# MATERIAL SAFETY DATA SHEET OF BENZENE SELENINIC ANHYDRIDE

## SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>IDENTIFICATION OF SUBSTANCE</th>
<th>BENZENE SELENINIC ANHYDRIDE, 98%</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYNONYMS</td>
<td>NONE</td>
</tr>
<tr>
<td>NAME OF THE MANUFACTURER</td>
<td>OMKAR SPECIALITY CHEMICALS LTD.</td>
</tr>
<tr>
<td>ADDRESS FOR CORRESPONDENCE</td>
<td>B-34 MIDC, Badlapur (E), Dist.Thane – 421503 State: Maharashtra (India)</td>
</tr>
<tr>
<td>TEL.NO.:</td>
<td>91-251-2697340</td>
</tr>
<tr>
<td>FAX NO.:</td>
<td>91-251-2697347</td>
</tr>
</tbody>
</table>

## SECTION 2: COMPOSITION AND INFORMATION ON INGREDIENT

<table>
<thead>
<tr>
<th>CHEMICAL NAME</th>
<th>BENZENE SELENINIC ANHYDRIDE, 98%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS NO.</td>
<td>17697-12-0</td>
</tr>
<tr>
<td>EINECS NO.</td>
<td>241-701-3</td>
</tr>
<tr>
<td>HAZARD SYMBOL</td>
<td>T – VERY TOXIC – IRRITANT</td>
</tr>
</tbody>
</table>

## SECTION 3: HAZARD IDENTIFICATION

### EMERGENCY OVERVIEW

**APPEARANCE**

ALMOST WHITE SOLID. THE TOXICOLOGICAL PROPERTIES OF THIS MATERIAL HAVE NOT BEEN FULLY INVESTIGATED. MOISTURE SENSITIVE. VERY TOXIC & IRRITANT IN NATURE.

### POTENTIAL HEALTH EFFECTS

<table>
<thead>
<tr>
<th>EYE</th>
<th>MAY CAUSE IRRITATION.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKIN</td>
<td>SKIN IRRITATION &amp; OTHER POTENTIAL EFFECTS WAS FOUND.</td>
</tr>
<tr>
<td>INGESTION</td>
<td>VERY TOXIC</td>
</tr>
<tr>
<td>INHALATION</td>
<td>VERY TOXIC</td>
</tr>
<tr>
<td>CHRONIC</td>
<td>NO INFORMATION FOUND</td>
</tr>
</tbody>
</table>

## SECTION 4: FIRST-AID MEASURES

| EYE           | IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR ATLEAST 15 MINUTES OCCASIONALLY LIFTING LOWER & UPPER EYE LIDS. |

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Regd. & Corporate Office: B-34, M.I.D.C., Badlapur (E). Dist. Thane, Maharashtra, India. Pin – 421503 Tel.: + 91-251-269 7340 / 269 0651 Fax: + 91 – 251 – 269 1572 / 269 7347 Email: omkarchem@vsnl.com / info@omkarchemicals.com Web: www.omkarchemicals.com
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. WASH MOUTH OUT 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.

NOTES TO PHYSICIAN: TREAT SYMPTOMATICALLY & SUPPORTIVELY. ALL FIRST – AID PROCEDURES SHOULD BE PERIODICALLY REVIEWED BY AN EXPERIENCED PHYSICIAN.

SECTION 5 : FIRE – FIGHTING MEASURES

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

SECTION 6 : ACCIDENTAL RELEASE MEASURES

GENERAL INFORMATION
USE PROPER PERSONAL PROTECTIVE SAFETY EQUIPMENTS AS INDICATED IN SECTION 8. PROVIDE VENTILLATION. ISOLATE HAZARD AREA. COLLECT ALL THE MATERIAL IN A SUITABLE LABELED DISPOSAL CONTAINER & NOTIFY GOVERNMENT OCCUPATIONAL HEALTH, SAFETY AND ENVIRONMENTAL AUTHORITIES. REVIEW FEDERAL/STATE/LOCAL GOVERNMENT REQUIREMENT PRIOR TO DISPOSAL. SWEEP UP/CLEAN AREA AFTER MATERIAL PICK-UP IS COMPLETED.

SECTION 7 : HANDLING & STORAGE

HANDLING
USE ONLY IN A WELL VENTILATED AREA. AVOID DUST GENERATION. USE ALL PROTECTIVE SAFETY EQUIPMENTS.
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 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 PREFERED. 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.

SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYSICAL STATE</td>
<td>WHITE CRYSTALLINE POWDER</td>
</tr>
<tr>
<td>APPEARANCE</td>
<td>ALMOST WHITE</td>
</tr>
<tr>
<td>ODOUR</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Ph</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>VAPOUR PRESSURE</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>VAPOUR DENSITY</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>EVAPORATION RATE</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>ASSAY</td>
<td>99.00% - 100.50%</td>
</tr>
<tr>
<td>BOILING POINT °C</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>MELTING POINT °C</td>
<td>165 - 170 °C</td>
</tr>
<tr>
<td>DECOMPOSITION TEMP.</td>
<td>NOT AVAILABLE</td>
</tr>
</tbody>
</table>
SOLUBILITY: FAINT OPALESCENCE
SPECIFIC GRAVITY/DENSITY: NOT AVAILABLE
MOLECULAR FORMULA: \([C_6H_5Se(O)]_2O\)
MOLECULAR WEIGHT: 360.13

SECTION 10: STABILITY & REACTIVITY DATA

CHEMICAL STABILITY: STABLE UNDER NORMAL STORAGE CONDITIONS.
CONDITION TO AVOID: INCOMPATIBLE MATERIALS. EXPOSURE TO MOIST AIR OR WATER.
INCOMPATIBILITY WITH OTHER MATERIALS: BASES – OXIDIZING AGENTS – METALS.
HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE, SELENIUM/SELENIUM OXIDES.
HAZARDOUS POLYMERIZATION: HAS NOT BEEN REPORTED.

SECTION 11: TOXICOLOGICAL INFORMATION

RTECS #: CAS # 17697-12-0 UNLISTED
ORAL LD 50: 30 Mg. / Kg.
DERMAL KD 50: 220 Mg / Kg.
INHALATION LC 50: 5.8 Mg / L

CARCINOGENICITY:
CAS#: 17697-12-0
IARC: IARC GROUP 3: NOT CLASSIFIED [LISTED AS SELENIUM COMPOUND]

SECTION 12: ECOLOGICAL INFORMATION

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

SECTION 13: DISPOSAL CONSIDERATIONS

CHEMICAL WASTE GENERATORS MUST DETERMINE WHETHER DISCARDED CHEMICAL WASTE IS CLASSIFIED AS A HAZARDOUS WASTE. US – EPA GUIDELINES FOR THE CLASSIFICATION DETERMINATION ARE LISTED IN 40 CFR PARTS 261.3. ADDITIONALLY, WASTE GENERATORS MUST CONSULT STATE AND LOCAL HAZARDOUS WASTE REGULATIONS TO ENSURE COMPLETE AND ACCURATE CLASSIFICATION.

SECTION 14: TRANSPORT INFORMATION
SECTION : 15 REGULATORY INFORMATION

US FEDERAL

TSCA – CAS # 17697-12-0 IS LISTED ON THE TSCA INVENTORY. IT IS FOR RESEARCH & DEVELOPMENT USE ONLY.

HEALTH & SAFETY REPORTING LIST

NONE OF THE CHEMICALS ARE ON THE HEALTH SAFETY REPORTING LIST

CHEMICAL TEST RULES

NONE OF THE CHEMICALS IN THIS PRODUCT ARE UNDER A CHEMICAL TEST RULE

SECTION 12 b

NONE OF THE CHEMICALS ARE LISTED UNDER TSCA SECTION 12 b

TSCA SIGNIFICANT NEW USE RULE

NONE OF THE CHEMICALS ARE IN THIS MATERIAL HAVE A SNUR UNDER TSCA

SARA

CERCLA HAZARDOUS SUBSTANCES & CORRESPONDING RQs

NONE OF THE CHEMICALS IN THIS MATERIAL HAVE AN RQ

SARA SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES

NONE OF THIS CHEMICALS IN THIS MATERIAL HAVE A TPQ

SECTION 313

THIS MATERIAL CONTAINS BENZENE SELENNIC ANHYDRIDE [LISTED AS SELENIUM COMPOUNDS], 09% [CAS# 17697-12-0] WHICH IS SUBJECT TO THE REPORTING REQUIREMENTS AOF SECTION 313 OF SARA TITLE III AND 40 CFR PAUT 373

CLEAN AIR ACT

THIS MATERIAL DOES NOT CONTAIN ANY HAZARDOUS AIRPOLLUTANTS. THIS MATERIAL DOES NOT CONTAIN ANY CLASS 1 OZONE DEPLETORS. THIS MATERIAL DOES NOT CONTAIN ANY CLASS 2 OZONE DEPLETORS.

CLEAR WATER ACT

NONE OF THE CHEMICALS IN THIS PRODUCT ARE LISTED AS HAZARDOUS SUBSTANCES UNDER THE CWA. NONE OF THE CHEMICALS IN THIS PRODUCT ARE LISTED AS PRIORITY POLLUTANTS UNDER THE CWA. NONE OF THE CHEMICALS IN THIS PRODUCT ARE LISTED AS TOXIC POLLUTANTS UNDER CWA
<table>
<thead>
<tr>
<th>UN NO</th>
<th>3467</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZARD CLASS</td>
<td>6.1</td>
</tr>
<tr>
<td>PACKING GROUP</td>
<td>II</td>
</tr>
<tr>
<td>FOR IATA</td>
<td>6249-1</td>
</tr>
<tr>
<td>EMS NO.</td>
<td>6.1 - 04</td>
</tr>
<tr>
<td>MFAG NO.</td>
<td>175</td>
</tr>
<tr>
<td>PROPER SHIPPING NAME</td>
<td>ORGANOMETALLIC COMPOUND, TOXIC SOLID, N.O.S. [BENZENE SELENINIC ANHYDRIDE]</td>
</tr>
</tbody>
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OSHA
NONE OF THE CHEMICALS IN THIS PRODUCT ARE CONSIDERED HIGHLY HAZARDOUS BY OSHA.

STATE
CAS # 17697-12-0 IS NOT PRESENT ON STATE LISTS FROM CA, PA, MN, MA, FL, OR NJ. CALIFORNIA NO SIGNIFICANT RISK LEVEL: NONE OF THE CHEMICALS IN THIS PRODUCT ARE LISTED.

EUROPEAN / INTERNATIONAL REGULATIONS
EUROPEAN LABELING IN ACCORDANCE WITH EC DIRECTIVES
HAZARD SYMBOL : T

RISK PHRASES :
*R 23/25 TOXIC BY INHALATION AND IF SWALLOWED.
*R33 DANGER OF CUMULATIVE EFFECTS.
SAFETY PHRASES :
*S 20/21 WHEN USING DO NOT EAT, DRINK OR SMOKE.
*S 45 IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVISE IMMEDIATELY [SHOW THE LABEL WHERE POSSIBLE].
*S 28A AFTER CONTACT WITH SKIN, WASH IMMEDIATELY WITH PLENTY OF WATER.

WGK (WATER DANGER / PROTECTION)
CAS # 17697-12-0 : NO INFORMATION AVAILABLE.

CANADA DSL / NDSL
*NONE OF THE CHEMICALS IN THIS PRODUCT ARE LISTED ON THE DSL OR NDSL LIST. CANADA-WHMIS. THIS PRODUCT HAS A WHMIS CLASSIFICATION OF D1A, D2B.

CANADIAN INGREDIENT DISCLOSURE LIST
CAS # 17697-12-0 : [LISTED AS SELENIUM COMPOUNDS] IS LISTED ON THE CANADIAN INGREDIENT DISCLOSURE LIST.

SECTION: 16 ADDITIONAL INFORMATION

This document is intended only as a guide to the appropriate precautionary han of material by a person trained in chemical handling. the user is responsibl determining the precautions & dangers of this chemical for his or her parti application depending on usage. adequate protective clothing, including eye / guards, approved respirators must be used to avoid contact with the materi 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 pvt. ltd. cannot warn of all of the potential dangers of use or
interaction with chemicals of materials. m/s. omkar speciality chemicals Pvt. Ltd. 
Warrants that, the chemical meets the specifications set forth on the test report. 
M/s. Omkar speciality chemicals Pvt. 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 heeded. 
“READ ALL PRECAUTIONARY INFORMATIONS. “