



1. Identification of the Product and Supplier

Product name:	MicroDense[®]
Product application:	Weighing material for drilling fluids.
Address/Phone No.:	Elkem ASA, Silicon Products P.O. Box 334 Skøyen N-0213 Oslo, Norway Telephone: + 47 22 45 01 00 https://www.elkem.com/silicon-products/ support.siliconproducts@elkem.com
Contact:	
Emergency Phone No.:	Chemtrec (800) 424-9300

2. Hazards Identification

Classification of the substance	The product does not meet the criteria for hazard classification in accordance with the UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS, 9 th rev.) and OSHA's HCS.
Hazard pictogram:	N/A (not applicable)
Signal word:	N/A (not applicable)
Hazard statements:	N/A (not applicable)
Precautionary statements:	N/A (not applicable)

3. Composition/Information on Ingredients

Synonyms:	Iron titanium oxide, iron titanate, ferrous titanate, titaniferrous oxide
IUPAC-name:	Iron titanium trioxide
CAS No.:	12789-64-9
EINECS No.:	235-828-3

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4. First Aid Measures

Inhalation: Irritation caused by dust: Fresh air. See a physician on persistent feeling of discomfort.
Skin contact: Wash skin with water and/or a mild detergent.
Eye contact: Rinse eyes with water/saline solution. See a physician on persistent feeling of discomfort.
Ingestion: Remove the person affected from dusty area. See inhalation.

5. Firefighting Measures

Extinguishing media: Not applicable. Depending on surrounding fire.

The product is not combustible, not flammable, and there is no inherent risk of dust explosion.

6. Accidental Release Measures

Avoid exposure to dust from the product. Vacuum up or sweep up released material and collect in suitable containers.

7. Handling and Storage

Handling: Avoid dust generation. See section 8. Suitable dust controls should be utilised when handling bulk materials. Wash thoroughly after handling. If handling respirable dust it is advisable to also use gloves and wash hands before eating, drinking or smoking to minimise inhalation or ingestion from hands.

Storage: The product must be stored under dry conditions and not exposed to water. Storage areas should be well ventilated, dry and dust generation minimised when handling.

8. Exposure Controls/Personal Protection

Occupational exposure controls

Avoid inhalation of dust. Eye protection, eye flushing facilities and protective gloves are recommended. Ensure adequate ventilation. Wear N95 dust masks as respiratory protection (42 CFR 84, CAN/CSA Z94.4-2018) for dust exposure that may exceed exposure limits. If adequate ventilation is not possible, a self-contained breathing apparatus or an air supplied respirator is recommended.



Occupational Exposure Limits (ACGIH ¹⁾, 2016):

Substance	[CAS No.]	8hr TWA		ACGIH TLV 15 minute STEL		Notations
		ppm	mg/m ³	ppm	mg/m ³	
PNOS ²⁾	-	-	10 ^(I) /3 ^(R)	-	-	-

¹⁾ American Conference of Governmental Industrial Hygienists

²⁾ Particles (insoluble or poorly soluble) Not Otherwise Specified. Ilmenite is considered to be PNOS. Specific TLVs for the individual substances have not been established or have been withdrawn, respectively.

^(I) Inhalable fraction

^(R) Respirable fraction

9. Physical and Chemical Properties

Form:	powder
Colour:	black
Odour:	odourless
Melting Point (°C):	1800
Solubility (Water):	Insoluble
Solubility (Organic solvents):	Insoluble
Specific Gravity (water =1):	4.5-4.7
Bulk density (kg/m ³) approx.:	1400-1600
Particle size, mean (µm):	5 ± 1 µm

10. Stability and reactivity

Conditions to avoid:	N/A
Hazardous decomposition products:	N/A

11. Toxicological Information

The product does not meet the criteria for hazard classification in accordance with the revised Hazard Communication Standard (HCS 2012) which applies GHS classification criteria (UN Globally Harmonized System of Classification and Labelling of Chemicals, 9th rev.) and OSHA's HCS, respectively.

Acute effects:

INGESTION:	Finely divided dust from the product may cause mechanical irritation of the gastrointestinal system as a result of abrasive action. May lead to dehydration of mucous membranes.
INHALATION:	Finely divided dust from the product may cause mechanical irritation and dehydration of mucous membranes.
SKIN CONTACT:	Finely divided dust from the product may cause mechanical irritation and dehydration.
EYE CONTACT:	Finely divided dust from the product may cause mechanical irritation and dehydration.

Chronic effects:

As for all types of airborne dust, chronic obstructive lung disease is suspected following long term exposure (years) for concentrations above recommended occupational exposure limits. In common with many minerals, Ilmenite contains low levels of naturally occurring radioactive elements of the Uranium and Thorium series. The main radiological hazard from the product is internal exposure to alpha particles given off by inhaled dust. Suitable dust control measures shall be employed to ensure occupational exposure to generated dust and alpha particles are kept as low as reasonably achievable. Prolonged exposure to low level gamma radiation from bulk or bagged stockpiles of Ilmenite may present a lesser, external hazard.

Endocrine disrupting properties:

The product is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU)2017/2100 or Commission Regulation (EU)2018/605.

12. Ecological Information

The product is not characterised as dangerous for the environment.

MOBILITY:	The product is not mobile under normal environmental conditions.
PERSISTENCE:	Not relevant for inorganic substances.
BIOACCUMULATION:	Not relevant.
ECO-TOXICITY:	The product does not meet the classification criteria for ecotoxicological endpoints in accordance with the UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS, 9 th revision) and OSHA's HCS, respectively.

Endocrine disrupting properties: The product is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU)2017/2100 or Commission Regulation (EU)2018/605.

13. Disposal Considerations

The material should be recovered for recycling if possible. Dispose of waste product according to applicable federal, state and local rules for non-hazardous solid waste materials. No special precautions are necessary during repackaging. The product is not a listed RCRA Hazardous Waste (40 CFR 261).

14. Transport Information

UN:	Not regulated
IMDG/IMO:	Not subject to classification
ADR/RID:	Not subject to classification
ICAO/IATA:	Not subject to classification

15. Regulatory Information

OSHA:	This safety data sheet has been compiled in accordance with the revised Hazard Communication Standard (HCS 2012) and applies GHS classification criteria. The product can be considered a nuisance dust and is as such outside the scope of the revised HCS (29 CFR 1910.1200 section (b)(6)(x)).
TSCA:	The product is listed in the TSCA (Toxic Substance Control Act) Inventory (ID 18338, CAS # 12789-64-9).
CERCLA:	(Comprehensive Response Compensation, and Liability Act): The product is not listed in 40 CFR 302.4.
RCRA:	(Resource Conservation/Recovery Act): The product is not a listed hazardous waste.
SARA TITLE III:	(Superfund Amendments and Reauthorization Act): 311/312 Hazard Categories: None. 313 Reportable Ingredients: None.
CALIFORNIA PROPOSITION 65:	Not applicable.
IARC:	Not applicable.
US-NTP:	The product is not listed in the 2011 Report on Carcinogens (RoC).

WHMIS: not classified.

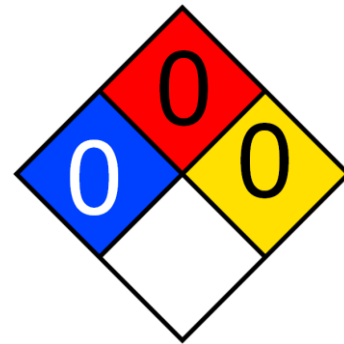
DSL Canada The substance is listed on the Domestic Substances List (identifier: 12789-64-9).

16. Other Information

According to Chapter 1.5.2 of the UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS) safety data sheets (SDS) are only required for substances and mixtures that meet the harmonized criteria for physical, health or environmental hazards. This product does not meet these criteria.

HMIS III (Hazardous Materials Information System)

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	F (see section 8)



NFPA 704 (National Fire Protection Association)

HEALTH	0
FLAMMABILITY	0
INSTABILITY/REACTIVITY	0
SPECIAL NOTICE	

Legal Disclaimer:

The information given in this sheet is to the best of Elkem's knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use

Microdense® is a registered trademark of Elkem ASA.

Changes from revision 00 to 01: Reference to GHS 7th rev.

Changes from rev. 01 to 02: updated information on dust masks in section 8. Company info updated.

Changes from rev. 02 to 03: updated company information: name, logo, email, fax deleted (Section 1), EDC properties information added (11 & 12), GHS ref updated to 9th rev.,

Changes from rev. 03 to 04: storage conditions updated.