



MATERIAL SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

Product Name: **RADIGEN®**

Printing date: 24.06.2014

revised on: 24.06.2014

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1. Identification of the Substance / Preparation and the Company		
1.1	Application of the preparation: Product name:	Micronutrient long-term fertilizer (Depot fertilizer) RADIGEN
1.2	Company:	JOST GmbH Giesestr. 4 58636 Iserlohn, GERMANY
	Phone:	+49 [0] 2371 94 85-23
	Fax:	+49 [0] 2371 94 85 35
1.3	Emergency telephone number:	+49 [0] 228 19 240 University Hospital Bonn Information Center against Acute Poisoning
2. Hazards Identification		
	Main hazards:	No significant hazard according to the EEC Dangerous Substance Directive and Dangerous Preparation Directive.
3. Composition / Information on ingredients		
3.1	Chemical characterization:	Mixture of metal oxides and metal alloys of manganese, iron, copper, zinc. Organic and inorganic salts. Calcium borate, Calcium carbonate.
3.1.1	Description:	Light grey powder
3.1.2	CAS-No.:	Not available
4. First Aid Measures		
4.1	Skin contact:	Remove contaminated clothing. Wash off immediately with plenty of water and soap. Seek medical treatment in the case of skin irritation. Wash clothing before further use.
4.2	Eye contact:	May cause irritation to eyes. Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical assistance if irritation or symptoms persist.
4.3	Inhalation:	May cause irritation to mucous membranes. Move the exposed person to fresh air. Rinse mouth with clear water. Seek medical treatment in case of persisting symptoms.
4.4	Ingestion:	May cause irritation to mucous membranes. Do not induce vomiting! Rinse mouth, give water to drink. Seek medical attention if irritation or symptoms persist.
5. Fire Fighting Measures		
5.1	Extinguishing media:	All - non-inflammable.
5.2	Fire hazards:	Burning produces irritating, toxic and obnoxious fumes
5.3.	Protective equipment:	Use self-contained respiratory equipment
6. Accidental Release Measures		
6.1	Personal precautions:	For personal protection see Section 8 below
6.2	Environmental precautions:	Do not allow product to enter drains. Collect in clean container for reuse (preferred) or disposal.
6.3	Measures for cleaning up:	Sweep up, avoid formation of dust.
7. Handling and Storage		
7.1	Handling:	Avoid contact with eyes and skin. The precautionary measures usual while handling chemicals are to be considered.
7.2	Storage:	Keep in a cool, dry, well ventilated area. Store in closed

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7.2.1	Storage classification (VCI concept)	original packaging, separately from the reach of children and domestic animals as well as from food. 13 (non-flammable solid matter)
8.	<u>Exposure Controls / Personal protection</u>	
8.1	Engineering controls:	No exposition limits specified
8.2	<u>Personal protection:</u>	
8.2.1	Respiratory:	In case of dust formation use dust mask. General dust exposure limit of 10 mg/m ³ has to be respected.
8.2.2	Hand:	Wear suitable protective gloves (PVC).
8.2.3	Eye:	The usual precautions for handling chemicals should be observed. Use protective goggles during dust formation.
8.2.4	Skin and body:	Consider usual preventive measures while handling fertilizers or chemicals. Wear protective clothing
8.3	General protective and hygienic measures:	Do not eat, drink, smoke while working.
8.4	Additional information about design of technical facilities:	No specific suggestions.
9.	<u>Physical and Chemical Properties</u>	
9.1	<u>General information</u>	
9.1.1	Form:	Fine powder
9.1.2	Colour:	Light grey
9.1.3	Odour:	Odourless
9.2	<u>Security-relevant data</u>	
9.2.1	Change in condition:	Not relevant
9.2.2	Flash point:	Not relevant
9.2.4	Explosive properties:	Not relevant
9.2.5	Vapour pressure:	Not relevant
9.2.7	Bulk density:	1,300 kg/m ³
9.2.8	Solubility in water (20°C):	Widely insoluble
9.2.9	pH-value: (50 g/l H ₂ O at 20°C):	6 - 7
10.	<u>Stability and Reactivity</u>	
10.1	Conditions to be avoided:	None known
10.2	Stability:	Stable under normal conditions
10.3	Hazardous decomposition products:	None known
10.4	Dangerous reactions:	None known
11.	<u>Toxicological Information</u>	
11.1	Toxicological tests:	No experimental toxicological data available.
11.1.1	Acute toxicity:	No data available on this product.
11.1.2	Primary irritant effect on skin or eye:	No data available on this product.
11.1.3	Additional toxicological information:	From structurally related products an only moderate toxic effect on humans and animals may be expected.
12.	<u>Ecological Information</u>	
12.1	General notes:	Content materials are essential plant nutrients.
12.2	Ecotoxicity:	No data available on this product.
13.	<u>Disposal Considerations</u>	
13.1	Product:	May be deposited considering the local regulations or used as fertilizer in agriculture and horticulture.
13.2	Contaminated packaging:	No specific recommendations.
14.	<u>Transport Information</u>	
14.1	Land transport ADR/RID and GGVS/GGVE (cross border/domestic):	Product not classified as dangerous for carriage.
14.2	Sea transport IMO/IMDG-code:	Not restricted
14.3	Air transport ICAO-TI and IATA-DGR:	Not restricted



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15. Regulatory Information

15.1 Labelling according to EC guidelines:

15.1.1	R-phrase(s):	None
15.1.2	S-phrase(s):	None
15.2	National legislation:	Product is registered as EC-FERTILIZER

16. Other Information

This information only concerns the above mentioned product and does not need to be valid if used with other product(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.