

SAFETY DATA SHEET

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

1.1. Product identifier

Trade name or designation of the mixture	Magnesium Oxide-Zinc Oxide (MgO-ZnO)
Synonyms	None.
Document number	MKE-0280
Issue date	09-July-2015
Version number	02
Revision date	13-October-2017
Supersedes date	09-July-2015

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

Identified uses	Not available.
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Supplier

Company name	Not available.
Address	Not available.
Telephone	Not available.
e-mail	Not available.
Contact person	Not available.

1.4. Emergency telephone number Not available.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard	Category 2	H411 - Toxic to aquatic life with long lasting effects.
--	------------	---

Hazard summary

Exposure to powder or dusts may be irritating to eyes, nose and throat. Dangerous for the environment if discharged into watercourses. Not classified for health hazards. However, occupational exposure to the mixture or substance(s) may cause adverse health effects. The material as sold in solid form is generally not considered hazardous. However, if the process involves grinding, melting, cutting or any other process that causes a release of dust or fumes, hazardous levels of airborne particulate could be generated.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Hazard pictograms



Signal word None.

Hazard statements

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

P273 Avoid release to the environment.

Response

P391 Collect spillage.

Storage

Store away from incompatible materials.

Disposal

Supplemental label information

81,67 % of the mixture consists of component(s) of unknown acute oral toxicity. 100 % of the mixture consists of component(s) of unknown acute dermal toxicity. 81,67 % of the mixture consists of component(s) of unknown acute inhalation toxicity. 81,67 % of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 81,67 % of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment. 81,67 % of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment. For further information, please contact the Product Stewardship Department at +1.800.862.4118.

2.3. Other hazards

Not a PBT or vPvB substance or mixture.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****General information**

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Zinc oxide	0 - 18,33	1314-13-2 215-222-5	-	030-013-00-7	
Classification:	Aquatic Acute 1;H400, Aquatic Chronic 1;H410				
Other components below reportable levels	≥ 81				

List of abbreviations and symbols that may be used above

DSD: Directive 67/548/EEC.

CLP: Regulation No. 1272/2008.

#: This substance has been assigned Union workplace exposure limit(s).

#: This substance has been assigned Community workplace exposure limit(s).

M: M-factor

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments

The full text for all R- and H-phrases is displayed in section 16. The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures**General information**

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures**Inhalation**

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact

Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. Get medical attention if symptoms occur.

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

Dusts may irritate the respiratory tract, skin and eyes. Coughing.

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

Treat symptomatically.

SECTION 5: Firefighting measures**General fire hazards**

No unusual fire or explosion hazards noted.

5.1. Extinguishing media**Suitable extinguishing media**

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters**Special protective equipment for firefighters**

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special firefighting procedures Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

For emergency responders Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up Avoid the generation of dusts during clean-up. Collect dust using a vacuum cleaner equipped with HEPA filter. Prevent product from entering drains. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.

6.4. Reference to other sections For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Minimise dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Avoid prolonged exposure. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

7.3. Specific end use(s) Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	MAK	5 mg/m ³	Respirable fume.
		5 mg/m ³	Respirable fraction.
	STEL	10 mg/m ³	Inhalable fraction.
		20 mg/m ³	Inhalable fraction.
		20 mg/m ³	Respirable fume.
Zinc oxide (CAS 1314-13-2)	MAK	10 mg/m ³	Respirable fraction.
		5 mg/m ³	Fume and respirable dust.

Belgium. Exposure Limit Values.

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m ³	Fume.
		10 mg/m ³	Fume.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m ³	Fume.
		10 mg/m ³	Respirable fraction.
	TWA	5 mg/m ³	Fume.
		2 mg/m ³	Respirable fraction.
		10 mg/m ³	Dust.

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	Type	Value
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m ³
		10 mg/m ³
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m ³
	TWA	5 mg/m ³

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	MAC	4 mg/m ³	Respirable dust.
		10 mg/m ³	Total dust.
Zinc oxide (CAS 1314-13-2)	MAC	5 mg/m ³	
	STEL	10 mg/m ³	

Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m ³	Fume.
Zinc oxide (CAS 1314-13-2)	TWA	5 mg/m ³	Fume.

Czech Republic. OELs. Government Decree 361

Components	Type	Value	
Magnesium oxide (CAS 1309-48-4)	Ceiling	10 mg/m ³	
	TWA	5 mg/m ³	
Zinc oxide (CAS 1314-13-2)	Ceiling	5 mg/m ³	
	TWA	2 mg/m ³	

Denmark. Exposure Limit Values

Components	Type	Value	
Magnesium oxide (CAS 1309-48-4)	TLV	6 mg/m ³	
Zinc oxide (CAS 1314-13-2)	TLV	4 mg/m ³	

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	5 mg/m ³	Respirable dust.
		10 mg/m ³	Total dust.
		1 mg/m ³	Dust.
Zinc oxide (CAS 1314-13-2)	TWA	5 mg/m ³	

Finland. Workplace Exposure Limits

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m ³	Dust.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m ³	Fume.
	TWA	2 mg/m ³	Fume.

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	VME	10 mg/m ³	Fume.
Zinc oxide (CAS 1314-13-2)	VME	5 mg/m ³	Fume.
		10 mg/m ³	Dust.

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	4 mg/m ³	Inhalable fraction.
		1,5 mg/m ³	Respirable fraction.
Zinc oxide (CAS 1314-13-2)	TWA	2 mg/m ³	Inhalable fraction.
		0,1 mg/m ³	Respirable fraction.

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	AGW	10 mg/m ³	Inhalable fraction.
		1,25 mg/m ³	Respirable fraction.

Greece. OELs (Decree No. 90/1999, as amended)

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Inhalable
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Fume.
	TWA	5 mg/m3	Fume.

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	STEL	24 mg/m3	Respirable.
Zinc oxide (CAS 1314-13-2)	TWA	6 mg/m3	Respirable.
	STEL	20 mg/m3	Respirable.
	TWA	5 mg/m3	Respirable.

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	6 mg/m3	
Zinc oxide (CAS 1314-13-2)	TWA	4 mg/m3	Fume.

Ireland. Occupational Exposure Limits

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	STEL	10 mg/m3	Fume.
	TWA	5 mg/m3	Fume.
		4 mg/m3	Respirable dust.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Total inhalable dust.
		10 mg/m3	Respirable fraction and fume.
	TWA	2 mg/m3	Respirable fraction and fume.

Italy. Occupational Exposure Limits

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m3	Inhalable fraction.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable fraction.
	TWA	2 mg/m3	Respirable fraction.

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	2 mg/m3	
Zinc oxide (CAS 1314-13-2)	TWA	2 mg/m3	Dust.
		0,5 mg/m3	

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

Components	Type	Value	
Magnesium oxide (CAS 1309-48-4)	TWA	4 mg/m3	
Zinc oxide (CAS 1314-13-2)	TWA	5 mg/m3	

Norway. Administrative Norms for Contaminants in the Workplace

Components	Type	Value	
Magnesium oxide (CAS 1309-48-4)	TLV	10 mg/m3	
Zinc oxide (CAS 1314-13-2)	TLV	5 mg/m3	

Poland. MACs. Regulation regarding maximum permissible concentrations and intensities of harmful factors in the work environment, Annex 1

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m3	Inhalable fraction.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Inhalable fraction.
	TWA	5 mg/m3	Inhalable fraction.

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m3	Inhalable fraction.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable fraction.
	TWA	2 mg/m3	Respirable fraction.

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	STEL	15 mg/m3	Fume.
	TWA	5 mg/m3	Fume.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Fume.
	TWA	5 mg/m3	Fume.

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	4 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable fraction.
Zinc oxide (CAS 1314-13-2)	STEL	1 mg/m3	Respirable fume.
	TWA	1 mg/m3	Respirable fume.

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

Components	Type	Value	Form
Zinc oxide (CAS 1314-13-2)	TWA	5 mg/m3	Respirable fume.

Spain. Occupational Exposure Limits

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	10 mg/m3	Dust and fume.
Zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable fraction.
	TWA	2 mg/m3	Respirable fraction.

Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	5 mg/m3	Respirable dust.
		10 mg/m3	Inhalable dust.
Zinc oxide (CAS 1314-13-2)	TWA	5 mg/m3	Total dust.

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	3 mg/m3	Respirable dust.
		3 mg/m3	Fume and respirable dust.
Zinc oxide (CAS 1314-13-2)	STEL	3 mg/m3	Fume and respirable dust.
	TWA	3 mg/m3	Fume and respirable dust.

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value	Form
Magnesium oxide (CAS 1309-48-4)	TWA	4 mg/m3	Respirable dust and/or fume.
		10 mg/m3	Inhalable dust.

Biological limit values No biological exposure limits noted for the ingredient(s).**Recommended monitoring procedures** Follow standard monitoring procedures.**Derived no effect levels (DNELs)** Not available.**Predicted no effect concentrations (PNECs)** Not available.**8.2. Exposure controls**

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL (occupational exposure limit), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.

Individual protection measures, such as personal protective equipment

General information Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

- **Hand protection** Wear appropriate chemical resistant gloves.
- **Other** Wear suitable protective clothing.

Respiratory protection Wear respirator with dust filter.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Environmental exposure controls Inform appropriate managerial or supervisory personnel of all environmental releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state Solid.

Form Powder.

Colour Not available.

Odour Not available.

Odour threshold Not available.

pH Not available.

Melting point/freezing point 1975 °C (3587 °F) estimated

Initial boiling point and boiling range 3600 °C (6512 °F) estimated

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapour pressure 0,00001 hPa estimated

Vapour density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Explosive properties Not explosive.

Oxidising properties Not oxidising.

9.2. Other information

Density 3,95 g/cm³ estimated

Specific gravity 3,95 estimated

SECTION 10: Stability and reactivity

- 10.1. Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.
- 10.2. Chemical stability** Material is stable under normal conditions.
- 10.3. Possibility of hazardous reactions** No dangerous reaction known under conditions of normal use.
- 10.4. Conditions to avoid** Contact with incompatible materials.
- 10.5. Incompatible materials** Phosphorus. Chlorine.
- 10.6. Hazardous decomposition products** No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

- Inhalation** Dust may irritate respiratory system. Prolonged inhalation may be harmful.
- Skin contact** Dust or powder may irritate the skin.
- Eye contact** Dust may irritate the eyes.
- Ingestion** May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

Symptoms Dusts may irritate the respiratory tract, skin and eyes. Coughing.

11.1. Information on toxicological effects

Acute toxicity Not known.

Components	Species	Test results
Zinc oxide (CAS 1314-13-2)		
Acute		
Inhalation		
LC50	Mouse	> 5,7 mg/l, 4 Hours
Oral		
LD50	Mouse	7950 mg/kg
	Rat	> 5 g/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Due to partial or complete lack of data the classification is not possible.

Serious eye damage/eye irritation Due to partial or complete lack of data the classification is not possible.

Respiratory sensitisation Due to partial or complete lack of data the classification is not possible.

Skin sensitisation Due to partial or complete lack of data the classification is not possible.

Germ cell mutagenicity Due to partial or complete lack of data the classification is not possible.

Carcinogenicity Due to partial or complete lack of data the classification is not possible.

Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)

Not listed.

Reproductive toxicity Due to partial or complete lack of data the classification is not possible.

Specific target organ toxicity - single exposure Due to partial or complete lack of data the classification is not possible.

Specific target organ toxicity - repeated exposure Due to partial or complete lack of data the classification is not possible.

Aspiration hazard Due to partial or complete lack of data the classification is not possible.

Mixture versus substance information No information available.

Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity Toxic to aquatic life with long lasting effects. Based on available data, the classification criteria are not met for hazardous to the aquatic environment, acute hazard.

Components	Species	Test results
Zinc oxide (CAS 1314-13-2)		
Aquatic		
Fish	LC50	Fathead minnow (Pimephales promelas) 2246 mg/l, 96 hours
* Estimates for product may be based on additional component data not shown.		
12.2. Persistence and degradability	No data is available on the degradability of this product.	
12.3. Bioaccumulative potential	No data available.	
Partition coefficient n-octanol/water (log Kow)	Not available.	
Bioconcentration factor (BCF)	Not available.	
12.4. Mobility in soil	No data available.	
12.5. Results of PBT and vPvB assessment	Not a PBT or vPvB substance or mixture.	
12.6. Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	
12.7. Additional information		
Estonia Dangerous substances in groundwater Data		
Zinc oxide (CAS 1314-13-2)		Zinc (Zn) 50 UG/L Zinc (Zn) 5000 UG/L
Estonia Dangerous substances in soil Data		
Zinc oxide (CAS 1314-13-2)		Zinc (Zn) 1000 mg/kg Zinc (Zn) 200 mg/kg Zinc (Zn) 500 mg/kg
SECTION 13: Disposal considerations		
13.1. Waste treatment methods		
Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).	
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.	
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.	
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.	
Special precautions	Dispose in accordance with all applicable regulations.	
SECTION 14: Transport information		
ADR		
14.1. UN number	UN3077	
14.2. UN proper shipping name	Environmentally hazardous substance, solid, n.o.s.	
14.3. Transport hazard class(es)		
Class	9	
Subsidiary risk	-	
Label(s)	9	
Hazard No. (ADR)	90	
Tunnel restriction code	E	
14.4. Packing group	III	
14.5. Environmental hazards	No.	
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.	

RID

14.1. UN number	UN3077
14.2. UN proper shipping name	Environmentally hazardous substance, solid, n.o.s.
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

ADN

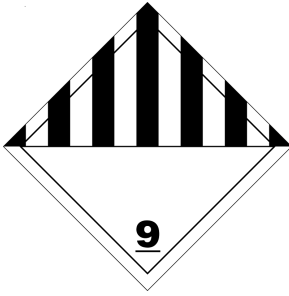
14.1. UN number	UN3077
14.2. UN proper shipping name	Environmentally hazardous substance, solid, n.o.s.
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
Label(s)	9
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

14.1. UN number	UN3077
14.2. UN proper shipping name	Environmentally hazardous substance, solid, n.o.s.
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	No.
ERG Code	9L
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

14.1. UN number	UN3077
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
14.3. Transport hazard class(es)	
Class	9
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-F
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.



SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Zinc oxide (CAS 1314-13-2)

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended. Additional information is given in the Safety Data Sheet.

National regulations

Follow national regulation for work with chemical agents.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

Not available.

References

Not available.

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculator methods and test data, if available.

Disclaimer

cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

This document has been prepared using data from sources considered to be technically reliable and the information is believed to be correct. Materion makes no warranties, expressed or implied, as to the accuracy of the information contained herein. Materion cannot anticipate all conditions under which this information and its products may be used and the actual conditions of use are beyond its control. The user is responsible to evaluate all available information when using this product for any particular use and to comply with all Federal, State, Provincial and Local laws, statutes and regulations.