



SAFETY DATA SHEET

In accordance with the Global Harmonized System requirements

DHT-4C

Aluminium Magnesium Carbonate Hydroxide

1. IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY

1.1 Product identifier

Trade name: DHT-4C
Chemical name of the main active ingredient: Aluminium Magnesium Carbonate Hydroxide
INDEX number of the main active ingredient as listed in annex VI of EU-CLP: no classification
EC number of the main ingredient: 943-434-4
CAS number of the main active ingredient: 11097-59-9
EU-REACH/CLP reference number of the main/active ingredient: 01-2120118818-50-0004

1.2 Relevant identified uses of the mixture and uses advised against

Uses: Stabilizer in the polymer industry
Uses advised against: None identified

1.3 Details of the supplier of the safety data sheet

Manufacturer/supplier: Kyowa Chemical Industry Co. Ltd.
4035 Hayashida-cho, Sakaide
Kagawa
762-0012, Japan
Kisuma Chemicals B.V.
P.O. Box 400
9640 AK Veendam
The Netherlands
Tel no: +31(0)598 666766
e-mail: REACH@kisuma.com
Contact: reach@kisuma.com
1.4 Emergency telephone number Kisuma Chemicals BV:
Tel: +31(0)598 666766 (09:00 – 17:00, C.E.T)
National Poisons Information Center, The Netherlands:
Tel: +31 (0)30 2748888 (24h)

2. HAZARD IDENTIFICATION

2.1 Classification of the mixture

The substance has no classification requirements in accordance with GHS/ Regulation (EC) No 1272/2008 (CLP).

Hazard statements: None

2.2 Label elements

The substance has no classification/labeling requirements in accordance with GHS/ Regulation (EC) No 1272/2008 (CLP).

Hazard pictogram:

Signal word: -
Hazard statements: -
Precautionary statements: -

2.3 Other hazards

PBT/PvB criteria Not applicable since the main active ingredient is inorganic



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3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture: According to the GHS definition and REACH Regulation the product is a substance

Information about components:

Chemical name:	EC No. Cas No.	GHS/CLP: Pictogram	GHS/CLP: Hazard statements	Concentration
Magnesium Aluminium Hydroxide Carbonate	943-434-4 11097-59-9	-	-	> 99%
-	-	-	-	-

4. FIRST-AID MEASURES

4.1 Description of first aid measures

Eye contact:	Immediately wash eyes with plenty of running water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical advice if irritation develops and persists.
Skin contact:	Wash affected skin area with plenty of water and soap thoroughly while removing contaminated clothing and shoes. Seek medical advice if irritation develops and persists.
Ingestion:	Seek medical advice if the victim feels unwell. Wash out mouth with plenty of water and give 2-4 cupfuls of water or milk to drink. Never give anything by mouth to an unconscious person. Induce vomiting.
Inhalation:	Remove the victim from exposure into fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice if cough or other symptoms appear.

4.2 Most important symptoms and effect

Acute effects	None identified
Delayed effects	None identified

4.3 Indication of any immediate medical attention and special treatment needed

None identified

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable:	Foam, dry powder, carbon dioxide, water mist.
Not suitable:	Not known

5.2 Special hazards arising from the mixture

Under fire situation, this material may generate COx

5.3 Advice for firefighter

In the event of fire, wear a self-contained breathing apparatus and a chemical protective suit.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Wear appropriate personal protective equipment (see section 8) during cleaning. Avoid contact with eyes and skin. Avoid inhalation. Avoid dust formation.

6.2 Environmental precautions

Prevent the material from entering surface water or sanitary sewer system. Do not discharge directly to a water source. If accidental spillage or washings enter drains or watercourses contact local Environment Agency.

6.3 Methods and material for containment and cleaning up

Sweep up into suitable containers for recovery or disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Technical measures/ Precautions:	Good ventilation (local exhaust) of the working area, safety showers and eye wash station near the workplace. Wear personal protective equipment (see section 8).
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General occupation hygiene: Do not eat, drink and smoke in work areas. Wash hands after use and remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures / storage conditions: Store under dry conditions.

Incompatible products: None known

Packaging material: Store the product in bags, car silos, container,.

7.3 Specific end use(s) None known

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure limit values: No Substance specific (inter)national regulations/recommendations
Japan.
Recommendation of Occupational Exposure Limits (OELs)(2007):
Respirable dust - 2mg/m3, Total - 8mg/m3 (JSOH)
USA
Particulates Not Otherwise Regulated (PNOR): 5 mg/m3 Respirable Dust Level (OSHA)
Particulates Not Otherwise Specified (PNOS): 3 mg/m3 Respirable Dust Level (ACGIH)
Germany
General Dust Limit (ASG)
Respirable fraction (A-dust): 3 mg/m3 (8 hr average)
Inhalable fraction (E-dust) : 4 mg/m3 (Yearly average)
Netherlands
Indicative values for non-specific dust:
T_{gg} (8h)= 5 mg/m3 (respirable fraction)
T_{gg} (8h)= 10 mg/m3 (inhalable fraction)
Consult your local authorities for general valid (non substance specific) acceptable exposure recommendations/limits.

Recommended occupational and consumer exposure limit values:

DNEL	Exposure pattern	Derived No Effect Level (DNEL)	
		Workers	General population
	<i>Long-term – dermal, systemic effects</i>	139 mg/kg bw/day	83 mg/kg bw/day
	<i>Long-term – inhalation, systemic effects</i>	245 mg/m3	72 mg/m3
	<i>Long-term – oral, systemic effects</i>	Not relevant	8.3 mg/kg bw/day

PNEC

8.2 Exposure controls:

Appropriate engineering controls: Keep exposure to a minimum
Environmental exposure controls: Wear appropriate personal protective equipment. Avoid contact with eyes and skin. Avoid inhalation. Local exhaust ventilation of the working area.
Individual protection measures, such as personal protective equipment:
Respiratory protection: NIOSH approved.
Hand protection: Chemical-resistant gloves.
Suitable material: Neoprene/nitrile rubber/ rubber
Breakthrough time: not determined.
Eye protection: Safety goggles where splashing is possible.
Skin and body protection: Normal overall
Hygiene measures: Wash hands and face before breaks and immediately after handling the product. When using do not eat, drink, or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties for the active ingredient in the mixture

*Information on basic physical and chemical properties from the read-across substance Aluminium-Magnesium-Carbonate-Hydroxide-Perchlorate (hydrate) (EC 422-150-1)



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Appearance:	White Powder
Odour:	Not determined.
pH:	~ 9 (saturation concentration in water)
Melting/Boiling temperature:	Decomposition > 150°C (EC A.1) *(Read-Across)
Evaporation rate:	Not determined.
Flammability:	Not flammable (EC A.10) *(Read-Across)
Explosive properties:	Not explosive (EC A.14, based on structure).
Oxidizing properties:	Not oxidizing (EC A.17, based on structure)
Vapour pressure:	0.7 Pa at 20°C (EC A.4, static technique). *(Read-Across)
Relative Density (D4(20)):	2.2 (no guideline followed; pycnometer)
Water solubility:	<0.009 mg/l at 20°C (EC A.6).
Particle size distribution:	
Partition coefficient n-octanol/water:	Technically not feasible as the substance is inorganic
Decomposition temperature	Decomposition >150°C (EC A.1) *(Read-Across)
Self heating:	
Auto ignition temperature:	No self-ignition is expected up to 400 °C (EC A.16).
Surface tension:	74.4 mN/m at 20.0°C (90% saturation concentration in water) (EC A.5: ring method). *(Read-Across)

9.2 Other information None known

10. STABILITY AND REACTIVITY

10.1 Reactivity:	Reactive with acids.
10.2 Chemical stability:	Stable under normal conditions.
10.3 Possibility of hazardous reaction:	None known
10.4 Conditions to avoid:	Temperatures > 300 °C.
10.5 Incompatible materials	Acids; pH < 1.
10.6 Hazardous decomposition products	Hazardous decomposition will not occur.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effect for the main, active ingredient in the mixture

*Information is given from the read-across substance Aluminium-Magnesium-Zinc-Carbonate-Hydroxide-(hydrate) (EC 423-570-6).

**Information is given from the read-across substance Aluminium-Magnesium-Carbonate-Hydroxide-Perchlorate-(hydrate) (EC 422-150-1).

ACUTE TOXICITY

Acute oral toxicity:	LD50 (mice): >10000 mg/kg (no guideline followed) LD50 (rat): >2000 mg/kg (EC B.1) *(Read-Across) LD50 (rat): >2000 mg/kg (EC B.1) *(Read-Across)
Acute dermal toxicity:	LD50 (rat): >2000 mg / kg (EG B.3) *(Read-Across)
Acute inhalation toxicity:	LC50 (rat): >5.17 mg/l (EC B.2) *(Read-Across) LC50 (rat): >5.16 mg/l (EC B.2) *(Read-Across)

LOCAL

Skin corrosion / Irritation	Not irritating to the skin (rabbit) (EC B.4). Not irritating to the skin (rabbit) (EC B.4) *(Read-Across). Not irritating to the skin (rabbit) (EC B.4) *(Read-Across)
Serious eye damage / eye irritation	Not irritating to the eyes (rabbit) (no specific guideline followed). Not irritating to the eyes (rabbit) (EC B.5) *(Read-Across). Not irritating to the eyes (rabbit) (EC B.5) *(Read-Across)

Skin sensitization:

No sensitization by skin contact (guinea pig) (EC B.6) *(Read-Across)

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No sensitization by skin contact (guinea pig) (EC B.6). *(Read-Across)

OTHER

Sub-acute toxicity:	28-day oral gavage (rat): NOAEL: 1000 mg/kg bw/day (EC B.7). *(Read-Across)
Germ cell mutagenicity:	Bacterial reverse mutation test (S. typhimurium): not mutagenic (no specific guideline followed). Bacterial reverse mutation test (S. typhimurium / E. coli): not mutagenic (EC B 13/14) *(Read-Across). Bacterial reverse mutation test (S. typhimurium / E. coli): not mutagenic (EC B 13/14) *(Read-Across). In vitro Mammalian Chromosome aberration (human lymphocytes): not clastogenic (EC B.10) *(Read-Across) In vitro Mammalian Chromosome aberration (human lymphocytes): not clastogenic (EC B.10) *(Read-Across) In vitro Gene mutation (L5178Y/TK+/- mouse lymphoma cells) not mutagenic (EC B.17) *(Read-Across).
Reproductive toxicity:	Developmental toxicity: NAOEL = 123 mg/kg bw/day (proposed NOAL calculated from a NOAEL for Al). *(Read-Across) Teratogenicity: NAOEL = 123 mg/kg bw/day (proposed NOAEL calculated from a NOAEL for Al). *(Read-Across)
Carcinogenicity:	Negative *(Read-Across)
STOT-single exposure:	None known *(Read-Across)
STOT-repeated exposure:	None known *(Read-Across)
OTHER INFORMATION	
Immunology:	-
Neurotoxicity:	NOAEL = 200 mg/kg bw/day (proposed NOAEL calculated from a NOAEL for Al). *(Read-Across)
Lung absorption:	Possible absorption in the lungs, however no adverse effects on lung capacity in workers have been observed.
Chronic toxicity:	180-day oral gavage (rat) (no specific guideline followed): no toxic effects up to 2000 mg/kg bw/day.

12. ECOLOGICAL INFORMATION**ECOLOGICAL INFORMATION GIVEN IS FOR THE MAIN, ACTIVE INGREDIENT IN THE MIXTURE****12.1 Toxicity**

*Information is given from the read-across substance Aluminium-Magnesium-Zinc-Carbonate-Hydroxide-(hydrate) (EC 423-570-6).

**Information is given from the read-across substance Aluminium-Magnesium-Carbonate-Hydroxide-Perchlorate-(hydrate) (EC 422-150-1).

Fish:	LC50 fresh water (96h): ≥ 100 mg/l (EC C.1) *(Read-Across) LC50 fresh water (96h): ≥ 100 mg/l (EC C.1) *(Read-Across) LC50 marine water (96h): ≥ 100 mg/l (OECD 203) *(Read-Across)
Daphnia magna:	EC50 (48h): ≥ 100 mg/l (EC C.2). *(Read-Across) EC50 (48h): ≥ 100 mg/l (EC C.2) *(Read-Across).
Algae:	EC50 freshwater (72h): ≥ 100 mg/l (EC C.3) *(Read-Across). EC50 marine water (48h): ≥ 180 mg/l (ISO DP 10253) *(Read-Across)
Inhibition of microbial activity:	Not toxic to waste water (activated sludge) bacteria at a concentration of 100 mg/l (nominal). 3h-IC50 > 100 mg/l *(Read-Across). Not toxic to waste water (activated sludge) bacteria at a concentration of 100 mg/l (nominal). 3h-IC50 > 100 mg/l *(Read-Across).
Marine copepods:	EC50 (48h): ≥ 100 mg/l (ISO/DIS 14669) *(Read-Across)

12.2 Persistence and degradability

Biodegradation:	Considered not biodegradable, inorganic substance.
Hydrolysis:	Test is not performed due to the low water solubility.

12.3 Bioaccumulative potential

Octanol-water partition coefficient (Kow):	The partition coefficient can not be calculated.
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12.4 Mobility in soil

Adsorption coefficient Not performed, inorganic substance.

12.5 Results of PBT and vPvB assessment

No PBT and vPvB assessment was conducted since the active ingredient in the mixture is inorganic.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste from residues: Disposal in accordance with local and national regulations. Do not allow material to contaminate ground water system. Do not contaminate surface water.

Container: Containers should be cleaned by appropriate method and then re-used or disposed by landfill or incineration as appropriate, in accordance with local and national regulations. Do not remove label until container is thoroughly cleaned.

14. TRANSPORT INFORMATION

14.1 UN Number: Not regulated for transport acc. ADR/DOT/IATA/IMDG

14.2 UN Proper shipping name: Not regulated for transport acc. ADR/DOT/IATA/IMDG

14.3 Transport hazard classes: Not regulated for transport acc. ADR/DOT/IATA/IMDG

14.4 Packing group: Not regulated for transport acc. ADR/DOT/IATA/IMDG

14.5 Environmental hazards: Not regulated for transport acc. ADR/DOT/IATA/IMDG

14.6 Special precautions for user: Not regulated for transport acc. ADR/DOT/IATA/IMDG

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code: Not regulated for transport acc. ADR/DOT/IATA/IMDG

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture: This substance is listed on: TSCA, DSL, ECL, INSQ, NZIoC, PICCS, AICS, IECSC, AREC, VNECI, TCSI and EINECS/REACH.
This substance does not contain any substances that are under REACH listed as SVHC
REACH: EC 943-434-4 is included as "related substances" to CAS No. 11097-59-9 in the REACH registration.
USA: NO CERCLA/SARA/OSHA substance specific requirements. No California proposition 65 substance specific requirements. No USA state specific requirements for this substance.
Germany WHC(WGK) classification: Non-water polluting substance; WGK nwg
Germany TRGS 510 classification: storage class 13; Non-combustible solids

15.2 Chemical safety assessment: In accordance with REACH article 14, a Chemical Safety assessment has been carried out for this substance

16. OTHER INFORMATION

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 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 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.

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