

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

1.1. Product identifier

Product form : Mixture
 Product name : OP 190
 Product code : S-00526

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

1.2.1. Relevant identified uses

Main use category : Submerged arc welding flux
 Industrial/Professional use spec : Reserved for industrial and professional use
 Function or use category : Welding and soldering agents

1.2.2. Uses advised against

Restrictions on use : No particular exclusions are known

1.3. Details of the supplier of the safety data sheet

Lincoln Electric Europe B.V.
 Nieuwe Dukenburgseweg 20
 6534 AD Nijmegen - The Netherlands
 T +31 243 522 911
sds@lincolnelectriceurope.com - www.lincolnelectric.eu

1.4. Emergency telephone number

Emergency number : INRS +33 (0)1.45.42.59.59

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA Belfast	0344 892 0111	Available 24 hours/day
United Kingdom	National Poisons Information Service (Cardiff Centre) Gwenwyn Ward, Llandough Hospital	Penarth CF64 2XX Cardiff	0344 892 0111	Available 24 hours/day

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Extra phrases : Not classified. The product contains less than 1% of respirable crystalline silica.

2.3. Other hazards

Other hazards not contributing to the classification : Dust from this product may cause eye irritation.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Quartz (SiO ₂)	(CAS-No.) 14808-60-7 (EC-No.) 238-878-4	3 - 7	STOT RE 1, H372
manganese dioxide	(CAS-No.) 1313-13-9 (EC-No.) 215-202-6 (EC Index-No.) 025-001-00-3 (REACH-no) 01-2119452801-43	3 - 7	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332

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Manganese substance with a Community workplace exposure limit	(CAS-No.) 7439-96-5 (EC-No.) 231-105-1 (REACH-no) 01-2119449803-34	0,783 - 2,93	Not classified
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Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Assure fresh air breathing.
First-aid measures after skin contact	: Remove contaminated clothing and shoes. Rinse with water.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Seek medical attention immediately.
First-aid measures after ingestion	: Rinse mouth. Get medical advice/attention.

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

Symptoms/effects	: See Heading 2.3.
Symptoms/effects after inhalation	: Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.
Symptoms/effects after skin contact	: May cause an allergic skin reaction.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Dry powder.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not flammable.

5.3. Advice for firefighters

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment. Gloves. Safety glasses.
Emergency procedures	: Limit exposure time and number of exposed workers to product.
Measures in case of dust release	: Wear suitable respiratory equipment.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	: Place in a suitable container for disposal in accordance with the waste regulations (see Section 13).
Methods for cleaning up	: Collect spills and put it into appropriated container.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Heading 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: Use care during processing to minimize generation of dust.
Precautions for safe handling	: Local exhaust and general ventilation must be adequate to meet exposure standards.
Hygiene measures	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Store in dry protected location to prevent any moisture contact.
Storage area	: Store in a well-ventilated place.
Special rules on packaging	: Store in a closed container. Keep only in original container.

7.3. Specific end use(s)

Not applicable.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Manganese (7439-96-5)

EU - Occupational Exposure Limits

Local name	Manganese
IOELV TWA (mg/m ³)	0,2 mg/m ³ (inhalable fraction) 0,05 mg/m ³ (respirable fraction)
Notes	(Year of adoption 2011)
Regulatory reference	SCOEL Recommendations

Germany - Occupational Exposure Limits (TRGS 900)

TRGS 900 Local name	Mangan und seine anorganischen Verbindungen
TRGS 900 Occupational exposure limit value (mg/m ³)	0,02 mg/m ³ (A) 0,2 mg/m ³ (E)
TRGS 900 Limitation of exposure peaks	8(II)
TRGS 900 Remark	DFG,Y,10
TRGS 900 Regulatory reference	TRGS900

Portugal - Occupational Exposure Limits

Local name	Manganês e compostos inorgânicos, expressos em Mn
OEL TWA (mg/m ³)	0,2 mg/m ³
Regulatory reference	Norma Portuguesa NP 1796:2014

Spain - Occupational Exposure Limits

Local name	Manganeso
VLA-ED (mg/m ³)	0,2 mg/m ³ elemental 0,2 mg/m ³ Compuestos inorgánicos de Manganeso, como Mn

Quartz (SiO₂) (14808-60-7)

Austria - Occupational Exposure Limits

MAK (mg/m ³)	0,1 mg/m ³
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Belgium - Occupational Exposure Limits

Limit value (mg/m ³)	0,1 mg/m ³
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France - Occupational Exposure Limits

Local name	quartz
VME (mg/m ³)	0,1 mg/m ³

Ireland - Occupational Exposure Limits

OEL (8 hours ref) (mg/m ³)	0,1 mg/m ³
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Netherlands - Occupational Exposure Limits

Local name	Silicium(di)oxide– kwarts
Grenswaarde TGG 8H (mg/m ³)	0,075 mg/m ³

Portugal - Occupational Exposure Limits

Local name	Silica, cristalina α - Quartzo
OEL TWA (mg/m ³)	0,025 mg/m ³

Spain - Occupational Exposure Limits

Local name	Sílice Cristalina (Cuarzo)
VLA-ED (mg/m ³)	0,05 mg/m ³ Fracción respirable

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Quartz (SiO₂) (14808-60-7)

Notes	(2015), n (En las industrias extractivas véase la Orden ITC 2585/2007, de 30 de agosto (BOE nº 315 de 7 de septiembre de 2007), por la que se aprueba la Instrucción Técnica Complementaria 2.0.02 del Reglamento General de Normas Básicas de Seguridad Minera.), d (Véase UNE EN 481: Atmósferas en los puestos de trabajo. Definición de las fracciones por el tamaño de las partículas para la medición de aerosoles.), y (Reclasificado, por la International Agency for Research on Cancer (IARC) de grupo 2A (probablemente carcinogénico en humanos) a grupo 1 (carcinogénico en humanos).), véase ITC/2582/2007
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Sweden - Occupational Exposure Limits

nivågränsvärde (NVG) (mg/m ³)	0,1 mg/m ³
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USA - ACGIH - Occupational Exposure Limits

ACGIH TWA (mg/m ³)	10
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manganese dioxide (1313-13-9)

United Kingdom - Occupational Exposure Limits

Local name	Manganese and its inorganic compounds (as Mn)
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WEL TWA (mg/m ³)	0,5 mg/m ³
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8.2. Exposure controls

Hand protection:

Welding gloves.

Eye protection:

Use a protection mask equipped with suitable filter glasses.

Skin and body protection:

Skin protection appropriate to the conditions of use should be provided.

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Colour	: Grey.
Odour	: odourless.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: > 700 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: > 1
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

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Explosive limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

None under normal conditions.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Protect from moisture.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Quartz (SiO₂) (14808-60-7)

IARC group	1 - Carcinogenic to humans
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Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified.
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Dispose in a safe manner in accordance with local/national regulations.
Additional information	: 12 01 13 Welding wastes (Q8).
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

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14.1. UN number

UN-No. (ADR)	: Not applicable
UN-No. (IMDG)	: Not applicable
UN-No. (IATA)	: Not applicable
UN-No. (ADN)	: Not applicable
UN-No. (RID)	: Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: Not applicable
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IMDG

Transport hazard class(es) (IMDG)	: Not applicable
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IATA

Transport hazard class(es) (IATA)	: Not applicable
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ADN

Transport hazard class(es) (ADN)	: Not applicable
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RID

Transport hazard class(es) (RID)	: Not applicable
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14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

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15.1.2. National regulations

Germany

Reference to AwSV

: Water hazard class (WGK) 1, Slightly hazardous to water (Classification according to AwSV, Annex 1)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV

: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen

: Quartz (SiO₂) is listed

SZW-lijst van mutagene stoffen

: None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding

: None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid

: Manganese is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling

: Manganese is listed

Denmark

Danish National Regulations

: Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Indication of changes:

1.3. Details of the supplier of the safety data sheet. 1.4. Emergency telephone number. 8. Exposure controls/personal protection. 15. Regulatory information.

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
IARC	International Agency for Research on Cancer
EC50	Median effective concentration
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOEC	No-Observed Effect Concentration
NOAEL	No-Observed Adverse Effect Level
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant

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TLM	Median Tolerance Limit
vPvB	Very Persistent and Very Bioaccumulative

Other information : The product must not be used for any application that is not allowed, in this case we will not be responsible for any damage caused. The user must respect current Safety, Health and Environmental legislation.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
H302	Harmful if swallowed.
H332	Harmful if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.