.

Conditions for safe storage, including any incompatibilities

Suitable container	▸ Metal can or drum ▸ Packaging as recommended by manufacturer. ▸ Check all containers are clearly labelled and free from leaks.
Storage incompatibility	None known

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
China Occupational Exposure Limits for Hazardous Agents in the Workplace	2-Butoxy ethanol	2-butoxyethanol	97 mg/m3	Not Available	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
Solvent naphtha 100	1,200 mg/m3	6,700 mg/m3	40,000 mg/m3
2-Butoxy ethanol	60 ppm	120 ppm	700 ppm

Ingredient	Original IDLH	Revised IDLH
Polyacrylate containing hydroxylgroups	Not Available	Not Available
Solvent naphtha 100	Not Available	Not Available
2-Butoxy ethanol	700 ppm	Not Available
water	Not Available	Not Available

Occupational Exposure Banding

Continued...

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
Solvent naphtha 100	E	≤ 0.1 ppm
Notes:	*Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.*	

MATERIAL DATA

Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations. Present day expectations require that nearly every individual should be protected against even minor sensory irritation and exposure standards are established using uncertainty factors or safety factors of 5 to 10 or more.
NOTE P: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0.01% w/w benzene (EINECS No 200-753-7). Note E shall also apply when the substance is classified as a carcinogen. This note applies only to certain complex oil-derived substances in Annex VI.

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk.
Personal protection	
Eye and face protection	‣ Safety glasses with side shields. ‣ Chemical goggles. ‣ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.
Skin protection	See Hand protection below
Hands/feet protection	‣ Wear chemical protective gloves, e.g. PVC. ‣ Wear safety footwear or safety gumboots, e.g. Rubber The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.
Body protection	See Other protection below
Other protection	‣ Overalls. ‣ P.V.C apron. ‣ Barrier cream.

Recommended material(s)

GLOVE SELECTION INDEX

Continued...

Glove selection is based on a modified presentation of the:
'Forsberg Clothing Performance Index'.
The effect(s) of the following substance(s) are taken into account in the ***computer-generated*** selection:
Antkote 2033

Material	CPI
BUTYL	A
NEOPRENE	A
VITON	A
NATURAL RUBBER	C
PVA	C

* CPI - Chemwatch Performance Index
A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion
NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -
* Where the glove is to be used on a short term, casual or infrequent basis, factors such as 'feel' or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Milky white

Physical state	Liquid	**Relative density (Agua= 1)**	1.06
Odour	Slight	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Available
pH (as supplied)	7.0-9.0 (1:4 Deionized water)	**Decomposition temperature**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (mPa.s)**	50-1850 at 25°C
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Available
Flash point (°C)	>93	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Applicable	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Available	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	Not Available	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water	Miscible	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	‣ Unstable in the presence of incompatible materials. ‣ Product is considered stable. ‣ Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7

Continued...

Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Antkote 2033	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
Polyacrylate containing hydroxylgroups	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
Solvent naphtha 100	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: >1900 mg/kg[1]	Eye: no adverse effect observed (not irritating)[1]
	Inhalation(Rat) LC50; >4.42 mg/L4[1]	Skin: adverse effect observed (irritating)[1]
	Oral(Rat) LD50; >4500 mg/kg[1]	
2-Butoxy ethanol	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: 667 mg/kg[1]	Eye: adverse effect observed (irritating)[1]
	Inhalation(Rat) LC50; 2.21 mg/l4[2]	Skin: adverse effect observed (irritating)[1]
	Oral(Guinea) LD50; 1414 mg/kg[1]	Skin: no adverse effect observed (not irritating)[1]
water	**TOXICITY**	**IRRITATION**
	Oral(Rat) LD50; >90 mg/kg[2]	Not Available
Legend:	*1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*	

WATER	No significant acute toxicological data identified in literature search.

Acute Toxicity	✗	**Carcinogenicity**	✗
Skin Irritation/Corrosion	✓	**Reproductivity**	✗
Serious Eye Damage/Irritation	✗	**STOT - Single Exposure**	✗
Respiratory or Skin sensitisation	✗	**STOT - Repeated Exposure**	✗
Mutagenicity	✗	**Aspiration Hazard**	✗

Legend: ✗ *– Data either not available or does not fill the criteria for classification*
✓ *– Data available to make classification*

SECTION 12 Ecological information

Toxicity

Antkote 2033	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
	Not Available	Not Available	Not Available	Not Available	Not Available
Polyacrylate containing hydroxylgroups	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
	Not Available	Not Available	Not Available	Not Available	Not Available
Solvent naphtha 100	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
	EC50	72	Algae or other aquatic plants	19mg/l	1
	EC50	96	Algae or other aquatic plants	64mg/l	2

Continued...

	NOEC(ECx)	72	Algae or other aquatic plants	1mg/l	1
	EC50	48	Crustacea	6.14mg/l	1

2-Butoxy ethanol

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	48	Crustacea	164mg/l	2
LC50	96	Fish	1250mg/l	2
EC50	72	Algae or other aquatic plants	623mg/l	2
EC10(ECx)	48	Crustacea	7.2mg/l	2
EC50	96	Algae or other aquatic plants	720mg/l	2

water

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

Legend: *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.
Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
2-Butoxy ethanol	LOW (Half-life = 56 days)	LOW (Half-life = 1.37 days)
water	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
2-Butoxy ethanol	LOW (BCF = 2.51)
water	LOW (LogKOW = -1.38)

Mobility in soil

Ingredient	Mobility
2-Butoxy ethanol	HIGH (KOC = 1)
water	LOW (KOC = 14.3)

Other adverse effects

No data available

SECTION 13 Disposal considerations

Waste treatment methods

Waste chemicals:	Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. ▸ **DO NOT** allow wash water from cleaning or process equipment to enter drains. ▸ It may be necessary to collect all wash water for treatment before disposal. ▸ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ▸ Recycle wherever possible or consult manufacturer for recycling options. ▸ Consult State Land Waste Management Authority for disposal. ▸ Bury residue in an authorised landfill.
Contaminated packing materials:	Refer to section above
Precautions for Transport:	Refer to section above

Continued...

SECTION 14 Transport information

Labels Required

Marine Pollutant	NO

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
Polyacrylate containing hydroxylgroups	Not Available
Solvent naphtha 100	Not Available
2-Butoxy ethanol	Not Available
water	Not Available

Transport in bulk in accordance with the ICG Code

Product name	Ship Type
Polyacrylate containing hydroxylgroups	Not Available
Solvent naphtha 100	Not Available
2-Butoxy ethanol	Not Available
water	Not Available

Precautions for Transport

Suitable Containers

See section 7

SECTION 15 Regulatory information

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

Polyacrylate containing hydroxylgroups is found on the following regulatory lists

China Inventory of Existing Chemical Substances

Solvent naphtha 100 is found on the following regulatory lists

Chemical Footprint Project - Chemicals of High Concern List
China Inventory of Existing Chemical Substances
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

2-Butoxy ethanol is found on the following regulatory lists

China Inventory of Existing Chemical Substances
China Inventory of Hazardous Chemicals (Chinese)
China Occupational Exposure Limits for Hazardous Agents in the Workplace
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

water is found on the following regulatory lists

China Inventory of Existing Chemical Substances

National/Regional Inventory Status

National/Regional Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes

Continued...

National Inventory	Status
Canada - NDSL	No (Polyacrylate containing hydroxylgroups; Solvent naphtha 100; 2-Butoxy ethanol; water)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (Polyacrylate containing hydroxylgroups)
Japan - ENCS	No (Solvent naphtha 100)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
China Taiwan - TCSI	Yes
Mexico - INSQ	No (Polyacrylate containing hydroxylgroups)
Vietnam - NCI	Yes
Russia - FBEPH	No (Polyacrylate containing hydroxylgroups)
Legend:	*Yes = All CAS declared ingredients are on the inventory* *No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)*

SECTION 16 Other information

Revision Date	26/06/2021
Initial Date	01/08/2018

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios.

Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average
PC—STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit。
IDLH: Immediately Dangerous to Life or Health Concentrations
ES: Exposure Standard
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index
AIIC: Australian Inventory of Industrial Chemicals
DSL: Domestic Substances List
NDSL: Non-Domestic Substances List
IECSC: Inventory of Existing Chemical Substance in China
EINECS: European INventory of Existing Commercial chemical Substances
ELINCS: European List of Notified Chemical Substances
NLP: No-Longer Polymers
ENCS: Existing and New Chemical Substances Inventory
KECI: Korea Existing Chemicals Inventory
NZIoC: New Zealand Inventory of Chemicals
PICCS: Philippine Inventory of Chemicals and Chemical Substances
TSCA: Toxic Substances Control Act
TCSI: Taiwan Chemical Substance Inventory
INSQ: Inventario Nacional de Sustancias Químicas
NCI: National Chemical Inventory

Continued...

FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

Disclaimer

The information in the SDS applies only for the specified product and does not include mixtures of this product with other substances and mixtures. The SDS provides product safety information for personnel trainned to use this product only.

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