Materials Health, Safety and Environmental Data Sheet
(EG)1907/2006, (EG)1272/2008, (EG)453/2010

1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

1.1 Product identification
Trade name: Lastek 40E
Application: nickel base coated welding electrode for cast iron

1.2 Supplier/Manufacturer:
Name: Lastek Belgium n.v.
Address: Toekomstlaan 50 – B 2200 Herentals
Phone/fax: tel. +32 14/22.57.67 – fax. +32 14/22.32.91 – E-Mail: info@lastek.be

1.3 Telephone for emergency: +32 14/22.57.67

2. COMPOSITION AND INFORMATION ABOUT CONSTITUENTS

Wire: nickel
The coating contains mineral and metal powders, organic compounds and silicate binder (potassium silicate and sodium silicate), barium carbonate, calcium carbonate, calcium fluoride and similar minerals. Typical organic products are: carboxymethylcellulose and alginate.

3. RISKS

The product self does not gives hazardous risks but electric arc welding may create one or more of the following hazards:
* welding fumes and gases may be dangerous to your health
* arc rays (UV-rays) can injure eyes and burn skin, heat rays (infrared radiation from flame or hot metal) can injure eyes
* electric shock can kill
* carcinogenic assessment: possible risk of cancer; nickel containing fumes must be considered possible carcinogenic (animal experiments) but are not classified as such
* may cause sensitization by skin contact; with sensitive persons nickel compounds can cause allergic reactions.

4. FIRST AID INSTRUCTIONS

Inhalation:	bring affected person to fresh air; if breathing is difficult give oxygen
In case of arc burn:	call a physician
In case of eye contact:	n.a.
Skin contact:	wash off with soap and plenty of water in case of burning: flush with plenty of cold water for several minutes (at least 5 to 10 minutes). If nickel eczema appears seek medical advice
Swallowing:	n.a.

5. FIRE FIGHTING INFORMATION

The product is non-flammable.

Extinguishing media:	n.a.
Extinguishing media to avoid:	n.a.
Special fire fighting procedures:	n.a.
Hazardous decomposition products:	n.a.

6. PRECAUTIONS TO BE TAKEN IN CASE MATERIAL IS RELEASED

Personal protection:	n.a.
Cleaning methods:	remove spoiled product mechanically
Waste disposal method:	n.a.

7. HANDLING AND STORING

Handling:	fume extraction needed if welding fumes may be released (see section 8)
Storing:	store in a dry place in closed packages

8. PROTECTION OF PERSONNEL

Technical precautions: during welding the necessary precautions have to be taken:
Use enough and adequate ventilation and local exhaust to keep fumes and gases from the welders breathing zone and the general area. Train the welder to keep his head out of the fumes. Wear appropriate welding clothing and personal protection means. Avoid grinding dust inhalation.

TLV-values: (Belgian list – Royal Decree 11.10.2002 – CEE/2000/39)	CASnr.	TLV
Welding fume	- - -	5 mg/m³
Iron oxide (fume)	1309-37-1	5 mg/m³
Calcium oxide	1305-78-8	2 mg/m³
Barium (soluble comp)	7440-39-3	0.5 mg/m³
Nickel (soluble compounds)	7440-02-0	0.1 mg/m³
Graphite	7782-42-5	2 mg/m³
Fluoride	- - -	2.5 mg/m³

Personal protection:

- Respiration protection: use an air purifying dust respirator or air supplied respirator when welding in confined space or in general work area when local exhaust does not keep exposure below TLV
- Eyes: wear helmet or use hand shield with shaded filter lens. The choice of appropriate light filtration will be based on visual acuity and may vary from one individual to another, particularly under different current densities, materials and electrode diameter; suggested filter shade number for shielded metal arc welding is 9 to 12.
- Hands: wear protective welder gloves to prevent injuries from radiation, sparks and electrical shock
- Skin: wear protective welder clothing as aprons, hats, and shoulder protection, arm protectors to prevent injuries from radiation, sparks and electrical shock. Welder may not permit electrical live parts or electrodes to make contact with skin.

9. PHYSICAL AND CHEMICAL DATA

Physical form:	solid, coated metallic rod
Odour:	none
Colour:	black
pH:	n.a.
Boiling point:	n.a.
Melting point:	1000-1500°C
Flash point:	n.a. (method:)
Explosion limits:	
LEL (lower):	n.a.
UEL (upper):	n.a.
Vapour pressure:	n.a.
Specific gravity:	8 g/cm³ (deposited metal)
Solubility in H_2O:	insoluble

10. STABILITY AND REACTIVITY

Stability: stable
Conditions to avoid: n.a.
Products to avoid: reacts with acids
Hazardous decomposition products: no fumes or vapours are evolved by these welding electrodes at normal ambient temperatures but in use (welding-) fumes will be evolved (see section 8)

11. TOXICOLOGICAL INFORMATION

Primary routes of entry: inhalation of welding fumes
Effects of acute exposure:

- Toxicity to animals: Values LD/LC50 Nickel >9000 mg/kg
- Local effects: n.a.
- Inhalation: n.a. for the product. For welding fumes see section 8
- Contact with skin: Nickel and nickel compounds may cause dermatitis in sensitised individuals

Carcinogenicity:
Metallic nickel and certain nickel alloys are classified possibly carcinogenic to humans, based on inadequate evidence of effects in humans. While epidemiology studies have demonstrated an increased risk of nasal, lung and possible risk of laryngeal cancer, the most likely causative agents were nickel sub sulphide, nickel sulphide and nickel oxide, with cancer linked principally to the nickel refining process of roasting nickel sulphide ores and not to metallic nickel itself. Evidence implicating metallic nickel and nickel alloys, or the hydrometallurgical nickel refining process as respiratory carcinogens for humans is lacking. Cohort mortality studies of workers in industries in which exposure was limited to metallic nickel of the hydrometallurgical process found no association between exposure to metallic nickel and its alloys to the subsequent development of respiratory cancer.
Effects of chronic (long-term) overexposure t air contaminants may lead to their accumulation in the lungs, a condition which may be seen as dense areas on chest X-rays. The severity of the change is proportional to the length of exposure. The changes seen are not necessarily associated with symptoms or signs of reduced lung function or disease. In addition, the changes on X-rays may be caused by non-work factors such as smoking, etc. Nickel and chromium (in some products) are considered carcinogenic. Long term overexposure to nickel fumes may also cause pulmonary fibrosis and oedema. Overexposure to manganese compounds may affect the central nervous system, symptoms of which are languor, sleepiness, muscular weakness, emotional disturbances and spastic gait. The effect of manganese on the nervous system is irreversible.

12. ECOLOGICAL INFORMATION

About product: Metallic product, do not throw it in the environment (scrap)
About ingredients: data are unknown

13. WASTE REMOVAL

Discard any product or residue as ordinary waste in an environmentally acceptable manner unless otherwise noted.
Recycle cardboard boxes and/or plastic packing in conformity with local applicable legislation.
Industrial waste number: 120102 (ferrous metallic scrap) - 120113 (welding waste

14. INFORMATION CONCERNING TRANSPORTATION

UN-nr: n.a.
ADR/RID: n.a.
IMDG: n.a.
IATA: n.a.

15. LABELLING

Full text of H-phrases used in Section 3
H-phrases: H312 / H319 / H332 / H335

16. OTHER INFORMATION

This information only refers to the described product and is based on actual knowledge and experience known by us, because operating conditions are unknown to us and does not belong to our sphere of influence.
The product may not be used without written permission for a use other than mentioned in pt.1.
This information may not be taken nor as a guarantee nor as a quality indication of our product.
This material safety information describes the product in relation with safety rules and is not meant as a technical description.
At any time the user is responsible for taking the necessary precautions to fulfil all local laws and regulations.

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