



Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) as amended
Material Name: Poco Graphite Synthetic Graphite - Copper Impregnated - Semiconductor Grade **SDS ID: 0140 (EU)**

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

1.1 Product identifier

Material Name

Poco Graphite Synthetic Graphite - Copper Impregnated - Semiconductor Grade

Product Description

This SDS covers the following Semiconductor Grades: DFP1C

Registration status

If this product is subject to REACH, then Registration numbers will be found in Section 3 and further information in Section 15.

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

Identified uses

semiconductor manufacture

Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

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Hugo-Junkers-Ring 5, Gebäude 107/W, 01109 Dresden, Germany

Telephone Number: +49 (0) 351 795 97 0
Fax Number: +49 (0) 351 795 97 499

Only Representative
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129 Concord Road
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Billerica, MA 01821
USA

Telephone Number: +1-952-556-4181
Telephone Number: +1-800-394-4083 (toll free within North America)

E-mail: Product.stewardship@entegris.com

1.4 Emergency telephone number

+1-703-527-3887 (24 hours) – CHEMTREC – International

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

None needed according to classification criteria.

2.2 Label elements



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

Hazard symbols

None needed according to classification criteria.

Signal word

None needed according to classification criteria

Hazard statements

None needed according to classification criteria.

Precautionary statements

Prevention

None needed according to classification criteria.

Response

None needed according to classification criteria.

Storage

None needed according to classification criteria.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

When processed by milling, grinding, welding, melting, sawing, brazing, burning or other similar processes the generated dust, fines, fume or mist may pose a hazard through inhalation, ingestion or by eye or skin contact. May form combustible dust concentrations in air (during handling or processing). Small chips and dust generated by processes may be environmentally hazardous and toxic to aquatic life. SECTION 16: Other information.

SECTION 3: Composition / information on ingredients

3.2 MIXTURE

CAS EC No Registration No	Component Name Synonyms	1272/2008 (CLP)	Percent
7782-42-5 231-955-3 01-2119486977-12-0051	Graphite	Self-Classified: Carc. 1A - H350	40-60
7440-50-8 231-159-6 01-2119480154-42-0159	Copper	Self-Classified: Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411	40-60

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

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation

If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.



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Skin

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

Eyes

Flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Then get immediate medical attention.

Ingestion

If swallowed, get medical attention.

4.2 Most Important Symptoms/Effects

Acute

No information on significant adverse effects.

Delayed

cancer

4.3 Indication of Immediate Medical Attention and Special Treatment

Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing agents appropriate for surrounding fire.

Unsuitable Extinguishing Media

None known.

5.2 Special hazards arising from the substance or mixture

Negligible fire hazard. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Combustion

oxides of carbon, oxides of copper

5.3 Advice for firefighters

Negligible fire hazard. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Fire Fighting Measures

Move container from fire area if it can be done without risk. Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. Use extinguishing agents appropriate for surrounding fire. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Avoid inhalation of material or combustion by-products. Dike for later disposal.

Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear personal protective clothing and equipment. Minimize dust generation and accumulation. Keep unnecessary people away, isolate hazard area and deny entry. Provide adequate ventilation. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Non-sparking tools should be used when working with dust. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.



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6.2 Environmental precautions

Avoid release to the environment. Collect spillage.

6.3 Methods and Materials for Containment and Cleaning Up

Do not touch or walk through spilled material. Stop leak if possible without personal risk. Keep unnecessary people away, isolate hazard area and deny entry. If sweeping of a contaminated area is necessary, use a dust suppressant agent. Collect spill using a vacuum cleaner with a HEPA filter or wet and scoop up dry spills. Avoid sweeping spilled dry material. Eliminate ignition sources including sources of electrical, static or frictional sparks. Keep out of water supplies and sewers. Prevent entry into waterways, sewers, basements, or confined areas. Avoid accumulation of airborne dusts. Small spills: Move containers away from spill to a safe area. Vacuum or sweep up material and place in a designated, labeled waste container. Large spills: If emergency personnel are unavailable vacuum or carefully scoop up spilled materials and place in an appropriate container for disposal. Avoid creating dusty conditions and prevent wind dispersal.

6.4 Reference to other sections

Safe handling: see section 7. Personal protection equipment (PPE): see section 8. Disposal: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions.

7.2 Conditions for safe storage, including any incompatibilities

None needed according to classification criteria.

Store and handle in accordance with all current regulations and standards. Keep separated from incompatible substances. Maintain graphite blocks in stable position. Any machine generated dust should be maintained in closed container. Maintain blocks as shipped, no specific handling or storage identified. Dust or powder from machining process should be kept in closed container.

Incompatible Materials

acids, oxidizing materials

7.3 Specific end use(s)

semiconductor manufacture

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Component Exposure Limits

Graphite	7782-42-5
ACGIH:	2 mg/m3 TWA (all forms except graphite fibers) respirable particulate matter
Austria	5 mg/m3 TWA [TMW] alveolar dust with <1% quartz, respirable fraction
	10 mg/m3 STEL [KZGW] alveolar dust with <1% Quartz, respirable fraction 2 X 60 min
Belgium	2 mg/m3 TWA (except fibers) alveolar fraction



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Bulgaria	5 mg/m ³ TWA inhalable fraction
Croatia	4 mg/m ³ TWA [GVI] respirable dust ; 10 mg/m ³ TWA [GVI] total dust, inhalable particles
Czech Republic	2 mg/m ³ TWA as respirable fraction, <=5% Silica, Cristobalite, Tridymite and .gamma.-Aluminium oxide dust
Estonia	5 mg/m ³ TWA total dust
Finland	2 mg/m ³ TWA
France	2 mg/m ³ TWA [VME] alveolar fraction
Germany (TRGS)	1.25 mg/m ³ TWA AGW respirable fraction exposure factor 2 ; 10 mg/m ³ TWA AGW inhalable fraction exposure factor 2
Germany (DFG)	0.3 mg/m ³ TWA MAK (multiplied by the material density) respirable fraction ; 4 mg/m ³ TWA MAK inhalable fraction
	2.4 mg/m ³ Peak
Greece	10 mg/m ³ TWA inhalable fraction ; 5 mg/m ³ TWA respirable fraction
Hungary	5 mg/m ³ TWA [AK] respirable
Ireland	2 mg/m ³ TWA all forms except fibres; respirable fraction
	6 mg/m ³ STEL (calculated) all forms except fibres; respirable fraction
Italy:	2 mg/m ³ TWA (all forms except Graphite fibers) respirable fraction
Latvia	2 mg/m ³ TWA
Lithuania	5 mg/m ³ TWA [IPRD] dust
Poland	6 mg/m ³ TWA [NDS] (synthetic) inhalable fraction
Portugal	2 mg/m ³ TWA [VLE-MP] (all forms except Graphite fibers) respirable fraction
Romania	2 mg/m ³ TWA (Quartz <=5%) dust, respirable fraction
Spain	2 mg/m ³ TWA [VLA-ED] (see UNE EN 481:1995 on workplace atmospheres ;definition of fractions by particle size for aerosol measurement) dust; respirable fraction
United Kingdom	10 mg/m ³ TWA inhalable dust ; 4 mg/m ³ TWA respirable dust



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	30 mg/m ³ STEL (calculated) inhalable dust ; 12 mg/m ³ STEL (calculated) respirable dust
Copper	7440-50-8
ACGIH:	0.2 mg/m ³ TWA fume
Austria	1 mg/m ³ TWA [TMW] inhalable fraction ; 0.1 mg/m ³ TWA [TMW] respirable fraction, smoke
	4 mg/m ³ STEL [KZGW] inhalable fraction 4 X 15 min ; 0.4 mg/m ³ STEL [KZGW] respirable fraction, smoke 4 X 15 min
Belgium	0.2 mg/m ³ TWA fume ; 1 mg/m ³ TWA dust and mist
Bulgaria	0.1 mg/m ³ TWA as Cu metal vapor
Croatia	0.2 mg/m ³ TWA [GVI] as Cu fume ; 1 mg/m ³ TWA [GVI] as Cu dust
	2 mg/m ³ STEL [KGVI] dust as Cu
Czech Republic	1 mg/m ³ TWA dust ; 0.1 mg/m ³ TWA fume
	2 mg/m ³ Ceiling dust ; 0.2 mg/m ³ Ceiling fume
Denmark	1 mg/m ³ TWA dust and powder ; 0.1 mg/m ³ TWA as Cu fume
Estonia	1 mg/m ³ TWA total dust ; 0.2 mg/m ³ TWA respirable dust
Finland	0.02 mg/m ³ TWA respirable dust
France	0.2 mg/m ³ TWA [VME] fume ; 1 mg/m ³ TWA [VME] as Cu dust
	2 mg/m ³ STEL [VLCT] as Cu dust
Germany (DFG)	0.01 mg/m ³ TWA MAK respirable fraction
	0.02 mg/m ³ Peak respirable fraction
Greece	0.2 mg/m ³ TWA fume ; 1 mg/m ³ TWA dust
	2 mg/m ³ STEL dust
Hungary	0.1 mg/m ³ TWA [AK]; 0.01 mg/m ³ TWA [AK] fume
	0.2 mg/m ³ STEL [CK]
Ireland	0.2 mg/m ³ TWA as Cu fume ; 1 mg/m ³ TWA as Cu dusts and mists



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	2 mg/m ³ STEL dusts and mists ; 0.6 mg/m ³ STEL (calculated) as Cu fume
Italy:	0.2 mg/m ³ TWA fume
Latvia	0.5 mg/m ³ TWA
	1 mg/m ³ STEL
Lithuania	1 mg/m ³ TWA [IPRD] inhalable fraction ; 0.2 mg/m ³ TWA [IPRD] respirable fraction
Netherlands	0.1 mg/m ³ TWA inhalable dust
Poland	0.2 mg/m ³ TWA [NDS]
Portugal	0.2 mg/m ³ TWA [VLE-MP] fume ; 1 mg/m ³ TWA [VLE-MP] as Cu dust and mist
Romania	0.5 mg/m ³ TWA dust
	0.2 mg/m ³ STEL fume ; 1.5 mg/m ³ STEL dust
Slovak Republic	1 mg/m ³ TWA inhalable fraction ; 0.2 mg/m ³ TWA respirable fraction
Spain	0.1 mg/m ³ TWA [VLA-ED] (see UNE EN 481:1995 on workplace atmospheres ;definition of fractions by particle size for aerosol measurement) respirable fraction
Sweden	0.01 mg/m ³ TLV respirable fraction
Switzerland	0.1 mg/m ³ TWA [MAK]
	0.2 mg/m ³ STEL [KZGW]
United Kingdom	1 mg/m ³ TWA dust and mists ; 0.2 mg/m ³ TWA fume
	0.6 mg/m ³ STEL (calculated) fume ; 2 mg/m ³ STEL dust and mist

Component Biological Exposure Limits

Graphite	7782-42-5
Germany (DFG)	2.4 mg/m ³ Peak
Copper	7440-50-8
Germany (DFG)	0.02 mg/m ³ Peak respirable fraction

Derived No Effect Levels (DNELs)

No DNELs available.

Predicted No Effect Concentrations (PNECs)

No PNECs available.



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8.2 Exposure Controls

Engineering controls

Provide local exhaust or process enclosure ventilation system. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Ensure compliance with applicable exposure limits.

Eye/face protection

Wear safety glasses (EN 166).

Skin Protection

Wear appropriate chemical resistant clothing (EN ISO 6529).

Respiratory Protection

Consult with a health and safety professional for specific respirators appropriate for your use. Follow the respiratory regulations found in European Standard EN 149.

Glove Recommendations

Wear appropriate chemical resistant gloves (EN 374).

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	gray to black solid block	Physical State	solid
Odor	odorless	Color	gray to black
Odor Threshold	Not available	pH	Not available
Melting Point	1083 °C (Copper)	Boiling Point	Not available
Boiling Point Range	Not available	Freezing point	Not available
Evaporation Rate	Not available	Flammability (solid, gas)	Not flammable
Autoignition Temperature	Not available	Flash Point	(Not flammable)
Lower Explosive Limit	Not available	Decomposition temperature	Not available
Upper Explosive Limit	Not available	Vapor Pressure	Not available
Vapor Density (air=1)	Not available	Specific Gravity (water=1)	Not available
Water Solubility	(Insoluble)	Partition coefficient: n-octanol/water	Not available
Viscosity	Not available	Kinematic viscosity	Not available



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Solubility (Other)	Not available	Density	2.8 - 3.5 g/cc
Physical Form	solid block	Sublimation	3648.9 °C (graphite)
Molecular Weight	Not available	Oxidising properties	Not available
Explosive properties	Not available		

9.2 Other information

No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No reactivity hazard is expected.

10.2 Chemical stability

Stable at normal temperatures and pressure.

10.3 Possibility of hazardous reactions

Will not polymerize.

10.4 Conditions to avoid

Avoid accumulation of airborne dusts. Avoid contact with incompatible materials.

10.5 Incompatible materials

acids, oxidizing materials

10.6 Hazardous decomposition products

Thermal decomposition products

oxides of carbon, oxides of copper

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Graphite (7782-42-5)

Inhalation LC50 Rat >2000 mg/m³ 4 h (no deaths occurred)

Copper (7440-50-8)

Inhalation LC50 Rat >5.11 mg/L 4 h

Product Toxicity Data

Acute Toxicity Estimate

No data available.

Irritation/Corrosivity Data

No information on significant adverse effects.

Respiratory Sensitization

No data available.

Dermal Sensitization

No data available.

Germ Cell Mutagenicity

No data available for the mixture.

Tumorigenic Data



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No data available for the mixture.

Component Carcinogenicity

Graphite	7782-42-5
DFG:	Category 4 (no significant contribution to human cancer ;except ultrafine particles ;inhalable fraction)

May cause cancer.

Toxicity for reproduction

No data available for the mixture.

Specific Target Organ Toxicity - Single Exposure

No target organs identified.

Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

Aspiration hazard

No data available.

SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic life with long lasting effects. Toxic to aquatic life with long lasting effects.

Component Analysis - Aquatic Toxicity

Graphite	7782-42-5
Fish:	LC50 96 h Danio rerio >100 mg/L [semi-static]
Copper	7440-50-8
Fish:	LC50 96 h Pimephales promelas 0.0068 - 0.0156 mg/L; LC50 96 h Pimephales promelas <0.3 mg/L [static]; LC50 96 h Pimephales promelas 0.2 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 0.052 mg/L [flow-through]; LC50 96 h Lepomis macrochirus 1.25 mg/L [static]; LC50 96 h Cyprinus carpio 0.3 mg/L [semi-static]; LC50 96 h Cyprinus carpio 0.8 mg/L [static]; LC50 96 h Poecilia reticulata 0.112 mg/L [flow-through]
Algae:	EC50 72 h Pseudokirchneriella subcapitata 0.0426 - 0.0535 mg/L [static] EPA ; EC50 96 h Pseudokirchneriella subcapitata 0.031 - 0.054 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna 0.03 mg/L [Static] EPA

12.2 Persistence and degradability

No data available for the mixture.

12.3 Bioaccumulative potential

No data available for the mixture.

12.4 Mobility in soil

No data available for the mixture.

12.5 Results of PBT and vPvB assessment

No components of this material are listed.

12.6 Other adverse effects

No data available.



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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
 Waste codes/waste designations according to LoW. EWC-code: 16 02 15*.
 Since emptied containers retain material residue, follow safe handling/label warnings even after container is emptied.
 Release to the environment or sewage system is prohibited.
 Dispose in accordance with all applicable federal, state/regional and local laws and regulations.

SECTION 14: Transport information

		ADR	RID	ICAO	IATA	ADN	IMDG
14.1	UN Number	Not regulated	Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2	UN Proper Shipping Name	--	--	--	--	--	--
14.3	Transport Hazard Class(es)	--	--	--	--	--	--
14.4	Packing Group	--	--	--	--	--	--
14.5	Environmental Hazards	--	--	--	--	--	--
14.6	Special Precautions For User	--	--	--	--	--	--
14.7	Transport in Bulk According to Annex II of MARPOL and the IBC Code	--	--	--	--	--	--
14.8	Further information	--	--	--	--	--	--

International Bulk Chemical Code

This material does not contain any chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
REACH Candidate List of Substances of Very High Concern (SVHC) for Authorization (Article 59(1)) - Reg. (EU) No. 1907/2006

No components of this material are listed.

EU - REACH (1907/2006) - Annex XVII Restrictions of Certain Dangerous Substances, Mixtures and Articles

No components of this material are listed.



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EU - Substances Depleting the Ozone layer (1005/2009)

No components of this material are listed.

EU - Persistent Organic Pollutants (850/2004)

No components of this material are listed.

EU - Export and Import Restrictions (689/2008) - Chemicals and Articles Subject to Export Ban

No components of this material are listed.

EU - Sevoso III Directive (2012/18/EU) - Qualifying Quantities of Dangerous Substances

No components of this material are listed.

EU - Plant Protection Products (1107/2009/EC)

No components of this material are listed.

EU - Biocides (528/2012/EU)

No components of this material are listed.

EU - Water Framework Directive (2000/60/EC)

No components of this material are listed.

EU - Limitation of Emissions of Volatile Organic Compounds Due to the Use of Organic Solvents in Certain Activities and Installations (1999/13/EC)

No components of this material are listed.

EU - Detergent Regulation (648/2004/EC)

No components of this material are listed.

Germany Regulations

Germany Water Classification - Product

hazard class 3 - severe hazard to waters

* Self-classification

Germany Water Classification - Component

Graphite (7782-42-5)

Reg. no 801 , non-hazardous to water

Copper (7440-50-8)

Reg. no 9697 , hazard class 2 - obviously hazardous to water (grain size 0.074 - 1.0 mm); Reg. no 9696 , hazard class 2 - obviously hazardous to water (particle size < 0,074 mm)

Denmark Regulations

No components of this material are listed.

Component Analysis - Inventory

Graphite (7782-42-5)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Yes	EIN	No	No	Yes	No

KR - REACH CCA	MX	NZ	PH	TH-TECI	TW, CN	VN (Draft)
No	Yes	Yes	Yes	Yes	Yes	Yes

Copper (7440-50-8)

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
Yes	DSL	Yes	Yes	EIN	Yes	No	Yes	No



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KR - REACH CCA	MX	NZ	PH	TH-TECI	TW, CN	VN (Draft)
No	Yes	Yes	Yes	No	Yes	Yes

15.2 Chemical Safety Assessment

No chemical safety assessment has been carried out for this mixture.

SECTION 16: Other information

16.1 Indication of changes

06/12/2021 - Update to Section(s) 3, 4, 7, 8, 11, 12, 16.

Preparation Date

07/04/2016

Revision date

06/12/2021

16.2 Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC - European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; F - Background (for Venezuela Biological Exposure Indices); IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL), KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; KR REACH CCA - Korea Registration and Evaluation of Chemical Substances Chemical Control Act; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX - Mexico; Ne - Non-specific; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; Nq - Non-quantitative; NSL - Non-Domestic Substance List (Canada); NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL - Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH - Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; Sc - Semi-quantitative; STEL - Short-term Exposure Limit; TCCA - Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TH-TECI - Thailand - FDA Existing Chemicals Inventory (TECI); TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW - Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); VN (Draft) - Vietnam (Draft); WHMIS - Workplace Hazardous Materials Information System (Canada)



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16.3 Key literature references and sources for data

Available upon request.

16.4 Methods Used for Classification of Mixture According to Regulation (EC) No 1272/2008

Available upon request.

16.5 Relevant H- and EUH-phrases (Number and full text) and Notes

H350 May cause cancer

H400 Very toxic to aquatic life

H411 Toxic to aquatic life with long lasting effects

16.6 Training advice

Read the Safety Data Sheet before handling product.

16.7 Further Information

Disclaimer:

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When processed by milling, grinding, welding, melting, sawing, brazing, burning or other similar processes the generated dust, fines, fume or mist may pose a hazard through inhalation, ingestion or by eye or skin contact. Combustible Dust; Carcinogenicity 1A; Hazardous to the Aquatic Environment - Acute Category 1; Hazardous to the Aquatic Environment - Chronic Category 2.