Material Safety Data Sheet
Tellurium(IV) oxide

ACC# 90122

Section 1 - Chemical Product and Company Identification

MSDS Name: Tellurium(IV) oxide
Catalog Numbers: AC222590500, AC222592500, AC318120050
Synonyms: Tellurium dioxide.
Company Identification:
Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410
For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7446-07-3	Tellurium dioxide	99+	231-193-1

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: off-white powder.
Warning! Harmful if swallowed, inhaled, or absorbed through the skin. May cause eye, skin, and respiratory tract irritation. May cause nervous system effects.
Target Organs: Blood, central nervous system, liver.

Potential Health Effects
Eye: May cause eye irritation.
Skin: May cause skin irritation.
Ingestion: Harmful if swallowed. Ingestion of tellurium and its compounds has produced symptoms such as "garlic-like" odor of the breath and sweat, metallic taste, sleepiness, anorexia, cyanosis, restlessness, tremor, diminished reflexes, paralysis, convulsions, liver damage, and nausea.
Inhalation: Harmful if inhaled. May cause respiratory tract irritation.
Chronic: Possible risk of harm to the unborn child. Prolonged or repeated exposure affects the nervous system.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.
Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Substance is noncombustible.
Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.
Flash Point: Not applicable.
Autoignition Temperature: Not applicable.
Explosion Limits, Lower: Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid breathing dust.
Storage: Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Tellurium dioxide	0.1 mg/m3 TWA (excluding hydrogen telluride, as Te) (listed under Tellurium compounds, n.o.s.).	0.1 mg/m3 TWA (as Te, except Tellurium hexafluoride and Bismuth telluride) (listed under Tellurium compounds, n.o.s.).	0.1 mg/m3 TWA (as Te) (listed under Tellurium compounds, n.o.s.).

OSHA Vacated PELs: Tellurium dioxide: No OSHA Vacated PELs are listed for this chemical.
Personal Protective Equipment
Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Powder
Appearance: off-white
Odor: odorless
pH: Not available.
Vapor Pressure: Not available.
Vapor Density: Not available.
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: 1245 deg C
Freezing/Melting Point:733 deg C
Decomposition Temperature:450 deg C
Solubility: Insoluble.
Specific Gravity/Density:5.89 g/cm3
Molecular Formula:O2Te
Molecular Weight:159.60

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Turns yellow when heated.
Conditions to Avoid: Dust generation, excess heat.
Incompatibilities with Other Materials: Strong acids.
Hazardous Decomposition Products: Tellurium fumes.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 7446-07-3: WY2675000
LD50/LC50:
CAS# 7446-07-3:
Oral, rat: LD50 = >5 gm/kg;
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Carcinogenicity:
CAS# 7446-07-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No reports of serious illness in workers exposed to Te & its compounds in industry were identified. Complaints & findings, including anorexia, nausea, drowsiness, metallic taste, & garlic-like odor to breath & sweat, are major negative effects reported.
Teratogenicity: Studies have found that diphenyl ditelluride can be teratogenic to rat fetuses and toxic for dams. The late fetal stages of rat prenatal development appeared uniquely sensitive to organic tellurium exposure.
Reproductive Effects: Not available.
Mutagenicity: Not available.
Neurotoxicity: Diphenyl ditelluride is extremely neurotoxic and even compounds that release the Te atom slowly may represent a neurotoxic time bomb for mammals.
Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical 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.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	TELLURIUM COMPOUND, N.O.S.	TELLURIUM COMPOUND, N.O.S.
Hazard Class:	6.1	6.1
UN Number:	UN3284	UN3284
Packing Group:	III	III

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 7446-07-3 is listed on the TSCA inventory.
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 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
Section 313 No chemicals are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean 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 the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
CAS# 7446-07-3 can be found on the following state right to know lists: California, (listed as Tellurium compounds, n.o.s.), Minnesota, (listed as Tellurium compounds, n.o.s.).

California Prop 65

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 Symbols:
XN
Risk Phrases:
R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

Safety Phrases:
S 24/25 Avoid contact with skin and eyes.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)
CAS# 7446-07-3: No information available.
Canada - DSL/NDSL
CAS# 7446-07-3 is listed on Canada's DSL List.
Canada - WHMIS
This product has a WHMIS classification of D1B.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all

of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 7446-07-3 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 4/30/1999
Revision #3 Date: 7/27/2005