

Israel Electric Corp. Ltd. Generation & Transmission Group Generation Division Chief Chemist Dpt.		חברת החשמל לישראל בע"מ חטיבת ייצור והולכה אגף הייצור מחלקת הכימאי הראשי	
מס' מפרט: 804	<b>מפרט טכני לכימיקלים וחומרים דומים</b>		
בתוקף מתאריך: 25.05.2012			
דף מס' 1 מתוך 3	הנושא: DESICCANTS		

## שם המפרט:

### SELF INDICATING ORANGE SILICA GEL FOR USE AS DESICCANT IN TRANSFORMER AIR DEHYDRATORS

חתימה	תאריך	שם	
	25.05.2012	אילית פרומין	הוכן ע"י
			נבדק ע"י
	25.05.2012	ד"ר י' מרקו	אושר ע"י

## 1. Scope

This specification covers self-indicating Orange Silica Gel with non-hazardous humidity indicator, for use in *Israel Electric* as dehydrating agent for transformer air drying equipment (Israel Electric catalogue N° 5001635).

The silica gel shall contain an indicator changing a color from orange into green or white (colorless) during the process of moisture adsorption.

The products shall not contain any material that has been regenerated.

## 2. Technical requirements

2.1 The material shall consist of silica gel in beaded form and free from extraneous matter. The bead size of 90% of it should be 2-6 mm.

2.2 The product shall conform to the technical requirements given in Table 1.

2.3 Suppliers shall submit with their proposals:

- a technical specification of the product, containing at least, the data required in the *Israel Electric* spec N° 804;
- Safety Data Sheet (SDS).

2.4 The regeneration conditions of silica gel shall be specified by the supplier in Table 2.

## 3. Packaging

3.1 The desiccant shall be filled into strong, sound clean, dry and transparent packages (to determine the color of the product). Each package shall contain 1.2 kg of desiccant, and it shall be hermetically sealed after filling. The packages shall be air tight and capable of being easily opened (e.g. transparent plastic bags, which cannot be torn).

3.2 The bagged desiccant shall be packaged in leakproof and air tight containers. The containers shall be approximately full and shall hold an agreed quantity of bags per container.

3.3 Each package and each container (both internal and external) shall be legibly and durably marked with at least the following details:

- The material designation
- Manufactures name
- Distinctive lot or batch number
- Quantity of contents
- Date of manufacture

SELF-INDICATING ORANGE SILICA GEL HEAVY METAL FREE  
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עמוד 2 מתוך 3

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**Table 1. Property Requirements for Silica Gel**

Properties	Limits	Supplier's Data
1. Chemical composition: -SiO <sub>2</sub> -humidity indicator	93 wt.% min 5% max	
2. Apparent density, kg/l, min	0.7	
3. New material moisture (100°C, 4h), % by weight, max	2.0	
4. Bead size: -larger than 6 mm, wt%, max -smaller than 2mm, wt%, max	5.0 5.0	
5. Water vapor adsorption capacity, %, min at relative humidity (RH) of air: 20% 40% 80%	10.0 20.0 33.0	
6. Colour change indication range (start to end), adsorption at 20%RH $\pm$ 7.5%RH, @ 20°C, weight%	6-14	

**Table 2. Regeneration conditions (shall be filled by supplier)**

Parameter	Insert all data in this column
1. Maximum temperature at which the material properties are preserved, °C	
2. Recommended temperature or temperature range for material regeneration, °C	
3. Recommended time for drying 1 kg of white/colourless material in a layer 2.5 cm high, by forced air at the recommended temperature, to reach 2% moisture, minutes	

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