

DATE: 07/02/04 ACCT: 085511001 PAGE: 1  
INDEX: H41831808 CAT NO: AC196561000 PO NBR: 681291

\*\*\*\* MATERIAL SAFETY DATA SHEET \*\*\*\*

Iodine, resublimed, p.a.  
95464

\*\*\*\* SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION \*\*\*\*

MSDS Name: Iodine, resublimed, p.a.  
Catalog Numbers:  
AC196560000, AC196560050, AC196561000, AC196565000  
Synonyms:  
None.  
Company Identification (Europe): Acros Organics BVBA  
Janssen Pharmaceuticaal 3a  
2440 Geel, Belgium  
Company Identification (USA): Acros Organics  
One Reagent Lane  
Fairlawn, NJ 07410

For information in North America, call: 800-ACROS-01  
For information in Europe, call: 0032(0) 14575211  
For emergencies in the US, call CHEMTREC: 800-424-9300  
For emergencies in Europe, call: 0032(0) 14575299

\*\*\*\* SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS \*\*\*\*

CAS#	Chemical Name	%	EINECS#
7553-56-2	Iodine	>99.5	231-442-4

Hazard Symbols: XN N  
Risk Phrases: 20/21 50

\*\*\*\* SECTION 3 - HAZARDS IDENTIFICATION \*\*\*\*

EMERGENCY OVERVIEW

Appearance: black-violet solid.  
Danger! May cause allergic skin reaction. Corrosive. May cause kidney damage. Causes eye and skin burns. May cause severe respiratory and digestive tract irritation with possible burns.  
Target Organs: Kidneys, thyroid.

Potential Health Effects

Eye: Causes severe eye irritation. May cause eye burns. Vapor or mist may cause irritation and severe burns.  
Skin: Causes skin burns. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.  
Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause kidney damage. May cause burns to the digestive tract. May cause thyroid abnormalities.  
Inhalation: May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. May cause epiphoria, which is an excessive flow of tears.  
Chronic: Chronic exposure can lead to iodism characterized by salivation, nasal discharge, sneezing, conjunctivitis, fever, laryngitis, bronchitis, stomatitis, and skin rashes. Chronic exposure can affect thyroid function. May cause kidney damage.

\*\*\*\* SECTION 4 - FIRST AID MEASURES \*\*\*\*

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.  
Skin: Get medical aid immediately. Rinse area with large amounts of water for at least 15 minutes. Remove contaminated clothing and shoes.  
Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.  
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. Do NOT use mouth-to-mouth resuscitation.  
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

DATE: 07/02/04 ACCT: 085511001 PAGE: 2  
INDEX: H41831808 CAT NO: AC196561000 PO NBR: 681291

pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Material will not burn. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.  
Extinguishing Media:  
Use extinguishing media most appropriate for the surrounding fire.  
Autoignition Temperature: Not applicable.  
Flash Point: Not applicable.  
Explosion Limits, lower: Not available.  
Explosion Limits, upper: Not available.  
NFPA Rating: (estimated) Health: 3; Flammability: 0; Instability: 0; Special: 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. Avoid runoff into storm sewers and ditches which lead to waterways. 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. Use with adequate ventilation. Minimize dust generation and accumulation. Keep container tightly closed. Avoid contact with clothing and other combustible materials. Do not get on skin or in eyes. Do not ingest or inhale.

Storage:  
Do not store near combustible materials. Keep away from food and drinking water. Keep away from strong acids. Keep away from metals. Keep away from reducing agents.

\*\*\*\* SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION \*\*\*\*

Engineering Controls:  
Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Exposure Limits			
Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Iodine	0.1 ppm Ceiling	2 ppm IDLH	0.1 ppm Ceiling; 1 mg/m3 Ceiling

OSHA Vacated PELs:

Iodine:  
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 impervious gloves.  
Clothing: Wear appropriate protective clothing to prevent skin exposure.  
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

\*\*\*\* SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES \*\*\*\*

Physical State: Solid  
Color: black-violet  
Odor: iodine-like  
pH: 5.4 (sat soln)  
Vapor Pressure: 1 mm Hg @ 38.7  
Vapor Density: 8.8 (air=1)  
Evaporation Rate: Negligible (n-Butyl Acetate=1)  
Viscosity: Not available.  
Boiling Point: 184.35 deg C  
Freezing/Melting Point: 113.5 deg C  
Decomposition Temperature: Sublimes  
Solubility in water: Slightly soluble.  
Specific Gravity/Density: 4.93

DATE: 07/02/04 ACCT: 085511001 PAGE: 3  
INDEX: H41831808 CAT NO: AC196561000 PO NBR: 681291

Molecular Formula: I2  
Molecular Weight: 253.81

\*\*\*\* SECTION 10 - STABILITY AND REACTIVITY \*\*\*\*

Chemical Stability:  
Stable  
Conditions to Avoid:  
Dust generation, excess heat.  
Incompatibilities with Other Materials:  
Powdered aluminum, active metals. Acetylene, acetaldehyde cause explosive reactions. Iodine reacts with ammonium hydroxide to form shock sensitive compounds that are explosive when dry.  
Hazardous Decomposition Products:  
Hydrogen iodide.  
Hazardous Polymerization: Will not occur.

\*\*\*\* SECTION 11 - TOXICOLOGICAL INFORMATION \*\*\*\*

RTECS#:  
CAS# 7553-56-2: NN1575000  
LD50/LC50:  
CAS# 7553-56-2: Oral, mouse: LD50 = 22 gm/kg; Oral, rabbit: LD50 = 10 gm/kg; Oral, rat: LD50 = 14 gm/kg.  
Carcinogenicity:  
Iodine  
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.  
Epidemiology:  
Experimental reproductive effects have been reported.  
Teratogenicity:  
No information available.  
Reproductive Effects:  
Reproductive effects have been reported in animals.  
Neurotoxicity:  
No information available.  
Mutagenicity:  
No information available.  
Other Studies:  
See actual entry in RTECS for complete information.

\*\*\*\* SECTION 12 - ECOLOGICAL INFORMATION \*\*\*\*

Ecotoxicity:  
Fish, LC50: 28.5 mg/kg

\*\*\*\* 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  
Shipping Name: CORROSIVE SOLID, N.O.S.  
Hazard Class: 8  
UN Number: 1759  
Packing Group: III  
Canadian TDG  
No information available.

\*\*\*\* SECTION 15 - REGULATORY INFORMATION \*\*\*\*

US FEDERAL  
TSCA  
CAS# 7553-56-2 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.  
SARA  
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.  
SARA Codes  
CAS # 7553-56-2: acute, chronic, flammable.  
Section 313  
No chemicals are reportable under Section 313.  
Clean Air Act:

DATE: 07/02/04 ACCT: 085511001 PAGE: 4  
INDEX: H41831808 CAT NO: AC196561000 PO NBR: 681291

This material does not contain any hazardous air pollutants.  
This material does not contain any Class 1 Ozone depleters.  
This material does not contain any Class 2 Ozone depleters.  
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  
Iodine can be found on the following state right to know lists:  
California, New Jersey, Pennsylvania, Minnesota, Massachusetts.  
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 N  
Risk Phrases:

R 20/21 Harmful by inhalation and in contact with skin.  
R 50 Very toxic to aquatic organisms.  
Safety Phrases:  
S 23 Do not inhale gas/fumes/vapour/spray.  
S 25 Avoid contact with eyes.  
S 61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

WGK (Water Danger/Protection)  
CAS# 7553-56-2: 1  
United Kingdom Occupational Exposure Limits  
CAS# 7553-56-2: OES-United Kingdom, STEL 0.1 ppm STEL; 1.1 mg/m3 STEL  
United Kingdom Maximum Exposure Limits

Canada  
CAS# 7553-56-2 is listed on Canada's DSL List.  
This product has a WHMIS classification of E.  
CAS# 7553-56-2 is listed on Canada's Ingredient Disclosure List.  
Exposure Limits

CAS# 7553-56-2: OEL-ARAB Republic of Egypt: TWA 0.1 ppm (0.1 mg/m3)  
OEL-AUSTRALIA: TWA 0.1 ppm (1 mg/m3)  
OEL-BELGIUM: STEL 0.1 ppm (1 mg/m3)  
OEL-DENMARK: STEL 1 ppm (1 mg/m3)  
OEL-FINLAND: STEL 0.1 ppm (1 mg/m3); Skin  
OEL-FRANCE: STEL 0.1 ppm (1 mg/m3)  
OEL-GERMANY: TWA 0.1 ppm (1 mg/m3)  
OEL-HUNGARY: TWA 1 mg/m3; STEL 2 mg/m3  
OEL-JAPAN: TWA 0.1 ppm (1 mg/m3); STEL 1 mg/m3 JAN9  
OEL-THE NETHERLANDS: TWA 0.1 ppm (1 mg/m3)  
OEL-THE PHILIPPINES: TWA 0.1 ppm (1 mg/m3)  
OEL-POLAND: TWA 1 mg/m3  
OEL-RUSSIA: TWA 0.1 ppm; STEL 1 mg/m3; Skin  
OEL-SWEDEN: STEL 0.1 ppm (1 mg/m3)  
OEL-SWITZERLAND: TWA 0.1 ppm (1 mg/m3); STEL 0.2 pp (2 mg/m3)  
OEL-THAILAND: TWA 0.1 ppm (1 mg/m3)  
OEL-TURKEY: TWA 0.1 ppm (1 mg/m3)  
OEL-UNITED KINGDOM: STEL 0.1 ppm (1 mg/m3)  
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV  
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

\*\*\*\* SECTION 16 - ADDITIONAL INFORMATION \*\*\*\*

MSDS Creation Date: 9/02/1997 Revision #5 Date: 3/22/2002

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.