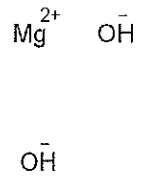
Magnesium hydroxide

Substance identity

EC / List no.: 215-170-3

CAS no.: 1309-42-8

Mol. formula: H2MgO2



Hazard classification & labelling

According to the notifications provided by companies to ECHA in REACH registrations no hazards have been classified.

About this substance

This substance is manufactured and/or imported in the European Economic Area in 100 000 - 1 000 000 tonnes per year.

This substance is used by consumers, in articles, by professional workers (widespread uses), in formulation or re-packing, at industrial sites and in manufacturing.

Consumer Uses

ECHA has no public registered data indicating whether or in which chemical products the substance might be used. ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment.

Article service life

ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment. ECHA has no public registered data indicating whether or into which articles the substance might have been processed.

Widespread uses by professional workers

ECHA has no public registered data indicating whether or in which chemical products the substance might be used. ECHA has no public registered data on the types of manufacture using this substance. ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment.

Formulation or re-packing

ECHA has no public registered data indicating whether or in which chemical products the substance might be used. ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment.

Uses at industrial sites

ECHA has no public registered data indicating whether or in which chemical products the substance might be used. ECHA has no public registered data on the types of manufacture using this substance. ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment.

Manufacture

ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment.

The InfoCard summarises the non-confidential data on substances as held in the databases of the European Chemicals Agency (ECHA), including data provided by third parties. The InfoCard is automatically generated. Information requirements under different legislative frameworks may therefore not be up-to-date or complete. Substance manufacturers and importers are responsible for consulting official publications. This InfoCard is covered by the ECHA Legal Disclaimer.

ECHA EUROPEAN CHEMICALS AGENCY

about INFOCARD - Last updated: 27/09/2017

The Brief Profile summarizes the non-confidential data on substances as it is held in the databases of the European Chemicals Agency (ECHA), including data provided by third parties. The Brief Profile is automatically generated; note that it does not currently distinguish between harmonised classification and minimum classification; information requirements under different legislative frameworks may therefore not be fully up to date or complete. For accuracy reasons, substance manufacturers and imports have the responsibility to consult official sources, e.g. the electronic edition of the Official Journal of the European Union.
This Brief Profile is covered by the ECHA Legal Notice.

Magnesium hydroxide

Brief Profile - Last updated: 30/01/2018

Substance Description

Substance identity

Mg^{2+} $\bar{O}H$

$\bar{O}H$

EC / List name: Magnesium hydroxide

IUPAC name: magnesium(2+) ion dihydroxide

Other names

EC / List no.:	215-170-3
CAS no.:	1309-42-8
Index number:	
Molecular formula:	H2MgO2

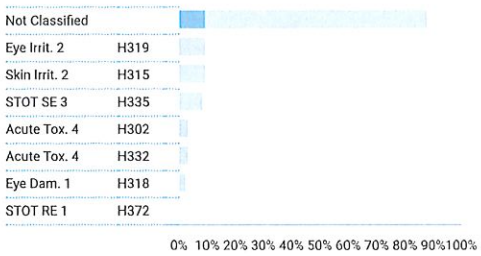
SMILES:	[OH-].[OH-].[Mg++]
InChI:	InChI=1S/Mg.2H2O/h;2*1H2/q+2;;/p-2 AuxInfo=1/1/N:1;2;3/rA:3Mg+2O-O-/rB:;;/rC:;3.4907,0,0;0,-5.7493,0;
Type of substance:	Mono constituent substance
Origin:	Inorganic
Registered compositions:	13
Of which contain:	0 impurities relevant for classification
	0 additives relevant for classification
Substance Listed:	EINECS (European INventory of Existing Commercial chemical Substances) List

Hazard classification & labelling

According to the notifications provided by companies to ECHA in REACH registrations no hazards have been classified.

Additionally, the classification provided by companies to ECHA in **CLP notifications** identifies that this substance causes serious eye irritation, causes skin irritation and may cause respiratory irritation.

Breakdown of all 509 C&L notifications submitted to ECHA



✔ Harmonised Classification
REACH registration dossiers notifications
CLP notifications

ℹ At least one notifier has indicated that an impurity or an additive present in the substance impacts the notified classification.

Properties of concern

Regulatory activities

Registration, Evaluation, Authorisation & Restriction of Chemicals (REACH)

Registration

Pre-registration: Substance pre-registered under REACH.

Registration: This substance has 42 active registrations under REACH, 1 Joint Submission(s) and 1 Individual Submission(s).

Evaluation

Dossier Evaluation:

Substance Evaluation:

Authorisation

Candidate List:

Annex XIV (Authorisation List):

Restriction

Annex XVII (Restriction List):

Classification Labelling & Packaging (CLP)

Harmonised C&L:

Notification: Classification & Labelling has been notified by industry to ECHA for this substance.

Biocidal Products Regulation (BPR)

Active Substance:

Biocidal Products:

Prior Informed Consent (PIC)

Annex I:

Annex V:

About this substance

General

This substance is manufactured and/or imported in the European Economic Area in 100 000 - 1 000 000 tonnes per year.

This substance is used by consumers, in articles, by professional workers (widespread uses), in formulation or re-packing, at industrial sites and in manufacturing.

Consumer Uses

This substance is used in the following products: anti-freeze products, lubricants and greases, adhesives and sealants, coating products, fillers, putties, plasters, modelling clay, polishes and waxes, air care products, washing & cleaning products, water softeners, water treatment chemicals, heat transfer fluids, hydraulic fluids, perfumes and fragrances, cosmetics and personal care products, fuels, inks and toners, leather treatment products, pH regulators and water treatment products, fertilisers, adsorbents, paper chemicals and dyes, polymers and textile treatment products and dyes.

Release to the environment of this substance can occur from industrial use: formulation of mixtures. Other release to the environment of this substance is likely to occur from: outdoor use, indoor use (e.g. machine wash liquids/detergents, automotive care products, paints and coating or adhesives, fragrances and air fresheners), indoor use in close systems with minimal release (e.g. cooling liquids in refrigerators, oil-based electric heaters), outdoor use in close systems with minimal release (e.g. hydraulic liquids in automotive suspension, lubricants in motor oil and break fluids), outdoor use in long-life materials with low release rate (e.g. metal, wooden and plastic construction and building materials) and indoor use in long-life materials with low release rate (e.g. flooring, furniture, toys, construction materials, curtains, foot-wear, leather products, paper and cardboard products, electronic equipment).

Article service life

This substance is used in the following activities or processes at workplace: production of mixtures or articles by tabletting, compression, extrusion or pelletisation, the low energy manipulation of substances bound in materials or articles, potentially closed industrial processing with minerals/metals at elevated temperature (e.g. smelters, furnaces, refineries, coke ovens), open transfer and processing with minerals/metals at elevated temperature, high energy work-up of substances bound in materials or articles (e.g. hot rolling/forming, grinding, mechanical cutting, drilling or sanding), transfer of chemicals, closed processes with no likelihood of exposure and closed, continuous processes with occasional controlled exposure.

Release to the environment of this substance can occur from industrial use: in the production of articles, formulation of mixtures, in processing aids at industrial sites, industrial abrasion processing with low release rate (e.g. cutting of textile, cutting, machining or grinding of metal), formulation in materials and as processing aid. Other release to the environment of this substance is likely to occur from: indoor use (e.g. machine wash liquids/detergents, automotive care products, paints and coating or adhesives, fragrances and air fresheners), outdoor use, indoor use in long-life materials with low release rate (e.g. flooring, furniture, toys, construction materials, curtains, foot-wear, leather products, paper and cardboard products, electronic equipment), outdoor use in long-life materials with low release rate (e.g. metal, wooden and plastic construction and building materials), indoor use in close systems with minimal release (e.g. cooling liquids in refrigerators, oil-based electric heaters), outdoor use in close systems with minimal release (e.g. hydraulic liquids in automotive suspension, lubricants in motor oil and break fluids) and outdoor use in long-life materials with high release rate (e.g. tyres, treated wooden products, treated textile and fabric, brake pads in trucks or cars, sanding of buildings (bridges, facades) or vehicles (ships)).

This substance can be found in complex articles, with no release intended: vehicles and machinery, mechanical appliances and electrical/electronic products (e.g. computers, cameras, lamps, refrigerators, washing machines). This substance can be found in products with material based on: plastic (e.g. food packaging and storage, toys, mobile phones), paper (e.g. tissues, feminine hygiene products, nappies, books, magazines, wallpaper), metal (e.g. cutlery, pots, toys, jewellery), stone, plaster, cement, glass or ceramic (e.g. dishes, pots/pans, food storage containers, construction and isolation material), rubber (e.g. tyres, shoes, toys) and wood (e.g. floors, furniture, toys).

Widespread uses by professional workers

This substance is used in the following products: lubricants and greases, anti-freeze products, coating products, polymers, polishes and waxes, adhesives and sealants, fillers, putties, plasters, modelling clay, washing & cleaning products, air care products, water softeners, water treatment chemicals, hydraulic fluids, laboratory chemicals, fertilisers, textile treatment products and dyes, inks and toners, leather treatment products, plant protection products, fuels, explosives, heat transfer fluids, metal working fluids, pH regulators and water treatment products, paper chemicals and dyes, adsorbents, perfumes and fragrances, pharmaceuticals and cosmetics and personal care products.

This substance is used in the following areas: agriculture, forestry and fishing, building & construction work, formulation of mixtures and/or re-packaging, mining, health services and scientific research and development. This substance is used for the manufacture of: chemicals, plastic products, pulp, paper and paper products, machinery and vehicles, textile, leather or fur, mineral products (e.g. plasters, cement), electrical, electronic and optical equipment, rubber products, wood and wood products, furniture and food products.

This substance is used in the following activities or processes at workplace: transfer of chemicals, closed, continuous processes with occasional controlled exposure, closed batch processing in synthesis or formulation, closed processes with no likelihood of exposure, batch processing in synthesis or formulation with opportunity for exposure, treatment of articles by dipping and pouring, non-industrial spraying, roller or brushing applications, mixing in open batch processes, transfer of substance into small containers, heat / pressure transfer fluids in closed systems, lubrication at high energy conditions and in partly open process, the low energy manipulation of substances bound in materials or articles, production of mixtures or articles by tabletting, compression, extrusion or pelletisation, laboratory work, industrial spraying, hand mixing with intimate contact only with personal protective equipment available, in materials as fuel sources, with limited exposure to unburned product to be expected, high energy work-up of substances bound in materials or articles (e.g. hot rolling/forming, grinding, mechanical cutting, drilling or sanding), calendering operations and open transfer and processing with minerals/metals at elevated temperature.

Release to the environment of this substance can occur from industrial use: formulation of mixtures, in processing aids at industrial sites, formulation in materials, in the production of articles, of substances in closed systems with minimal release, as processing aid, industrial abrasion processing with low release rate (e.g. cutting of textile, cutting, machining or grinding of metal) and manufacturing of the substance. Other release to the environment of this substance is likely to occur from: indoor use (e.g. machine wash liquids/detergents, automotive care products, paints and coating or adhesives, fragrances and air fresheners), outdoor use, indoor use in close systems with minimal release (e.g. cooling liquids in refrigerators, oil-based electric heaters), outdoor use in close systems with minimal release (e.g. hydraulic liquids in automotive suspension, lubricants in motor oil and break fluids), indoor use in long-life materials with low release rate (e.g. flooring, furniture, toys, construction materials, curtains, foot-wear, leather products, paper and cardboard products, electronic equipment), outdoor use in long-life materials with low release rate (e.g. metal, wooden and plastic construction and building materials), outdoor use in long-life materials with high release rate (e.g. tyres, treated wooden products, treated textile and fabric, brake pads in trucks or cars, sanding of buildings (bridges, facades) or vehicles (ships)) and indoor use in long-life materials with high release rate (e.g. release from fabrics, textiles during washing, removal of indoor paints).

Formulation or re-packing

This substance is used in the following products: polymers, lubricants and greases, fertilisers, pharmaceuticals, coating products, textile treatment products and dyes, anti-freeze products, fillers, putties, plasters, modelling clay, adhesives and sealants, inks and toners, leather treatment products, polishes and waxes, laboratory chemicals, non-metal-surface treatment products, metal working fluids and fuels. This substance has an industrial use resulting in manufacture of another substance (use of intermediates).

This substance is used in the following activities or processes at workplace: transfer of chemicals, closed batch processing in synthesis or formulation, mixing in open batch processes, closed processes with no likelihood of exposure, closed, continuous processes with occasional controlled exposure, batch processing in synthesis or formulation with opportunity for exposure, production of mixtures or articles by tabletting, compression, extrusion or pelletisation, the low energy manipulation of substances bound in materials or articles, laboratory work, calendering operations, transfer of substance into small containers, treatment of articles by dipping and pouring, industrial spraying, roller or brushing applications, hand mixing with intimate contact only with personal protective equipment available and high energy work-up of substances bound in materials or articles (e.g. hot rolling/forming, grinding, mechanical cutting, drilling or sanding).

Release to the environment of this substance can occur from industrial use: formulation of mixtures, formulation in materials, in the production of articles, as processing aid, as an intermediate step in further manufacturing of another substance (use of intermediates), for thermoplastic manufacture, in processing aids at industrial sites and manufacturing of the substance.

Uses at industrial sites

This substance is used in the following products: polymers, lubricants and greases, pH regulators and water treatment products, laboratory chemicals, anti-freeze products, coating products, fillers, putties, plasters, modelling clay, polishes and waxes, adhesives and sealants, air care products, non-metal-surface treatment products, washing & cleaning products, textile treatment products and dyes, metal surface treatment products, leather treatment products, inks and toners, heat transfer fluids, hydraulic fluids, metal working fluids, paper chemicals and dyes, water softeners, water treatment chemicals, fuels, fertilisers, adsorbents, explosives and cosmetics and personal care products. This substance has an industrial use resulting in manufacture of another substance (use of intermediates).

This substance is used in the following areas: municipal supply (e.g. electricity, steam, gas, water) and sewage treatment, formulation of mixtures and/or re-packaging, building & construction work, mining and agriculture, forestry and fishing. This substance is used for the manufacture of: chemicals, plastic products, pulp, paper and paper products, rubber products, textile, leather or fur, electrical, electronic and optical equipment, machinery and vehicles, mineral products (e.g. plasters, cement), metals, fabricated metal products, wood and wood products and furniture.

This substance is used in the following activities or processes at workplace: transfer of chemicals, closed, continuous processes with occasional controlled exposure, closed batch processing in synthesis or formulation, closed processes with no likelihood of exposure, batch processing in synthesis or formulation with opportunity for exposure, roller or brushing applications, industrial spraying, transfer of substance into small containers, production of mixtures or articles by tabletting, compression, extrusion or pelletisation, mixing in open batch processes, treatment of articles by dipping and pouring, the low energy manipulation of substances bound in materials or articles, laboratory work, calendering operations, lubrication at high energy conditions and in partly open process, in materials as fuel sources, with limited exposure to unburned product to be expected, hand mixing with intimate contact only with personal protective equipment available, non-industrial spraying, potentially closed industrial processing with minerals/metals at elevated temperature (e.g. smelters, furnaces, refineries, coke ovens), blowing agents in manufacture of foam, high energy work-up of substances bound in materials or articles (e.g. hot rolling/forming, grinding, mechanical cutting, drilling or sanding), open transfer and processing with minerals/metals at elevated temperature and greasing at high energy conditions.

Release to the environment of this substance can occur from industrial use: in processing aids at industrial sites, in the production of articles, as processing aid, formulation in materials, of substances in closed systems with minimal release, as an intermediate step in further manufacturing of another substance (use of intermediates), as processing aid, for thermoplastic manufacture, manufacturing of the substance, industrial abrasion processing with low release rate (e.g. cutting of textile, cutting, machining or grinding of metal) and formulation of mixtures. Other release to the environment of this substance is likely to occur from: indoor use (e.g. machine wash liquids/detergents, automotive care products, paints and coating or adhesives, fragrances and air fresheners), indoor use in long-life materials with low release rate (e.g. flooring, furniture, toys, construction materials, curtains, foot-wear, leather products, paper and cardboard products, electronic equipment), outdoor use in long-life materials with low release rate (e.g. metal, wooden and plastic construction and building materials), outdoor use as processing aid and indoor use in close systems with minimal release (e.g. cooling liquids in refrigerators, oil-based electric heaters).

Manufacture

This substance is used in the following activities or processes at workplace: closed processes with no likelihood of exposure, transfer of chemicals, closed, continuous processes with occasional controlled exposure, closed batch processing in synthesis or formulation, batch processing in synthesis or formulation with opportunity for exposure, transfer of substance into small containers, laboratory work, mixing in open batch processes and production of mixtures or articles by tabletting, compression, extrusion or pelletisation.

Release to the environment of this substance can occur from industrial use: manufacturing of the substance, as processing aid, formulation of mixtures and in the production of articles. Other release to the environment of this substance is likely to occur from: indoor use in close systems with minimal release (e.g. cooling liquids in refrigerators, oil-based electric heaters).

Precautionary Measures and safe use

ECHA has no data from registration dossiers on the precautionary measures for using this substance. Guidance on the safe use of the substance provided by manufacturers and importers of this substance.

Registrants/suppliers

Active

- Akzo Nobel Pulp and Performance Chemicals AB, Färjevägen 1 SE-445 80 Bohus Sweden
- BASF Nederland B.V., Groningensingel 1 Postbus 1019 6801 MC Arnhem Netherlands
- BIM Kemi Sweden AB, PO Box 3102 Hunstugans väg 7 S-443 03 Stenkullen Sweden
- BIM Norway AS, Nedre Eikervei 37 C PB12 37 C Bragernes 3001 Drammen Norway
- Caima-Industria de Celulose SA, Constância Sul 2250-058 Constância Portugal
- Carl Spaeter GmbH, Philosophenweg 17 47053 Duisburg Germany
- Charles River Laboratories Den Bosch B.V. OR01, Hambakenwetering 7 5231 DD 's Hertogenbosch Netherlands
- Dr. Paul Lohmann GmbH KG, Hauptstraße 2 31860 Emmerthal Germany
- DUSLO, Administrativna budova ev.č 1236 927 03 Šaľa Slovakia
- FormiChem GmbH, Anna-von-Philipp-Strasse B33 86633 Neuburg a.d. Donau Germany
- Frisia Zout b.v., NL-8861 Harlingen, Lange Lijnbaan 15 8861 NW Harlingen Netherlands
- ICL Europe Coöperatief U.A. (OR1), Koningin Wilhelminaplein 30 Prinsenhof 1062 KR Amsterdam Netherlands
- Innospec France SA, 17, Route de Rouen 27 950 Saint Marcel United Kingdom
- Johnson Matthey Chemicals GmbH, Wardstrasse 17 D-46446 Emmerich am Rhein Germany
- Kaustik Europe b.v. (OR6), Oslo 1 2993 LD Barendrecht Netherlands
- KISUMA CHEMICALS B.V., Billitonweg 7 9641 KZ Veendam Netherlands
- Kisuma Chemicals BV, Billitonweg 7 9641 KZ Veendam Netherlands
- Kürzeder & März Bleichhilfsmittel, Stalleringer Straße 3 85457 Hörlkofen Germany
- Lehmann & Voss & Co. KG, Alsterufer 19 20354 Hamburg Hamburg Germany
- Magnesia GmbH, Max-Jenne-Straße 2 - 4 21337 Lüneburg Niedersachsen Germany
- Magnesitas de Rubián, S.A., Carretera LU-546, Km 35. Vila de Mouros 27341 O Inicio Lugo Spain
- Magnesitas Navarras, Avda Roncesvalles S/N 31630 Zubiri Navarra Spain
- MAGNIFIN Magnesiapodukte GmbH & Co KG, Magnesitstrasse 40 8614 Breitenau am Hochlantsch Austria
- MARTINSWERK GMBH, Koelnerstrasse, 110 50127 BERGHEIM Germany
- MERCADOS MUNDIALES IMPORT EXPORT S.A.U., C/ Ayuntamientos Democraticos Nº 22 39700 Castro Urdiales Cantabria Spain
- MITSUBISHI GAS CHEMICAL EUROPE GMBH, Immermannstr.13 40210 Duesseldorf Germany
- Nedmag B.V., Billitonweg 1 9640AE Veendam Netherlands
- Nordic Paper Seffle AB, Forskningsvägen 1 661 31 Säffle Sweden
- Premier Periclase Ltd, Boyne Road none Drogheda Louth Ireland
- Rheinkalk Eifel Sauerland GmbH & Co. KG, Am Kalkstein 1 42489 Wülfrath Germany
- RHI NORMAG AS, Herøya Industripark Po Box 1021 3905 Porsgrunn Norway
- Sappi Alfeld GmbH, Mühlenmasch 1 31061 Alfeld (Leine) Germany
- Sappi Austria Produktions-GmbH & Co.KG, Brucker Strasse 21 8101 Gratkorn Austria
- Sappi Ehingen GmbH, Biberacher Strasse 73 89584 Ehingen Germany
- Sappi Stockstadt GmbH, Obernburger Straße 1-9 63811 Stockstadt Bavaria Germany
- SCA Hygiene Products GmbH Mannheim, Sandhofer Str. 176 68305 Mannheim Germany Germany
- Stora Enso Paper AB, Stora Enso Fine Paper Nymölla mill SE-295 80 Nymölla Sweden
- Van Mannekus & Co. BV, Nieuwe Waterwegstraat 45 3115HE Schiedam Netherlands Netherlands
- Yara UK Ltd, Harvest House Europarc DN37 9TZ Grimsby N.E.LincolnshireUK United Kingdom

Inactive

Other names

IUPAC names

- -
- Magnesium Dihydroxide
- magnesium hydoxide
- Magnesium Hydroxide
- Magnesium Hydroxide, Hidróxido de magnesio, Hidróxido magnésico, Leche de magnesia
- magnesium(2+) ion dihydroxide
- Magnesiumdihydroxide

Regulatory processes names

- Magnesium hydroxide

Trade names

- 200-06H
- Akdolit
- Akdolit Hydrolit Mg G
- CellGuard MH
- CellGuard MH UF
- Dolomag
- Duhor
- FloMag H
- FloMag HUS
- FloMag MHP
- Hidramag
- Hidromag
- Inertimag
- Kisuma 5
- Kisuma 5AC
- Kisuma 5BC
- Kisuma 5C
- Kisuma 5Q
- Magal H
- MagChem MH
- MagChem MH 10
- MagChem MH 10 LC
- MagChem MH 10 ULC
- MagChem MH UF
- Magnesium Hydroxide
- Magnifin
- MagShield S
- MagShield S NB 10
- MagShield SD
- MagShield UF
- MagShield UF NB 10
- MagShield UF NB 10 CL
- MagShield UF NB 25
- MagShield VLH NB 10
- MagShield VLH NB 20
- MagShield VLH NB 25
- ManMag HP MH
- Marinco H2
- Martinit
- MDH
- Oxyfertil
- Papermag
- Premier ECOMAG Magnesium Hydroxide suspension
- Purmag
- R-1557
- Sorbacal
- TIS# I0038
- Versamag
- Visucal
- Y99R8

Other names

Scientific properties

Physical and chemical properties

This section provides physicochemical information compiled from all automatically processable data from REACH registration dossiers that is available to ECHA at the time of generation. The quality and correctness of the information remains the responsibility of the data submitter. The Agency thus cannot guarantee the correctness of the information displayed.

Appearance/physical state / colour

Study results — 7 studies submitted, 7 studies processed

Type of Study provided

Studies with data				
Key study	1			
Weight of evidence	6			

Data waiving: no waivers

Summaries: 0 summaries submitted, 0 summaries processed

⚠ No data available

C Physical state at 20°C and 1013 hPa
Solid (100%) [7]

C Form
Powder (43%), Crystalline (29%), Other (29%) [7]

C Odour
Odourless (100%) [2]

C Substance type
Inorganic (100%) [7]

Melting/freezing point

Study results — 9 studies submitted, 4 studies processed

Type of Study provided

Studies with data				
Key study	1			
Weight of evidence	8			

Data waiving: no waivers

Summaries: 0 summaries submitted, 0 summaries processed

⚠ No data available

R Melting / freezing point
350 °C [4]

Boiling point

Study results: 2 studies submitted, 0 studies processed

⚠ No automatically processable data submitted

Type of Study provided

Studies with data	
Key study	1

Data waiving	
Other	1

Summaries: 0 summaries submitted, 0 summaries processed

⚠ No data available

Density

Study results: 5 studies submitted, 5 studies processed

R **Bulk density**
0.35 - 0.6 g/cm³ [1]

R **Density**
2.36 - 2.41 g/cm³ @ 20 - 25 °C [5]

R **Relative density**
2.41 [1]

Type of Study provided

Studies with data	
Key study	1
Weight of evidence	4

Data waiving: no waivers

Summaries: 0 summaries submitted, 0 summaries processed

⚠ No data available

Vapour pressure

Study results: 2 studies submitted, 0 studies processed

⚠ No automatically processable data submitted

Type of Study provided

Studies with data	

Data waiving	
Sci. unjustified	1
Other	1

Summaries: 0 summaries submitted, 0 summaries processed

⚠ No data available

Partition coefficient

Study results: 2 studies submitted, 0 studies processed

⚠ No automatically processable data submitted

Type of Study provided

Studies with data	

Data waiving	
Sci. unjustified	1
Other	1

Summaries: 0 summaries submitted, 0 summaries processed

⚠ No data available

Water solubility

Study results: 3 studies submitted, 3 studies processed

R **Water solubility (mass/vol.)**
1.59 - 9 mg/L @ 18 - 20.3 °C and pH 8.3 [6]

Type of Study provided

Studies with data	
Key study	1
Weight of evidence	2

Data waiving: no waivers

Summaries: 0 summaries submitted, 0 summaries processed

⚠ No data available

Solubility in organic solvents / fat solubility

⚠ Data not provided by the registrant

Surface tension

Study results: 2 studies submitted, 0 studies processed

⚠ No automatically processable data submitted

Type of Study provided

Studies with data	

Data waiving	
Sci. unjustified	1
Other	1

Summaries: 0 summaries submitted, 0 summaries processed

⚠ No data available

Flash point

Study results: 2 studies submitted, 0 studies processed

⚠ No automatically processable data submitted

Type of Study provided

Studies with data	

Data waiving	
Sci. unjustified	1
Other	1

Summaries: 0 summaries submitted, 0 summaries processed

⚠ No data available

Auto flammability

Study results: 2 studies submitted, 0 studies processed

⚠ No automatically processable data submitted

Type of Study provided

Studies with data	
Key study	1

Data waiving	
Other	1

Summaries: 0 summaries submitted, 0 summaries processed

⚠ No data available

Flammability

Study results: 9 studies submitted, 1 study processed

C Interpretation of results
Non flammable (100%) [1]

Type of Study provided

Studies with data	
Key study	1
Supporting study	1

Data waiving	
Sci. unjustified	7

Summaries: 0 summaries submitted, 0 summaries processed

No data available

Explosiveness

Study results: 2 studies submitted, 0 studies processed

No automatically processable data submitted

Type of Study provided

Studies with data	

Data waiving	
Sci. unjustified	1
Other	1

Summaries: 0 summaries submitted, 0 summaries processed

No data available

Oxidising

Study results: 2 studies submitted, 0 studies processed

No automatically processable data submitted

Type of Study provided

Studies with data	

Data waiving	
Sci. unjustified	1
Other	1

Summaries: 0 summaries submitted, 0 summaries processed

No data available

Oxidation reduction potential — Data not provided by the registrant

pH — Data not provided by the registrant

Dissociation constant

Study results: 1 study submitted, 0 studies processed

No automatically processable data submitted

Type of Study provided

Studies with data	

Data waiving	
Sci. unjustified	1

Summaries: 0 summaries submitted, 0 summaries processed

No data available

Viscosity

Study results: 2 studies submitted, 0 studies processed

No automatically processable data submitted

Type of Study provided

Studies with data	

Data waiving	
Not feasible	2

Summaries: 0 summaries submitted, 0 summaries processed

No data available

Environmental fate and pathways

This section provides environmental fate and pathways information compiled from all automatically processable data from REACH registration dossiers that is available to ECHA at the time of generation. The quality and correctness of the information remains the responsibility of the data submitter. The Agency thus cannot guarantee the correctness of the information displayed.

Phototransformation in air — Data not provided by the registrant

Hydrolysis

Study results: 1 study submitted, 0 studies processed

Study data not processed for brief profile

Type of Study provided

Studies with data	

Data waiving	
Not feasible	1

Summaries: 0 summaries submitted, 0 summaries processed

No data available

Phototransformation in water — Data not provided by the registrant

Phototransformation in soil — Data not provided by the registrant

Biodegradation in water - screening tests

Study results: 2 studies submitted, 0 studies processed

No automatically processable data submitted

Type of Study provided

Studies with data	
Other	1

Data waiving	
Sci. unjustified	1

Summaries: 0 summaries submitted, 0 summaries processed

No data available

Biodegradation in water & sediment - simulation tests — Data not provided by the registrant

Biodegradation in soil

Study results: 1 study submitted, 0 studies processed

⚠ Study data not processed for brief profile

Type of Study provided

Studies with data				
Key study				
Supporting study				

Data waiving

Sci. unjustified	1

Summaries: 0 summaries submitted, 0 summaries processed

⚠ No data available

Bioaccumulation: aquatic / sediment

Study results: 1 study submitted, 0 studies processed

⚠ Study data not processed for brief profile

Type of Study provided

Studies with data				
Key study				
Supporting study				

Data waiving

Sci. unjustified	1

Summaries: 0 summaries submitted, 0 summaries processed

⚠ No data available

Bioaccumulation: terrestrial

⚠ Data not provided by the registrant

Adsorption/desorption

Study results: 1 study submitted, 0 studies processed

⚠ No automatically processable data submitted

Type of Study provided

Studies with data				
Key study				
Supporting study				

Data waiving

Sci. unjustified	1

Summaries: 0 summaries submitted, 0 summaries processed

⚠ No data available

Henrys law constant (H)

⚠ Data not provided by the registrant

Distribution modelling

⚠ Data not provided by the registrant

Ecotoxicological information

This section provides ecotoxicological information compiled from all automatically processable data from REACH registration dossiers that is available to ECHA at the time of generation. The quality and correctness of the information remains the responsiblity of the data submitter. The Agency thus cannot guarantee the correctness of the information displayed.

Predicted No-Effect Concentration (PNEC)

R Summaries: 1 summary submitted, 1 summary processed

The Predicted No-Effect Concentration (PNEC) value is the concentration of a substance below which adverse effects in the environment are not expected to occur. Please note that when more than one summary is provided, PNEC values may refer to constituents of the substance and not to the substance as a whole. More detailed information is available in the dossiers.

Hazard for Aquatic Organisms	
Freshwater	100 µg/L (1)
Intermittent releases (freshwater)	1 mg/L (1)
Marine water	10 µg/L (1)
Intermittent releases (marine water)	-
Sewage treatment plant (STP)	1 mg/L (1)
Sediment (freshwater)	81.88 µg/kg sediment dw (1)
Sediment (marine water)	8.188 µg/kg sediment dw (1)

Hazard for Air	
Air	-
Hazard for Terrestrial Organism	
Soil	19.12 µg/kg soil dw (1)
Hazard for Predators	
Secondary poisoning	66.67 mg/kg food (1)

Short-term toxicity to fish

Study results: 5 studies submitted, 2 studies processed

P/R Results

LC50 (4 days) 306.79 - 775.8 mg/L [3]

Type of Study provided

Studies with data				
Key study	2			
Supporting study				3

Data waiving

no waivers

Summaries: 0 summaries submitted, 0 summaries processed

⚠ No data available

Long-term toxicity to fish

Study results: 1 study submitted, 0 studies processed

⚠ No automatically processable data submitted

Type of Study provided

Studies with data				
Key study				
Supporting study				

Data waiving

Sci. unjustified	1

Summaries: 0 summaries submitted, 0 summaries processed

⚠ No data available

Short-term toxicity to aquatic invertebrates

Study results 15 studies submitted, 1 study processed

Type of Study provided

Summaries 0 summaries submitted, 0 summaries processed

P/R **Results**
LC50 (4 days) 170.86 mg/L [1]
LC50 (48 h) 284.76 mg/L [1]

Studies with data				
Key study	2			
Supporting study				13

Data waiving
no waivers

⚠ No data available

Long-term toxicity to aquatic invertebrates

Study results 1 study submitted, 0 studies processed

Type of Study provided

Summaries 0 summaries submitted, 0 summaries processed

⚠ No automatically processable data submitted

Studies with data

Data waiving
Sci. unjustified 1

⚠ No data available

Toxicity to aquatic algae and cyanobacteria

Study results 2 studies submitted, 1 study processed

Type of Study provided

Summaries 0 summaries submitted, 0 summaries processed

P/R **Results**
EC50 (72 h) 100 mg/L [2]

Studies with data				
Key study	1			
Supporting study				1

Data waiving
no waivers

⚠ No data available

Toxicity to aquatic plants other than algae

⚠ Data not provided by the registrant

Toxicity to microorganisms

Study results 2 studies submitted, 1 study processed

Type of Study provided

Summaries 0 summaries submitted, 0 summaries processed

P/R **Results**
EC50 (3 h) 100 mg/L [1]

Studies with data				
Key study	1			
Supporting study				1

Data waiving
no waivers

⚠ No data available

Sediment toxicity

Study results 1 study submitted, 0 studies processed

Type of Study provided

Summaries 0 summaries submitted, 0 summaries processed

⚠ No automatically processable data submitted

Studies with data

Data waiving
Sci. unjustified 1

⚠ No data available

Endocrine disrupter testing in aquatic vertebrates – in vivo

⚠ Data not provided by the registrant

Toxicity to terrestrial macroorganisms except arthropods

Study results 3 studies submitted, 0 studies processed

Type of Study provided

Summaries 0 summaries submitted, 0 summaries processed

⚠ No automatically processable data submitted

Studies with data				
Supporting study				1
Weight of evidence				1

Data waiving
Sci. unjustified 1

⚠ No data available

Toxicity to terrestrial arthropods

Study results 3 studies submitted, 0 studies processed

Type of Study provided

Summaries 0 summaries submitted, 0 summaries processed

⚠ No automatically processable data submitted

Studies with data				
Supporting study				2

Data waiving
Sci. unjustified 1

⚠ No data available

Toxicity to terrestrial plants

Study results 1 study submitted, 0 studies processed

Type of Study provided

Summaries 0 summaries submitted, 0 summaries processed

⚠ No automatically processable data submitted

Studies with data

Data waiving
Sci. unjustified 1

⚠ No data available

Toxicity to soil microorganisms

Study results: 1 study submitted, 0 studies processed

⚠ No automatically processable data submitted

Type of Study provided

Studies with data					Data waiving
					Sci. unjustified: 1

Summaries: 0 summaries submitted, 0 summaries processed

⚠ No data available

Toxicity to birds

Study results: 1 study submitted, 0 studies processed

⚠ No automatically processable data submitted

Type of Study provided

Studies with data					Data waiving
					Sci. unjustified: 1

Summaries: 0 summaries submitted, 0 summaries processed

⚠ No data available

Toxicity to mammals

⚠ Data not provided by the registrant

Toxicological information

This section provides toxicological information compiled from all automatically processable data from REACH registration dossiers that is available to ECHA at the time of generation. The quality and correctness of the information remains the responsibility of the data submitter. The Agency thus cannot guarantee the correctness of the information displayed.

Derived No- or Minimal Effect Level (DN(M)EL)

M/C Summaries: 1 summary submitted, 1 summary processed

The derived no- or minimum effect level (DN(M)EL) is the level of exposure above which a human should not be exposed to a substance. Please note that when more than one summary is provided, DN(M)EL values may refer to constituents of the substance and not to the substance as a whole. More detailed information is available in the dossiers.

Data for WORKERS

INHALATION Exposure	Threshold	Most sensitive study
Systemic Effects		
Long-term:	(DNEL) 117.54 mg/m³	repeated dose toxicity
Acute /short term:	(DNEL) 117.54 mg/m³	repeated dose toxicity
Local Effects		
Long-term:	-	-
Acute /short term:	-	-
DERMAL Exposure	**Threshold**	**Most sensitive study**
Systemic Effects		
Long-term:	(DNEL) 16.67 mg/kg bw/day	repeated dose toxicity
Acute /short term:	(DNEL) 16.67 mg/kg bw/day	repeated dose toxicity
Local Effects		
Long-term:	-	-
Acute /short term:	-	-
EYE Exposure		
-		

Data for the GENERAL POPULATION

INHALATION Exposure	Threshold	Most sensitive study
Systemic Effects		
Long-term:	(DNEL) 34.78 mg/m³	repeated dose toxicity
Acute /short term:	(DNEL) 34.78 mg/m³	repeated dose toxicity
Local Effects		
Long-term:	-	-
Acute /short term:	-	-
DERMAL Exposure	**Threshold**	**Most sensitive study**
Systemic Effects		
Long-term:	(DNEL) 10 mg/kg bw/day	repeated dose toxicity
Acute /short term:	(DNEL) 10 mg/kg bw/day	repeated dose toxicity
Local Effects		
Long-term:	-	-
Acute /short term:	-	-
ORAL Exposure	**Threshold**	**Most sensitive study**
Systemic Effects		
Long-term:	(DNEL) 10 mg/kg bw/day	repeated dose toxicity
Acute /short term:	(DNEL) 10 mg/kg bw/day	repeated dose toxicity
EYE Exposure		
-		

Toxicokinetics, metabolism, and distribution

Study results

Study data for toxicokinetics: 4 studies submitted, 0 studies processed

⚠ Study data not processed for brief profile

Type of Study provided

Study data: basic toxicokinetics

Studies with data					Data waiving
Supporting study	2			2	no waivers

Study data: dermal absorption: 0 studies submitted, 0 studies processed

⚠ Study data not processed for brief profile

Studies with data					Data waiving
					no waivers

Summaries: 0 summaries submitted, 0 summaries processed

⚠ No data available

Acute toxicity

Study results	Type of Study provided	Summaries
		0 summaries submitted 0 summaries processed

oral

3 studies submitted
1 study processed

P/R Results
LD50 2 000 mg/kg bw (rat) [1]

M/C Interpretations of results
Practically nontoxic [1]

oral

Studies with data				
Key study	1			
Supporting study	1			1

Data waiving: no waivers

Summaries: No data available

inhalation

1 study submitted
1 study processed

P/R Results
LC50 (4 h) 2.1 mg/L air (rat) [1]

M/C Interpretations of results
Practically nontoxic [1]

inhalation

Studies with data				
Key study	1			

Data waiving: no waivers

dermal

1 study submitted
0 studies processed

No automatically processable data submitted

dermal

Studies with data				

Data waiving: Sci. unjustified 1

other routes

3 studies submitted
0 studies processed

No automatically processable data submitted

other routes

Studies with data				
Supporting study				2

Data waiving: Sci. unjustified 1

Irritation / corrosion

Study results	Type of Study provided	Summaries
		0 summaries submitted 0 summaries processed

Study data: skin

2 studies submitted
0 studies processed

Study data not processed for brief profile

Study data: skin

Studies with data				
Key study	2			

Data waiving: no waivers

Summaries: No data available

Study data: eye

3 studies submitted
0 studies processed

Study data not processed for brief profile

Study data: eye

Studies with data				
Key study	2			
Other	1			

Data waiving: no waivers

Sensitisation

Study results	Type of Study provided	Summaries
		0 summaries submitted 0 summaries processed

Study data: skin

0 studies submitted
0 studies processed

Study data not processed for brief profile

Study data: skin

Studies with data				
Weight of evidence	2			

Data waiving: Other 1

Summaries: No data available

Study data: respiratory

0 studies submitted
0 studies processed

Study data not processed for brief profile

Study data: respiratory

Studies with data				

Data waiving: no waivers

Repeated dose toxicity

Study results

Type of Study provided

Summaries: 0 summaries submitted, 0 summaries processed

Study data: oral — 4 studies submitted, 1 study processed

Study data: oral

⚠ No data available

P/R **Results**

NOAEL (rat): 1 000 mg/kg bw/day [1]

Studies with data				
Key study	1			1
Supporting study				2

Data waiving: no waivers

Study data: inhalation — 1 study submitted, 0 studies processed

Study data: inhalation

⚠ No automatically processable data submitted

Studies with data				
Other				1

Data waiving: no waivers

Study data: dermal — 1 study submitted, 0 studies processed

Study data: dermal

⚠ No automatically processable data submitted

Studies with data				

Data waiving

Exposure cons.	1

Genetic toxicity

Study results

Type of Study provided

Summaries: 0 summaries submitted, 0 summaries processed

Study data: in vitro — 3 studies submitted, 0 studies processed

Study data: in vitro

⚠ No data available

⚠ Study data not processed for brief profile

Studies with data				
Key study	3			

Data waiving: no waivers

Study data: in vivo — 0 studies submitted, 0 studies processed

Study data: in vivo

⚠ Study data not processed for brief profile

Studies with data				

Data waiving: no waivers

Carcinogenicity

Study results — 6 studies submitted, 0 studies processed

Type of Study provided

Summaries: 0 summaries submitted, 0 summaries processed

⚠ Study data not processed for brief profile

Studies with data				
Key study				1
Supporting study	3			2

Data waiving: no waivers

⚠ No data available

Toxicity to reproduction

Study results

Type of Study provided

Summaries

0 summaries submitted
0 summaries processed

Study data: reproduction

3 studies submitted
0 studies processed

⚠ Study data not processed for brief profile

Studies with data				
Weight of evidence	2			1

Data waiving

no waivers

⚠ No data available

Study data: developmental

2 studies submitted
0 studies processed

⚠ Study data not processed for brief profile

Studies with data				
Key study	1			1

Data waiving

Sci. unjustified	1

Study data: other studies

1 study submitted
0 studies processed

⚠ Study data not processed for brief profile

Studies with data				
Supporting study				1

Data waiving

no waivers

Neurotoxicity

⚠ Data not provided by the registrant

Immunotoxicity

⚠ Data not provided by the registrant

Endocrine disrupter mammalian screening - in vivo

⚠ Data not provided by the registrant

Legend

Type of study

- Experimental results
- Read across based on grouping of substance (category approach) or Read-across from supporting substance (structural analogue or surrogate)
- Estimated by calculation or (Q)SAR
- Experimental study planned, other or unspecified

Type of aggregation

- C — Concatenated distinct values
- R — Range of values
- P/R — Prioritisation (Eco)Toxicology AND Range of values
- M/C — Most Conservative of values

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