1. Identification of the Product and Supplier

Product name:	***MicroDense***
Product application:	Weighting 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 Telefax: + 47 22 45 01 11 https://www.elkem.com/silicon-products/
Contact person:	sds.esm@elkem.no
REACH registration number:	Exempted from REACH registration in accordance with Regulation (EC) 1907/2006, Annex V
REACH and CLP helpdesk:	REACH and CLP website: https://echa.europa.eu/support/helpdesks/
Emergency Phone No.:	not applicable for non-hazardous substances. https://poisoncentres.echa.europa.eu/home

2. Hazards Identification

Classification of the substance	The product does not meet the criteria for hazard classification according to Regulation (EC) No1272/2008 (CLP) and the UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS, 7th rev.).
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, titanoferrous oxide
IUPAC-name:	Iron titanium trioxide
CAS No.:	12168-52-4, 98072-94-7, 12022-71-8
EINECS No.:	235-334-8, 308-551-1, 234-667-6

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: Storage areas should be well ventilated, dry and dust generation minimised when handling.

8. Exposure Controls/Personal Protection

A) Occupational exposure controls

Eye protection, eye flushing facilities and protective gloves. Ensure good ventilation. Wear CE-marked respiratory protection according to EN 149 FFP 2S in areas of inadequate ventilation.

Occupational Exposure Limits (ACGIH [1)], 2016):

		ACGIH TLV				
		8hr TWA		15 minute STEL		Notations
Substance	**[CAS No.]**	**ppm**	**mg/m³**	**ppm**	**mg/m³**	
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

B) Environmental exposure controls

Limit value for PM_{10} and $PM_{2.5}$ (Directive 2008/50/EC):

	Averaging period	**Limit value**
PM_{10}	One day	50 µg/m^3★
PM_{10}	Calendar year	25 µg/m^3
$PM_{2,5}$	Calendar year	15 µg/m^3

★Not to be exceeded more than 35 times a calendar year.

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.:	1250-1550
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 according to Regulation (EC) No 1272/2008 (CLP) and the UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS, 7th rev.).

Acute effects:

INGESTION:	Finely divided dust from the product may cause 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 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.

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.
ECOTOXICITY:	The product does not meet the classification criteria for ecotoxicological endpoints in accordance with Regulation (EC) 1272/2008 (CLP) and the UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS, 7th rev.).

13. Disposal Considerations

The product should be recovered for recycling if possible.
This material is not classified as hazardous waste according to Commission Decisions 2000/532/EC and 2001/118/EC. Prior to disposal of large quantities of this material advice should be sought from the relevant Waste Regulation Authority.

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

The text of this Product Safety Information is prepared in compliance with:

- Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and subsequent amendments.
- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
- UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS, 7th rev.).

16. Other Information

According to Chapter 1.5.2 of the UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS), Article 58 (2)(a), and Article 59(2)(b) of (EC) No 1272/2008 (CLP), which amends REACH article 31(1), safety data sheets (SDS) are only required for substances and mixtures that meet the harmonised criteria for physical, health or environmental hazards. Since this product does not meet these criteria, a SDS according to (EU) 2015/830 is not issued. In order to communicate relevant HSE-(health, safety and environmental-) information, this product safety information (PSI) is provided instead.

In accordance with REACH article 31(5), safety data sheets shall be supplied in an official language of the Member State(s) where the substance or mixture is placed on the market. This obligation, however, only applies for hazard-classified products which require a formal SDS. Since this product is not hazard-classified, the product safety information (PSI) is, in accordance with current regulation, provided in English language only.

REACH article 31(7) requires relevant exposure scenarios from the Chemical Safety Report (CSR) to be annexed to the SDS. However, according to REACH Annex I, section 0. (Introduction), subsection 0.6. no 4 and 5, exposure scenarios are only required for hazard-classified substances or mixtures. Since this product is not hazard-classified according to CLP, there is no requirement for exposure scenarios.

Changes from rev0 to rev1: New brandname Microdense. Updated ACGIH values in section 8.
Changes from rev1 to rev2: New corporate address. Paragraph 2 in section 16.
Changes from rev2 to rev3: updated bulkdensity in section 9.
Changes from rev3 to rev4: generic e-mail address, reference to DPD removed, reference to GHS inserted, reference to (EU) 2015/830 inserted, ACGIH values updated, legal disclaimer removed, section 9 updated.
Changes from rev4 to rev5: helpdesk links updated, company name updated (ASA).
Changes from rev5 to rev6: company information updated (chapter 1), limit values in chapter 8 B updated.