

## MATERIAL SAFETY DATA SHEET

<b>SECTION 1 : CHEMICAL PRODUCT AND COMPANY IDENTIFICATION</b>	
IDENTIFICATION OF SUBSTANCE	SODIUM SELENATE
SYNONYMS	DISODIUM SELENATE , SODIUM SELENIUM OXIDE
NAME OF THE MANUFACTURER	Lasa Supergenerics Limited
ADDRESS FOR CORRESPONDENCE	C-105,MIDC, Mahad (Dist- Raigad ) Pin : 402302,  State: Maharashtra (India)
TEL.NO.:	022-4970 1092
FAX NO.:	
EMAIL ID:	<a href="mailto:info@lasalabs.com">info@lasalabs.com</a>

<b>SECTION 2 : COMPOSITION AND INFORMATION ON INGREDIENT</b>	
CHEMICAL NAME	SODIUM SELENATE
CAS NO.	13410 – 01 – 0
RTECS NO.	VS6650000

<b>SECTION 3 : HAZARD IDENTIFICATION</b>	
APPEARANCE	WHITE TO OFFWHITE POWDER
TARGET ORGANS	CENTRAL NERVOUS SYSTEM, LIVER, KIDNEYS, SPLEEN, G.I. SYSTEM, TEETH
HMIS / NFPA RATINGS	HEALTH – 3, FLAMMABILITY –0, REACTIVITY – 0
POTENTIAL HEALTH EFFECTS	
EYE	IRRITATING TO EYES
SKIN	IRRITATING & TOXIC TO SKIN
INHALATION	TOXIC BY INHALATION. IRRITATING TO RESPIRATORY SYSTEM, MUCOUS MEMBRANES.
INGESTION	VERY TOXIC IF SWALLOWED

<b>SECTION 4 : FIRST-AID MEASURES</b>	
EYE	IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR ATLEAST 15 MINUTES OCCASIONALLY LIFTING LOWER & UPPER EYELIDS. GET MEDICAL AID IMMEDIATELY.
SKIN	FLUSH SKIN WITH PLENTY OF SOAP AND WATER AT LEAST FOR 15 MINUTES.
INGESTION	IF VICTIM IS CONSCIOUS AND ALERT, GIVE 2-4 CUPFULS OF MILK OR WATER. GET MEDICAL AID IMMEDIATELY. WASHOUT MOUTH WITH WATER.
INHALATION	GET MEDICAL AID IMMEDIATELY. REMOVE FROM EXPOSURE AND REMOVE TO FRESH AIR IMMEDIATELY. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.

ALWAYS SEEK MEDICAL AID IMMEDIATELY. CONSULT NEAREST POISON CONTROL CENTRE OR PHYSICIAN WHO IS FAMILIAR WITH CHEMICALS AND ITS AFTER EFFECTS. TREAT SYMPTOMATICALLY AND SUPPORTIVELY. ALL FIRST – AID PROCEDURES SHOULD BE PERIODICALLY REVIEWED BY AN EXPERIENCED PHYSICIAN.

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SECTION 5 : FIRE – FIGHTING MEASURES
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GENERAL INFORMATION	AS IN ANY FIRE, WEAR A SELF-CONTAINED BREATHING APPARATUS MSHA/NIOSH (APPROVED OR EQUIVALENT) & FULLY PROTECTIVE GEAR. DURING FIRE TOXIC GASES MAY BE GENERATED.
EXTINGUISHING MEDIA	USE CARBON DIOXIDE OR EXTINGUISHING MEDIA SHOULD BE APPROPRIATE TO SURROUNDING FIRE CONDITIONS.
FLASH POINT	NOT AVAILABLE
AUTOIGNITION TEMP.	NOT AVAILABLE
EXPLOSION LIMIT, LOWER	NOT AVAILABLE
UPPER	NOT AVAILABLE

SECTION 6 : ACCIDENTAL RELEASE MEASURES
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GENERAL INFORMATION	<p>USE PROPER PERSONAL PROTECTIVE SAFETY EQUIPMENTS AS INDICATED IN SECTION 8. PROVIDE VENTILLATION.</p> <p>ISOLATE HAZARD AREA. COLLECT ALL THE MATERIAL IN A SUITABLE LABELED DISPOSAL CONTAINER &amp; NOTIFY GOVERNMENT OCCUPATIONAL HEALTH, SAFETY AND ENVIRONMENTAL AUTHORITIES.</p> <p>REVIEW FEDERAL / STATE / LOCAL GOVERNMENT REQUIREMENT PRIOR TO DISPOSAL. SWEEP UP/CLEAN AREA AFTER MATERIAL PICK-UP IS COMPLETED.</p>
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SECTION 7 : HANDLING & STORAGE
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HANDLING	USE ONLY IN A WELL VENTILATED AREA. AVOID DUST GENERATION. USE ALL PROTECTIVE SAFETY EQUIPMENTS.
STORAGE	KEEP AWAY FROM HEAT, SPARKS, OPEN FLAME, SOURCES OF IGNITION AND OTHER INCOMPATIBLE MATERIALS. STORE IN A COOL/DRY PLACE TIGHTLY SEALED.

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## SECTION 8 : EXPOSURE CONTROL & PERSONAL PROTECTION

EXPOSURE TO THIS MATERIAL CAN BE CONTROLLED IN MANY WAYS. THE MEASURES APPROPRIATE FOR A PARTICULAR WORKSITE DEPEND ON HOW THIS MATERIAL IS USED AND ON TO THE EXTENT OF EXPOSURE. THIS GENERAL INFORMATION CAN BE USED TO HELP DEVELOP SPECIFIC CONTROL MEASURES. ENSURE THAT, THE CONTROL SYSTEMS ARE PROPERLY DESIGNED AND MAINTAINED. AVOID PROLONGED OR REPEATED EXPOSURE. COMPLY WITH OCCUPATIONAL, ENVIRONMENTAL, FIRE AND OTHER APPLICABLE REGULATIONS.

USE ALL PROTECTIVE SAFETY EQUIPMENTS SUCH AS SAFETY GOGGLES, [AS PER OSHA'S EYE & FACE PROTECTION REGULATIONS IN 29 CFR 1910.133 OR EUROPEAN STANDARD EN166], PROPER CLOTHINGS, SAFETY SHOES, APPROVED RESPIRATORS THAT MEETS OSHAS'S 29CFR 1910.134 & ANSIZ88.2 REQUIREMENTS OR EUROPEAN STANDARD EN 149 REQUIREMENTS. ALWAYS CLEAN USED SAFETY EQUIPMENTS BEFORE REUSE.

ENGINEERING METHODS TO CONTROL EXPOSURE TO WORK PLACE CHEMICALS ARE PREFERRED. METHODS INCLUDE MECHANICAL [LOCAL EXHAUST] VENTILLATION, PROCESS – PERSONNEL ENCLOSURES AND CONTROL OF PROCESS CONDITIONS. ADMINISTRATIVE CONTROL MAY ALSO BE REQUIRED. SUPPLY SUFFICIENT REPLACEMENT AIR TO MAKE – UP FOR AIR REMOVED BY EXHAUST SYSTEM.

FACILITIES SHOULD BE EQUIPPED WITH EYEWASH AND SAFETY SHOWER FACILITIES.

APPROPRIATE EQUIPMENTS SHOULD BE AVAILABLE FOR USE IN EMERGENCIES SUCH AS SPILLS OR FIRE EXPOSURE LIMITS.

### EXPOSURE LIMITS RTECS

COUNTRY	SOURCE	TYPE	VALUE
USA	ACGIH	TWA	0.2 mg ( Se ) / m <sup>3</sup>
USA	MSHA STANDARD – AIR	TWA	0.2 mg ( Se ) / m <sup>3</sup>
USA	OSHA	PEL	8H TWA 0.2 mg (Se ) / m <sup>3</sup>

## SECTION 9 : PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE	:	WHITE TO OFFWHITE SOLID
MOLECULAR FORMULA	:	Na <sub>2</sub> SeO <sub>4</sub>
MOLECULAR WEIGHT	:	188.94
pH	:	5.5 TO 7.5
SOLUBILITY	:	SOLUBLE IN WATER.

## SECTION 10 : STABILITY & REACTIVITY DATA

CHEMICAL STABILITY	:	STABLE UNDER NORMAL STORAGE CONDITIONS.
CONDITIONS TO AVOID	:	EXPOSURE TO AIR, MOISTURE, SOURCES OF IGNITION, FLAME, HEAT ETC.
INCOMPATIBILITY WITH	:	STRONG OXIDIZING AGENTS
HAZARDOUS DECOMPOSITION PRODUCT	:	SELENIUM / SELENIUM OXIDES
HAZARDOUS POLYMERIZATION	:	WILL NOT OCCUR

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SECTION 11 : TOXICOLOGICAL INFORMATION
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EXPOSURE CAN CAUSE: ANEMIA. ACUTE SELENIUM POISONING PRODUCES CENTRAL NERVOUS SYSTEM EFFECTS, WHICH INCLUDE NERVOUSNESS, CONVULSIONS, DROWSINESS. OTHER SIGNS OF INTOXICATION CAN INCLUDE SKIN ERUPTIONS, LASSITUDE, GASTROINTESTINAL DISTRESS, ODOUROUS BREATH, PARTIAL LOSS OF HAIR, NAILS. CHRONIC EXPOSURE BY INHALATION CAN PRODUCE SYMPTOMS THAT INCLUDE PALLOR, COATING OF TONGUE, ANEMIA, IRRITATION OF MUCOSA, LUMBAR PAIN, LIVER & SPLEEN DAMAGE, COUGHING, CHEST PAINS, DIFFICULTY IN BREATHING, STOMACH PAINS, VOMITING, DIARRHEA.

TOXICITY DATA

ORAL – RAT – 1.6 mg/kg LD 50 ORAL –  
RABBIT – 2.25 mg/kg LD 50

THIS PRODUCT IS OR CONTAINS A COMPONENT THAT IS NOT CLASSIFIABLE AS TO ITS CARCINOGENICITY BASED ON ITS IARC, ACGIH, NTP OR EPA CLASSIFICATION.

SPECIES : RAT

ROUTE OF APPLICATION : ORAL

DOSE : 128mg/kg

EXPOSURE TIME : 2Y, FREQUENCY : C

RESULT : TUMORIGENIC : CARCINOGENIC BY RTECS CRITERIA.

BLOOD : LEUKEMIA LUNGS, THORAX, OR RESPIRATION THORAX

IARC CARCINOGEN LIST – RATING : GROUP 3

CHRONIC EXPOSURE : TERATOGEN

SPECIES : MOUSE

DOSE : 14 mg/kg

ROUTE OF APPLICATION : ORAL

EXPOSURE TIME : ( 14 D POST )

RESULT : SPECIFIC DEVELOPMENTAL ABNORMALITIES : SKIN & SKIN APPENDAGES.

SPECIES : HAMSTER

DOSE : 18894 mg/kg

ROUTE OF APPLICATION : ORAL

EXPOSURE TIME : ( 8D PREG )

RESULT : EFFECTS ON EMBRYO OR FETUS : FETOTOXICITY ( EXPECT DEATH, e.g., STUNTED FETUS ).

CHRONIC EXPOSURE : MUTAGEN

SPECIES : HUMAN

DOSE : 10 mmol/l

CELL TYPE : FIBROBLAST

MUTATION TEST : UNSCHEDULED DNA SYNTHESIS

SPECIES : HUMAN

DOSE : 8 nmol/l

CELL TYPE : LYMPHOCYTE

MUTATION TEST : CYTOGENETIC ANALYSIS

SPECIES : RAT

DOSE : 100 umol/l

CELL TYPE : LIVER

MUTATION TEST : UNSCHEDULED DNA SYNTHESIS

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SPECIES : MOUSE  
ROUTE : ORAL  
DOSE : 14 mg/kg  
MUTATION TEST : CYTOGENETIC ANALYSIS

CHRONIC EXPOSURE : REPRODUCTIVE HAZARD

SPECIES : RAT DOSE  
: 26mg / kg  
ROUTE OF APPLICATION : ORAL  
EXPOSURE TIME : ( 13W MALE )  
RESULT : PATERNAL EFFECTS : SPERMATOGENESIS ( INCLUDING GENETIC MATERIAL, SPERM MORPHOLOGY, MOTILITY, AND COUNT ).  
SPECIES : MOUSE  
DOSE : 60 mg / kg  
ROUTE OF APPLICATION : ORAL  
EXPOSURE TIME : ( 8-12D PREG )  
RESULT : EFFECTS ON NEWBORN : VIABILITY INDEX ( e.g., # ALIVE AT DAY 4 PER # BORN ALIVE ). EFFECTS ON NEWBORN: GROWTH STATISTICS ( e.g., REDUCED WEIGHT GAIN).

SECTION 12 : ECOLOGICAL INFORMATION

NO DATA AVAILABLE. HOWEVER, DO NOT RELEASE MATERIAL TO ENVIRONMENT, WITHOUT PROPER GOVERNMENTAL PERMITS.

SECTION : 13 DISPOSAL CONSIDERATIONS

WASTE GENERATORS MUST DETERMINE WHETHER DISCARDED CHEMICAL WASTE IS CLASSIFIED AS A HAZARDOUS WASTE. US – EPA GUIDE LINES FOR THE CLASSIFICATION DETERMINATION ARE LISTED IN 40 CFR PARTS 261.3. COLLECT ALL THE WASTE IN A WELL COVERED / LEAK PROOF / LABELED CONTAINERS AND REVIEW FEDERAL / STATE / LOCAL GOVERNMENT REQUIREMENT PRIOR TO DISPOSAL.

SECTION : 14 TRANSPORT INFORMATION

PROPER SHIPPING NAME	SELENATES
UN NO	2630
PACKING GROUP	I
HAZARD CLASS	6.1
IMDG NO.	6249
EMS NO.	6.1 – 04
MFAG NO.	175,225

SECTION : 15 REGULATORY INFORMATION

EU DIRECTIVES CLASSIFICATION

SYMBOL OF DANGER : T – N  
INDICATION OF DANGER : TOXIC. DANGEROUS FOR ENVIRONMENT  
US CLASSIFICATION & LABEL TEXT  
INDICATION OF DANGER : HIGHLY TOXIC ( USA ),TOXIC ( EU)

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US STATEMENT : TARGET ORGANS – CENTRAL NERVOUS SYSTEM, LIVER, KIDNEYS.

US REGULATORY INFORMATION

SARA LISTED : YES

NOTES : THIS PRODUCT IS SUBJECT TO SARA SECTION 313 REPORTING REQUIREMENTS – SELENIUM COMPOUNDS .

TSCA INVENTORY ITEM – YES.

CANADA REGULATORY INFORMATION

DSL – YES, NDSL – NO.

SECTION : 16 ADDITIONAL INFORMATION

THIS DOCUMENT IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE PRECAUTIONARY HANDLING OF MATERIAL BY A PERSON TRAINED IN CHEMICAL HANDLING. THE USER IS RESPONSIBLE FOR DETERMINING THE PRECAUTIONS & DANGERS OF THIS CHEMICAL FOR HIS OR HER PARTICULAR APPLICATION DEPENDING ON USAGE. ADEQUATE PROTECTIVE CLOTHING, INCLUDING EYE / FACE GUARDS, APPROVED RESPIRATORS MUST BE USED TO AVOID CONTACT WITH THE MATERIAL OR BREATHING CHEMICAL VAPOURS / FUMES.

EXPOSURE TO THIS PRODUCT MAY CAUSE ADVERSE HEALTH EFFECTS. THIS CHEMICAL MAY INTERACT WITH OTHER SUBSTANCES. SINCE THE POTENTIAL USES ARE SO VARIED, M/S. OMKAR SPECIALITY CHEMICALS LTD. CANNOT WARN OF ALL OF THE POTENTIAL DANGERS OF USE OR INTERACTION WITH CHEMICALS OF MATERIALS. M/S. OMKAR SPECIALITY CHEMICALS LTD. WARRANTS THAT, THE CHEMICAL MEETS THE SPECIFICATIONS SET FORTH ON THE TEST REPORT.

M/S. OMKAR SPECIALITY CHEMICALS LTD. DISCLAIMS ANY OTHER WARRANTIES EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR PURPOSE.

THE USER SHOULD RECOGNISE THAT, THIS PRODUCT CAN CAUSE SEVERE INJURY, ESPECIALLY IF IMPROPERLY HANDLED OR THE KNOWN DANGERS OF USE ARE NOT HEEDDED.

“READ ALL PRECAUTIONARY INFORMATIONS. “

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