RT Modified Clay Desiccant – Drying Agent

SafetyDataSheet

accordingto Regulation(EC)No. 1907/2006 (REACH), as retained and amended in UK law
Date of issue: 09/06/2023 Version: 1.0

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

1.1. Product identifier

Product form : Mixture
Product name : RT Modified Clay Desiccant – Drying Agent

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

1.2.1. Relevant identified uses

Main use category : Industrial use
Use of the substance/mixture : Desiccant

1.2.2. Uses advised against

Restrictions on use : Anything other than the above

1.3. Details of the supplier of the safety data sheet

R-Tech Solutions
Unit 1
Pinner Parc
Whitland
SA34 0RA
United Kingdom
Telephone: 01994 240500
E-mail: sales@desiccants.co.uk

1.4. Emergency telephone number

Emergency number : 01994240500
(Monday - Friday, 09:00 - 17:00)
English

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Eye Dam. 1 H318
Full text of hazard classes, H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS05

Signal word (CLP) : Danger
Contains : Calcium oxide
Hazard statements (CLP) : H318 - Causes serious eye damage.
Precautionary statements (CLP) : P280 - Wear protective clothing, eye protection, face protection, protective gloves.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Calcium chloride	CAS-No.: 10043-52-4 EC No.: 233-140-8 EC index No.: 017-013-00-2 REACH-no: 01-2119494219- 28-0048	≥ 25	Eye Irrit. 2, H319
Magnesium oxide	CAS-No.: 1309-48-4 EC No.: 215-171-9	3 - <5	Not classified
Calcium oxide substance with a Community workplace exposure limit	CAS-No.: 1305-78-8 EC No.: 215-138-9	3 - <5	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
Diiron trioxide	CAS-No.: 1309-37-1 EC No.: 215-168-2	1 - 3	Not classified
Titanium dioxide	CAS-No.: 1317-80-2	<1	Carc. 2, H351

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Use personal protective equipment as required. If medical advice is needed, have product container or label at hand.
First-aid measures after inhalation : If symptoms develop obtain medical attention.
First-aid measures after skin contact : Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician.
First-aid measures after ingestion : If symptoms develop, obtain medical attention.

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

Symptoms/effects : No information available.
Symptoms/effects after inhalation : Dust from this product may cause respiratory irritation.
Symptoms/effects after skin contact : Repeated and/or prolonged skin contact may cause irritation.
Symptoms/effects after eye contact : Causes serious eye damage.
Symptoms/effects after ingestion : Not expected to present a significant hazard under anticipated conditions of normal use.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media : Do not use a water jet since it may cause the fire to spread.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not flammable.
Hazardous decomposition products in case of fire : Thermal decomposition can lead to release of irritating and toxic gases and vapours. Carbon dioxide. Carbon monoxide.

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Avoid fire-fighting water entering the environment. Do not allow run-off from fire fighting to enter drains or water courses.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment Emergency procedures : See Section 8. Wear suitable protective clothing, gloves and eye or face protection.
: Ventilate area. Avoid inhalation of dust from dried product. Do not get in eyes.

6.1.2. For emergency responders

Protective equipment Emergency procedures : See Section 8. Wear suitable protective clothing, gloves and eye or face protection.
: Ventilate area. Avoid inhalation of dust from dried product. Do not get in eyes.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Clear spills immediately.
Methods for cleaning up : Collect using vacuum cleaner fitted with HEPA filter. Sweep or shovel spills into appropriate container for disposal. Minimise generation of dust. Do not dry sweep dust.

6.4. Reference to other sections

SECTION 8: Exposure controls/personal protection. SECTION 13: Disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Provide adequate ventilation. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8. Do not breathe dust. Avoid contact with skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not get in eyes.
Hygiene measures : Keep good industrial hygiene. When using do not eat, drink or smoke. Take off contaminated clothing. Keep away from food, drink and animal feeding stuffs. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Store in a dry place.
Incompatible materials : Strong acids. Strong bases. Alkalis.
Packaging materials : Keep only in the original container in a cool,well-ventilated place away from combustible materials.

7.3. Specific end use(s)

Desiccant.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Diiron trioxide (1309-37-1)	
United Kingdom - Occupational Exposure Limits	
Local name WEL TWA (mg/m³)	Iron oxide
	5 mg/m³ fume (as Fe) 4 mg/m³ Rouge, respirable 10 mg/m³ Rouge, total inhalable
WEL STEL (mg/m³)	10 mg/m³ fume (as Fe)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

Calcium oxide (1305-78-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Calcium oxide
IOELV TWA (mg/m³)	1 mg/m³ Respirable fraction
IOELV STEL (mg/m³)	4 mg/m³ Respirable fraction
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164 COMMISSION DIRECTIVE (EU) 2017/164
United Kingdom - Occupational Exposure Limits	
Local name	Calcium oxide
WEL TWA (mg/m³)	2 mg/m³
WEL STEL (mg/m³)	4 mg/m³ Respirable fraction
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

Magnesium oxide (1309-48-4)	
United Kingdom - Occupational Exposure Limits	
Local name WEL TWA (mg/m³)	Magnesium oxide 4 mg/m³ (as Mg) fume
	and respirable dust 10 mg/m³ (as Mg) inhalable dust fume
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

Exposure limit values for the other components

Dust		
United Kingdom - Occupational Exposure Limits		
Local name	Dust	
WEL TWA (mg/m³)	10 mg/m³ inhalable dust 4 mg/m³ Respirable dust	
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE	

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed
No additional information available

8.1.4. DNEL and PNEC
No additional information available

8.1.5. Control banding
No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls:

Provide adequate ventilation, including appropriate local extraction, to ensure that occupational exposure limits are not exceeded. Provide adequate ventilation to minimise dust concentrations. Emergency eye wash stations should be available in the immediate vicinity of any potential exposure. Do not get in eyes.

8.2.2. Personal protective equipment:

Wear suitable protective clothing.Avoidall unnecessary exposure.

8.2.2.1. Eye and face protection:

Chemical goggles or safety glasses. Standard EN 166 - Personal eye-protection.

8.2.2.2. Skin and body protection:

Wear chemically protective gloves, a lab coat or an apron to prevent prolonged or repeated skin contact

Hand protection: Wear chemically resistant protective gloves. Standard EN 374 - Protective gloves against chemicals. The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed. Gloves should be removed and replaced if there are any signs of degradation or breakthrough.

8.2.2.3. Respiratory protection:

Not required for normal conditions of use. In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazard protection:

Not required for normal conditions of use.

8.2.3. Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Round granules particle size 1 to 3mm.
Colour	: Brownish - grey. : Odourless.
Odour	: No data available
Odour threshold	: 7 – 8 (in suspension at 10% in water)
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: > 1600 °C
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	

Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20°C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: Water: < 20 g/l
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available
	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under recommended handling and storage conditions (see section 7).

10.2. Chemical stability

Hygroscopic.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Strong acids. Alkalis. Strong bases.

10.6. Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapours. Carbon dioxide. Carbon monoxide.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity (oral)	: Not classified :
Acute toxicity (dermal)	Not classified :
Acute toxicity (inhalation)	Not classified

Calcium chloride (10043-52-4)	
LD50 oral, rat LD50 dermal,	2301 mg/kg
rabbit	> 5000 mg/kg

Diiron trioxide (1309-37-1)	
LD50 oral, rat	> 5000 mg/kg

Calcium oxide (1305-78-8)	
LD50 oral, rat LC50 inhalation,	> 2000 mg/kg bodyweight (OECD 425 method)
rat (mg/l)	> 6.04 mg/l - 4 Hours (OECD 436 method)

Skin corrosion/irritation : Not classified
pH: 7 – 8 (in suspension at 10% in water)

Serious eye damage/irritation : Causes serious eye damage.
pH: 7 – 8 (in suspension at 10% in water)

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Diiron trioxide (1309-37-1)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified

Calcium oxide (1305-78-8)	
NOAEL, oral, mouse	≥ 440 mg/kg bw/day ((OECD 414 method))

STOT-single exposure : Not classified

Calcium oxide (1305-78-8)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

Calcium chloride (10043-52-4)	
EC50 Daphnia NOEC chronic	2400 mg/l
fish	230 mg/l 25 days (OECD 210 method)

Diiron trioxide (1309-37-1)	
EC50 Daphnia	> 100 mg/l - 48 Hours (Daphnia magna, Mobility), (OECD 202 method)

12.2. Persistence and degradability

Calcium chloride (10043-52-4)	
Persistence and degradability	Readily biodegradable.

Calcium oxide (1305-78-8)	
Persistence and degradability	Not relevant for inorganic substances.

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

Diiron trioxide (1309-37-1)	
Ecology - soil	Insoluble in water.

Calcium oxide (1305-78-8)	
Ecology - soil	Soluble in water.

12.5. Results of PBT and vPvB assessment

RT Modified Clay Desiccant – Drying Agent
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Component	
Calcium chloride (10043-52-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose in a safe manner in accordance with local/national regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Additional information : Handle empty containers with care.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with / ADR / IMDG / IATA / ADN / RID

14.1 UN number

UN-No. (ADR) : Not regulated

UN-No. (IMDG) : Not regulated

UN-No. (IATA) : Not regulated

UN-No. (ADN) : Not regulated

UN-No. (RID) : Not regulated

14.2. UN proper shipping name

Proper Shipping Name : Not regulated

Proper Shipping Name (IMDG) Not regulated :

Proper Shipping Name (IATA) Not regulated :

Proper Shipping Name (ADN) Not regulated :

Proper Shipping Name (RID) Not regulated

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not regulated

IMDG

Transport hazard class(es) (IMDG) : Not regulated

IATA

Transport hazard class(es) (IATA) : Not regulated

ADN

Transport hazard class(es) (ADN) : Not regulated

RID

Transport hazard class(es) (RID) : Not regulated

14.4. Packing group

Packing group	: Not regulated :
Packing group (IMDG)	Not regulated :
Packing group (IATA)	Not regulated :
Packing group (ADN)	Not regulated :
Packing group (RID)	Not regulated

14.5. Environmental hazards

Dangerous for the environment	: No : No : No supplementary information
Marine pollutant	available
Other information	

14.6. Special precautions for user

Overlandtransport
Not regulated

Transportbysea
Not regulated

Air transport
Not regulated

Inlandwaterway transport
Not regulated

Rail transport
Not regulated

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)
Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)
Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)
Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)
Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)
Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)
Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)
Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations
No additional information available

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out

SECTION 16: Other information

Abbreviations and acronyms:	
	ADR (Accord européen relatif au transport international des marchandises Dangereuses par Route)
	CAS (Chemical Abstracts Service) number
	CLP (Classification, Labeling and Packaging)
	DNEL (Derived No Effect Level)
	EC (European Community)
	EN (European Norm)
	IATA (International Air Transport Association)
	IBC (Intermediate Bulk Container)
	IMDG (International Maritime Dangerous Goods Code)
	LC50 (Lethal Concentration 50%)
	LD50 (Lethal Dose 50%)
	NOAEL (No Observed Adverse Effect Level)
	NOEC (No Observed Effect Concentration)
	OECD (Organisation for Economic Co-operation and Development)
	OEL (Occupational exposure limit)
	PBT (Persistent, Bioaccumulative and Toxic)
	PNEC (Predicted No Effect Concentration)
	REACH (Registration, Evaluation and Authorisation of CHemicals)
	STEL (Short Term Exposure Limit)
	UNxxxx (Number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods)
	vPvB (very Persistent and very Bioaccumulative)

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. Where 'Regulation (EC) No. 1272/2008' appears in the safety data sheet, this is a reference to Regulation (EC) No. 1272/2008, as retained and amended in UK law. Supplier's safety documents. ECHA (European Chemicals Agency).

Other information : Classification procedure according to Regulation (EC) No. 1272/2008 [CLP]: Physical hazards: On basis of test data. Health hazards: On basis of test data. Environmental hazards: On basis of test data.

Full text of H- and EUH-statements:	
Carc. 2	Carcinogenicity, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H315	Causes skin irritation. Causes serious eye damage.
H318	Causes serious eye irritation.
H319	May cause respiratory irritation.
H335	Suspected of causing cancer.
H351	Skin corrosion/irritation, Category 2
Skin Irrit. 2	Specific target organ toxicity – Single exposure,
STOT SE 3	Category 3, Respiratory tract irritation

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.