

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.

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

1.1 Product identifier

Product Name: JM®-51

Product Size: 1.2 mm (3/64")

Other means of identification

SDS number: 200000025113

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

Identified uses:

Uses advised against:

1.3 Details of the supplier of the safety data sheet

Manufacturer/Importer/Supplier/Distributor Information

Company Name: The Shanghai Lincoln Electric Co., Ltd.

Address: No. 195, Lane 5008, Hu Tai Road

Shanghai 201907

China

Telephone: +86 21 6673 4530

Contact Person: Safety Data Sheet Questions: www.lincolnelectric.com/sds

Arc Welding Safety Information: www.lincolnelectric.com/safety

Company Name: Lincoln Electric Europe B.V.

Address: Collse Heide 12

Nuenen 5674 VN

The Netherlands

Telephone: +31 243 522 911

Contact Person: Safety Data Sheet Questions: www.lincolnelectric.com/sds

Arc Welding Safety Information: www.lincolnelectric.com/safety

1.4 Emergency telephone number:

USA/Canada/Mexico +1 (888) 609-1762

Americas/Europe +1 (216) 383-8962

Asia Pacific +1 (216) 383-8966

Middle East/Africa +1 (216) 383-8969

3E Company Access Code: 333988

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product has not been classified as hazardous according to the legislation in force.

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

Not classified as hazardous according to applicable GHS hazard classification criteria.

2.3 Other hazards

Electrical Shock can kill. If welding must be performed in damp locations or with wet clothing, on metal structures or when in cramped positions such as sitting, kneeling or lying, or if there is a high risk of unavoidable or accidental contact with work piece, use the following equipment: Semiautomatic DC Welder, DC Manual (Stick) Welder, or AC Welder with Reduced Voltage Control.

Arc rays can injure eyes and burn skin. Welding arc and sparks can ignite combustibles and flammable materials. Overexposure to welding fumes and gases can be hazardous. Read and understand the manufacturer's instructions, Safety Data Sheets and the precautionary labels before using this product. Refer to Section 8.

SECTION 3: Composition/information on ingredients**Reportable Hazardous Ingredients
3.2 Mixtures****SECTION 4: First aid measures****4.1 Description of first aid measures**

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Ingestion: No data available.

4.2 Most important symptoms and effects, both acute and delayed: No data available.

4.3 Indication of any immediate medical attention and special treatment needed

Hazards: No data available.

Treatment: No data available.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media: No data available.

Unsuitable extinguishing media: No data available.

5.2 Special hazards arising from the substance or mixture: No data available.

**5.3 Advice for firefighters
Special fire-fighting
procedures:**

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: No data available.

6.2 Environmental Precautions: No data available.

6.3 Methods and material for containment and cleaning up: No data available.

6.4 Reference to other sections: No data available.

SECTION 7: Handling and storage:

7.1 Precautions for safe handling: No data available.

7.2 Conditions for safe storage, including any incompatibilities: No data available.

7.3 Specific end use(s): No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

MAC, PEL, TLV and other exposure limit values may vary per element and form - as well as per country. All country-specific values are not listed. If no occupational exposure limit values are listed below, your local authority may still have applicable values. Refer to your local or national exposure limit values.

Control Parameters

Occupational Exposure Limits: EU & Great Britain

Occupational Exposure Limits: US

None of the components have assigned exposure limits.

Biological Limit Values: EU & Great Britain

None of the components have assigned exposure limits.

Biological Limit Values: ACGIH

None of the components have assigned exposure limits.

8.2 Exposure controls

Appropriate Engineering Controls No data available.

Individual protection measures, such as personal protective equipment

General information: No data available.

Eye/face protection: No data available.

Skin protection

Hand Protection: No data available.

Other: No data available.

Respiratory Protection: No data available.

Hygiene measures: No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	No data available.
Physical state:	Solid
Form:	Solid
Color:	No data available.
Odor:	No data available.
Odor Threshold:	No data available.
pH:	No data available.
Melting Point:	No data available.
Boiling Point:	No data available.
Flash Point:	No data available.
Evaporation Rate:	No data available.
Flammability (solid, gas):	No data available.
Flammability Limit - Upper (%):	No data available.
Flammability Limit - Lower (%):	No data available.
Vapor pressure:	No data available.
Relative vapor density:	No data available.
Density:	No data available.
Relative density:	No data available.
Solubility(ies)	
Solubility in Water:	No data available.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition Temperature:	No data available.

SADT:	No data available.
Viscosity:	No data available.
Explosive properties:	No data available.
Oxidizing properties:	No data available.

9.2 Other information

VOC Content:	Not available.
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Bulk density:	Not available.
Dust Explosion Limit, Upper:	Not available.
Dust Explosion Limit, Lower:	Not available.

Dust Explosion Description Number Kst:	Not available.
Minimum ignition energy:	Not available.
Minimum ignition temperature:	Not available.
Metal Corrosion:	Not available.

SECTION 10: Stability and reactivity

10.1 Reactivity:	No data available.
10.2 Chemical Stability:	No data available.
10.3 Possibility of hazardous reactions:	No data available.
10.4 Conditions to avoid:	No data available.
10.5 Incompatible Materials:	No data available.
10.6 Hazardous Decomposition Products:	No data available.

SECTION 11: Toxicological information**Information on likely routes of exposure**

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	No data available.
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11.1 Information on toxicological effects**Acute toxicity (list all possible routes of exposure)****Oral****Product:****Dermal****Product:****Inhalation****Product:****Repeated dose toxicity****Product:** No data available.**Skin Corrosion/Irritation****Product:** No data available.**Serious Eye Damage/Eye Irritation****Product:** No data available.**Respiratory or Skin Sensitization****Product:** No data available.**Carcinogenicity****Product:** No data available.**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:****Germ Cell Mutagenicity****In vitro****Product:** No data available.**In vivo****Product:** No data available.**Reproductive toxicity****Product:** No data available.**Specific Target Organ Toxicity - Single Exposure****Product:** No data available.**Specific Target Organ Toxicity - Repeated Exposure****Product:** No data available.**Aspiration Hazard****Product:** No data available.**11.2 Information on other hazards****Endocrine disrupting properties****Product:** No data available.**Other information****Product:** No data available.**SECTION 12: Ecological information**

12.1 Ecotoxicity**Acute hazards to the aquatic environment:****Fish****Product:** No data available.**Aquatic Invertebrates****Product:** No data available.**Chronic hazards to the aquatic environment:****Fish****Product:** No data available.**Aquatic Invertebrates****Product:** No data available.**Toxicity to Aquatic Plants****Product:** No data available.**12.2 Persistence and Degradability****Biodegradation****Product:** No data available.**12.3 Bioaccumulative potential****Bioconcentration Factor (BCF)****Product:** No data available.**12.4 Mobility in soil:** No data available.**12.5 Results of PBT and vPvB assessment:****Product:** No data available.**12.6 Endocrine disrupting properties:****Product:** No data available.**12.7 Other adverse effects:****Other hazards****Product:** No data available.**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Disposal instructions:** No data available.**Contaminated Packaging:** No data available.**SECTION 14: Transport information**

ADR

14.1 UN number or ID number:	
14.2 UN Proper Shipping Name:	NOT DG REGULATED
14.3 Transport Hazard Class(es)	
Class:	NR
Label(s):	—
Hazard No. (ADR):	—
Tunnel restriction code:	
14.4 Packing Group:	—
Limited quantity	
Excepted quantity	
14.5 Marine Pollutant	No
14.6 Special precautions for user:	None.

ADN

14.1 UN number or ID number:	
14.2 UN Proper Shipping Name:	NOT DG REGULATED
14.3 Transport Hazard Class(es)	
Class:	NR
Label(s):	—
Hazard No. (ADR):	—
14.4 Packing Group:	—
Limited quantity	
Excepted quantity	
14.5 Marine Pollutant	No
14.6 Special precautions for user:	None.

RID

14.1 UN number or ID number:	
14.2 UN Proper Shipping Name	NOT DG REGULATED
14.3 Transport Hazard Class(es)	
Class:	NR
Label(s):	—
14.4 Packing Group:	—
14.5 Marine Pollutant	No
14.6 Special precautions for user:	None.

IMDG

14.1 UN number or ID number:	
14.2 UN Proper Shipping Name:	NOT DG REGULATED
14.3 Transport Hazard Class(es)	
Class:	NR
Label(s):	—
EmS No.:	
14.4 Packing Group:	—
Limited quantity	
Excepted quantity	
14.5 Marine Pollutant	No
14.6 Special precautions for user:	None.

IATA

14.1 UN number or ID number:	
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14.2 Proper Shipping Name: NOT DG REGULATED

14.3 Transport Hazard Class(es):

Class: NR

Label(s): —

14.4 Packing Group: —

Cargo aircraft only :

Passenger and cargo aircraft :

Limited quantity:

Excepted quantity

14.5 Marine Pollutant No

14.6 Special precautions for user: None.

Cargo aircraft only: Allowed.

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:**

EU. Directive 2012/18/EU (SEVESO III) on major accident hazards involving dangerous substances, Annex I:

**15.2 Chemical safety
assessment:**

No Chemical Safety Assessment has been carried out.

International regulations**SECTION 16: Other information****Definitions:****References**

PBT

PBT: persistent, bioaccumulative and toxic substance.

vPvB

vPvB: very persistent and very bioaccumulative substance.

**Key literature references and
sources for data:**

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.

Wording of the H-statements in section 2 and 3**Issue Date:** 08.08.2024

Disclaimer:

The Lincoln Electric Company urges each end user and recipient of this SDS to study it carefully. See also www.lincolnelectric.com/safety. If necessary, consult an industrial hygienist or other expert to understand this information and safeguard the environment and protect workers from potential hazards associated with the handling or use of this product. This information is believed to be accurate as of the revision date shown above. However, no warranty, expressed or implied, is given. Because the conditions or methods of use are beyond Lincoln Electric's control, we assume no liability resulting from the use of this product. Regulatory requirements are subject to change and may differ between various locations. Compliance with all applicable Federal, State, Provincial, and local laws and regulations remain the responsibility of the user.

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Annex to the extended Safety Data Sheet (eSDS)

Exposure Scenario:

Read and understand the “**Recommendations for Exposure Scenarios, Risk Management Measures and to identify Operational Conditions under which metals, alloys and metallic articles may be safely welded**”, which is available from your supplier and at <http://european-welding.org/health-safety>.

Welding/Brazing produces fumes which can affect human health and the environment. Fumes are a varying mixture of airborne gases and fine particles which, if inhaled or swallowed, constitute a health hazard. The degree of risk will depend on the composition of the fume, concentration of the fume and duration of exposure. The fume composition is dependent upon the material being worked, the process and consumables being used, coatings on the work such as paint, galvanizing or plating, oil or contaminants from cleaning and degreasing activities. A systematic approach to the assessment of exposure is necessary, taking into account the particular circumstances for the operator and ancillary worker that can be exposed.

Considering the emission of fumes when welding, brazing or cutting of metals, it is recommended to (1) arrange risk management measures through applying general information and guidelines provided by this exposure scenario and (2) using the information provided by the Safety Data Sheet, issued in accordance with REACH, by the welding consumable manufacturer.

The employer shall ensure that the risk from welding fumes to the safety and health of workers is eliminated or reduced to a minimum. The following principle shall be applied:

- 1- Select the applicable process/material combinations with the lowest class, whenever possible.
- 2- Set welding process with the lowest emission parameter.
- 3- Apply the relevant collective protective measure in accordance with class number. In general, the use of PPE is taken into account after all other measures is applied.
- 4- Wear the relevant personal protective equipment in accordance with the duty cycle.

In addition, compliance with the National Regulations regarding the exposure to welding fumes of welders and related personnel shall be verified.