Material Safety Data Sheet
Mercury Chloride, P.A

ACC# 00955

Section 1 - Chemical Product and Company Identification

MSDS Name: Mercury Chloride, P.A
Catalog Numbers: AC213120000, AC213120050, AC213121000
Synonyms: Dimercury Dichloride; Mercurous Chloride; Mercury Subchloride.
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

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>10112-91-1</td>
<td>Mercury Chloride</td>
<td>100%</td>
<td>233-307-5</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: off-white powder.

Warning! Toxic. Harmful if swallowed. Causes eye, skin, and respiratory tract irritation. May cause central nervous system effects. Light sensitive. May cause kidney damage. Moisture sensitive. Very toxic to aquatic organisms. May cause reproductive and fetal effects.

Target Organs: Kidneys, central nervous system, reproductive system.

Potential Health Effects

Eye: Causes eye irritation. Contact may cause ulceration of the conjunctiva and cornea.

Skin: Causes skin irritation. May be absorbed through the skin.

Ingestion: Harmful if swallowed. May cause kidney damage. May cause severe digestive tract irritation with abdominal pain, nausea, vomiting and diarrhea. May cause central nervous system depression. Inorganic mercury compounds may cause central and peripheral nervous system effects. May cause weakness, fatigue, vascular collapse, and esophagus.

Inhalation: Causes respiratory tract irritation. Irritation may lead to chemical pneumonitis and pulmonary edema. May cause gastrointestinal effects including gum and mouth inflammation, jaw necrosis, and loosening of the teeth. May cause kidney damage. Acute exposure to high concentrations of mercury vapors may cause severe respiratory tract irritation.

Chronic: May cause kidney injury. May cause reproductive and fetal effects. Chronic exposure to mercury may cause permanent central nervous system damage, fatigue, weight loss, tremors, personality changes. May cause tremors, irritability, loss of memory and intellect. May also cause Pink disease characterized by skin, cardiovascular, and neurobehavioral abnormalities. Chronic exposure to mercury vapors may produce weakness, fatigue, anorexia, loss of weight and gastrointestinal disturbances which is collectively referred to as asthenic-vegetative syndrome or
micromercurialism. Chronic exposure to mercury compounds may produce immunologic glomerular disease.

### 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. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid immediately.

**Notes to Physician:** Treat symptomatically and supportively.

**Antidote:** The use of a metal chelator should be determined only by qualified medical personnel.

### 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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use extinguishing media appropriate to the surrounding fire. 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: 1

### 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. Wash area with soap and water. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Isolate area and deny entry. 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. Do not ingest or inhale. Use only in a chemical fume hood.

**Storage:** Do not store in direct sunlight. Store in a tightly closed container. 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 only under a chemical fume hood.

**Exposure Limits**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury Chloride</td>
<td>0.025 mg/m³ TWA (as Hg) (listed under Mercury inorganic compounds). Skin - potential significant contribution to overall exposure by the cutaneous route (listed under Mercury inorganic compounds).</td>
<td>0.05 mg/m³ TWA (vapor, except organo alkyls, as Hg) (listed under Mercury compounds). 10 mg/m³ IDLH (as Hg, except organo(alkyl) compounds) (listed under Mercury compounds).</td>
<td>none listed</td>
</tr>
</tbody>
</table>

**OSHA Vacated PELs:** Mercury Chloride: 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:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

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**Section 9 - Physical and Chemical Properties**

**Physical State:** Powder

**Appearance:** off-white

**Odor:** None reported.

**pH:** Not available.

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** Not available.

**Decomposition Temperature:** Not available.

**Solubility:** practically insoluble

**Specific Gravity/Density:** 7.1500g/cm³

**Molecular Formula:** Cl₂Hg₂

**Molecular Weight:** 472.08

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**Section 10 - Stability and Reactivity**

**Chemical Stability:** Stable under normal temperatures and pressures. May decompose when exposed to light.

**Conditions to Avoid:** High temperatures, incompatible materials, light, moisture.

**Incompatibilities with Other Materials:** Substance may react with acacia, ammonia, alkali chlorides, bromides, carbonates, cocaine, copper salts, cyanides, hydroxides, iodine, iodoform, lead salts, silver salts, soap, sulfates, and sulfites.

**Hazardous Decomposition Products:** Hydrogen chloride, mercury/mercury oxides.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 10112-91-1: OV8740000
LD50/LC50:
CAS# 10112-91-1:
Oral, mouse: LD50 = 180 mg/kg;
Oral, rat: LD50 = 210 mg/kg;
Skin, rat: LD50 = 1500 mg/kg;

Carcinogenicity:
CAS# 10112-91-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.
Teratogenicity: No information available.
Reproductive Effects: Adverse reproductive effects have occurred in experimental animals.
Mutagenicity: No information available.
Neurotoxicity: No information available.
Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.
Environmental: No information reported.
Physical: No information available.
Other: None.

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

<table>
<thead>
<tr>
<th></th>
<th>US DOT</th>
<th>Canada TDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipping Name:</td>
<td>MERCURY COMPOUNDS, SOLID, N.O.S. (Mercury chloride)</td>
<td>MERCURY COMPOUNDS, SOLID, N.O.S. (Mercury chloride)</td>
</tr>
<tr>
<td>Hazard Class:</td>
<td>6.1</td>
<td>6.1</td>
</tr>
<tr>
<td>UN Number:</td>
<td>UN2025</td>
<td>UN2025</td>
</tr>
<tr>
<td>Packing Group:</td>
<td>III</td>
<td>III</td>
</tr>
</tbody>
</table>
Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 10112-91-1 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.

SARA Codes
CAS # 10112-91-1: immediate, delayed.

Section 313
This material contains Mercury Chloride (listed as Mercury compounds), 100%, (CAS# 10112-91-1) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:
CAS# 10112-91-1 (listed as Mercury compounds) is listed as a hazardous air pollutant (HAP).
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. CAS# 10112-91-1 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.

STATE
CAS# 10112-91-1 can be found on the following state right to know lists: California, (listed as Mercury compounds), New Jersey, Pennsylvania, (listed as Mercury compounds).

California Prop 65
WARNING: This product contains Mercury Chloride, listed as `Mercury compounds', a chemical known to the state of California to cause developmental reproductive toxicity.
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 22 Harmful if swallowed.
R 36/37/38 Irritating to eyes, respiratory system and skin.
R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety Phrases:
S 13 Keep away from food, drink and animal feeding stuffs.
S 24/25 Avoid contact with skin and eyes.
S 46 If swallowed, seek medical advice immediately and show this container or label.
S 60 This material and its container must be disposed of as hazardous waste.
S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

WGK (Water Danger/Protection)
- CAS# 10112-91-1: 3

Canada - DSL/NDSL
- CAS# 10112-91-1 is listed on Canada's DSL List.

Canada - WHMIS
This product has a WHMIS classification of D1B, D2B, D2A.
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# 10112-91-1 (listed as Mercury compounds) is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 4/29/1999
Revision #4 Date: 3/15/2007

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 event shall Fisher 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 Fisher has been advised of the possibility of such damages.