

Acros Organics N.V.

Lead (II) Fluoride, 99.99%

NFPA

Manufacturer MSDS Number: 05962

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SECTION 1 : CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: Lead (II) Fluoride, 99.99%

Manufacturer Name: Acros Organics N.V.

Address:

One Reagent Lane

City: Fair Lawn,

State: NJ

Zip: 07410

Business Phone: 800-ACROS-01

For information in North America, call: 800-ACROS-01

Chemtrec: For emergencies in the US, call CHEMTREC: 800-424-9300

Synonyms:

None known.

Product Codes:

AC212520000, AC212520250

SECTION 2 : COMPOSITION, INFORMATION ON INGREDIENTS

Chemical Name	CAS#	% Weight	EINECS #
Lead Fluoride	7783-46-2	99.99	231-998-8

RTECS:

OG1225000

Comments:

Hazard Symbols: T; Risk Phrases: 20/22 33 61 62

SECTION 3 : HAZARDS IDENTIFICATION

Emergency Overview:

Danger! Danger of cumulative effects. May cause skeletal abnormalities. Causes eye and skin irritation. May cause respiratory and digestive tract irritation. This product contains lead, a chemical known to the state of California to cause developmental effects. This product contains lead, a chemical known to the state of California to cause cancer.

Physical State:

beige and gray crystals.

Target Organs:

Central nervous system, skeletal structures.

Lead Fluoride:

Potential Health Effects:

Eye Contact:

May cause eye irritation. May cause visual disturbances.

Skin Contact:

Causes skin irritation.

Inhalation:

May cause respiratory tract irritation. May cause effects similar to those described for ingestion.

Ingestion:

May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Inorganic fluorides can be harmful. Acute exposure to fluorine compounds can lead to digestive tract burns, and abdominal pain. Exposure to fluoride compounds can result in systemic toxic effects on the heart, liver, and kidneys. It may also deplete calcium levels in the body leading to hypocalcemia and death. Fluoride can reduce calcium levels leading to fatal hypocalcemia. Ingestion of lead compounds can cause toxic effects in the blood-forming organs, kidneys and central nervous system. Symptoms of lead poisoning or plumbism include weakness, weight loss, lassitude, insomnia, and hypotension. It also includes constipation, anorexia, abdominal discomfort and colic. Symptoms of lead poisoning include; weakness, weight loss, lassitude, insomnia, and hypotension. Acute lead poisoning can cause muscle weakness, "lead line" on the gums, metallic taste, definite loss of appetite, insomnia, dizziness, high lead levels in blood and urine with shock, coma and death in extreme cases.

Chronic Health Effects:

Chronic inhalation and ingestion may cause chronic fluoride poisoning (fluorosis) characterized by weight loss, weakness, anemia, brittle bones, and stiff joints. Effects may be delayed. Chronic exposure to lead may result in plumbism which is characterized by lead line in gum, headache, muscle weakness, mental changes. Chronic exposure to fluoride compounds may cause systemic toxicity. Chronic exposure to lead may cause adverse effects on human reproduction, embryonic and fetal development and postnatal (e.g., mental) development.

LD50/LC50

CAS# 7783-46-2: Oral, mouse: LD50 = 3015 mg/kg; Oral, rat: LD50 = 3031 mg/kg;

SECTION 4 : FIRST AID MEASURES

Eye Contact:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin Contact:

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

Inhalation:

Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

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.

Note to Physicians:

Use of chelators such as BAL penicillamine and N-acetylpenicillamine should be considered.

SECTION 5 : FIRE FIGHTING MEASURES

Flash Point:

Not applicable.

Upper Flammable or Explosive Limit: Not available.

Lower Flammable or Explosive Limit: Not available.

Auto Ignition Temperature: Not applicable.

Extinguishing Media:

Do NOT get water inside containers. For small fires, use dry chemical, carbon dioxide, or water spray. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. Cool containers with flooding quantities of water until well after fire is out.

Additional 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 water spray to keep fire-exposed containers cool. Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated. Non-combustible, substance itself does not burn but may decompose upon heating to produce irritating, corrosive and/or toxic fumes.

NFPA

Health: 2

Flammability: 0

Reactivity: 0

Other:

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Leak Response:

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.

Personal Precautions:

Use proper personal protective equipment as indicated in Section 8.

SECTION 7 : HANDLING and STORAGE

Handling:

Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Wash clothing before reuse.

Storage:

Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep containers tightly closed.

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.

Skin Protection Description:

Wear appropriate protective gloves and clothing to prevent skin exposure.

Eye/Face Protection:

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.

Protective Clothing/Body Protection:

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection:

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 a respirator's use.

OSHA Vacated PELS

Lead Fluoride: No OSHA Vacated PELs are listed for this chemical.

Ingredient Guidelines

Ingredient: Lead Fluoride

Guideline Information:

ACGIH: none listed ; NIOSH: none listed; OSHA - Final PELs: none listed

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

Physical State/Appearance:

Crystals

Color:

beige and gray

Odor:

none reported

pH:

Not available.

Decomposition Temperature:

Not available.

Vapor Pressure:

Not available.

Vapor Density:

Not available.

Boiling Point:

1293 deg C @ 760.00mmHg

Melting Point:

824 deg C

Solubility:

0.065 G/100 ML WATER (20°C)

Density:

8.4450g/cm³

Evaporation Point:

Not available.

Viscosity:

Not available.

Molecular Formula:

F₂Pb

Molecular Weight:

245.19

SECTION 10 : STABILITY AND REACTIVITY

Chemical Stability:

Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid:

Incompatible materials, dust generation, excess heat, strong oxidants.

Incompatibilities with Other Materials:

Acids, hydrogen peroxides, strong oxidizing agents, calcium carbide, fluorine.

Hazardous Polymerization:

Has not been reported

Hazardous Decomposition Products:

Hydrogen fluoride, lead/lead oxides.

SECTION 11 : TOXICOLOGICAL INFORMATION

Lead Fluoride:

Skin Effects:

Epidemiological studies have not shown a relationship between lead exposure and the incidence of cancer in lead workers. A study involving battery plant workers showed a significant rise in the standardized mortality ratio for gastric and lung cancer. IARC has concluded that the evidence for carcinogenicity of lead to humans is inadequate although there is sufficient evidence of carcinogenicity of some lead salts to animals. Repeated exposure to lead has caused many toxic effects including: neurological changes, kidney damage, and blood abnormalities. There are several reports that certain l

Carcinogenicity:

CAS# 7783-46-2: ACGIH: A3 - Animal Carcinogen (listed as Lead). California: carcinogen; initial date 10/1/92 (listed as Lead). OSHA: Possible select carcinogen (listed as Lead). IARC: Group 3 carcinogen (listed as Fluoride compounds, inorganic, n.o.s.).

Mutagenicity:

No information found.

Teratogenicity:

No information found.

Neuro Toxicity:

Neurotoxic effects have occurred in humans. Neurotoxic effects have occurred in experimental animals.

Reproductive Toxicity:

Reproductive effects have occurred in experimental animals.

Other Toxicological Information:

See actual entry in RTECS for complete information.

SECTION 12 : ECOLOGICAL INFORMATION

SECTION 13 : DISPOSAL CONSIDERATIONS

Waste Disposal:

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 Hazard Class:

RCRA P-Series: None listed.; RCRA U-Series: None listed.

RCRA U-Series

None listed.

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Name:

DOT regulated - small quantity provisions apply (see 49CFR173.4)

Canadian Shipping Name: No information available.

SECTION 15 : REGULATORY INFORMATION

Lead Fluoride:

TSCA 8(b): Inventory Status

CAS# 7783-46-2 is listed on the TSCA inventory.

TSCA 8(d): Manufacturer Health and Safety Data

TSCA Section 8(D) - Manufacturer Health and Safety Data :None of the chemicals are on the Health & Safety Reporting List:.

TSCA 12(b): Export Notification

TSCA Section 12(b) : None of the chemicals are listed under TSCA Section 12b:.

Section 302 Extremely Hazardous Substances (TPQ): None of the chemicals in this product have a TPQ.

Section 302 Extremely Hazardous Substances (RQ): CAS# 7783-46-2: final RQ = 10 pounds (4.54 kg)

Section 313 Toxic Release Form:

This material contains Lead Fluoride (listed as Lead), 99.99%, (; CAS# 7783-46-2) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Section 112(r): 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.

Section 116.4 part 117: Clean Water Act

CAS# 7783-46-2 is listed as a Hazardous Substance 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 29 CFR 1200:

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

US Federal:

TSCA Section 4 - Chemical Test Rules : None of the chemicals in this product are under a Chemical Test Rule. ; TSCA Section 5(A) - Chemicals with significant new use rules :None of the chemicals in this material have a SNUR under TSCA.

State:

CAS# 7783-46-2 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Massachusetts. WARNING: This product contains Lead Fluoride, listed as 'Lead', a chemical known to the state of California to cause birth defects or other reproductive harm. California No Significant Risk Level: None of the chemicals in this product are listed.

Canada WHMIS:

Canada - DSL/NDSL : CAS# 7783-46-2 is listed on Canada's DSL List. Canada - WHMIS: This product has a WHMIS classification of D1B, D2A, D2B. Canadian Ingredient Disclosure List ; CAS# 7783-46-2 (listed as Lead) is listed on the

Canadian Ingredient Disclosure List.

European Community Chemical Inventory Status:

European Labeling in Accordance with EC Directives

European International Regulations:

Hazard Symbols: T

Risk Phrases:

R 20/22 Harmful by inhalation and if swallowed. R 33 Danger of cumulative effects.
R 61 May cause harm to the unborn child. R 62 Possible risk of impaired fertility.

WGK:

CAS# 7783-46-2: 2

Safety Phrase:

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S 53 Avoid exposure - obtain special instructions before use.

Regulatory Notes

Exposure Limits: CAS# 7783-46-2: OEL-ARAB Republic of Egypt:TWA 0.05 mg(Pb)/m3 OEL-A USTRALIA:TWA 0.15 mg(Pb)/m3 OEL-AUSTRALIA:TWA 2.5 mg(F)/m3 OEL-AUSTR IA:TWA 0.1 mg(Pb)/m3 OEL-BELGIUM:TWA 0.15 mg(Pb)/m3 OEL-BELGIUM:TWA 2.5 mg(F)/m3 OEL-CZECHOSLOVAKIA:TWA 1 mg(F)/m3;STEL 5 mg(F)/m3 OEL-D ENMARK:TWA 0.1 mg(Pb)/m3 OEL-DENMARK:TWA 2.5 mg(F)/m3 OEL-FINLAND:TW A 0.1 mg(Pb)/m3 OEL-FINLAND:TWA 2.5 mg(F)/m3 OEL-FRANCE:TWA 0.15 mg (Pb)/m3 OEL-FRANCE:TWA 2.5 mg(F)/m3 OEL-GERMANY:TWA 0.1 mg(Pb)/m3 OE L-GERMANY:TWA 2.5 mg(F)/m3 OEL-HUNGARY:STEL 0.04 mg (Pb)/m3;Carcinogen OEL-HUNGARY:TWA 1 mg (F)/m3;STEL 2 mg(F)/m3 OEL-THE NETHERLANDS:TWA 2.5 mg(F)/m3 OEL-THE PHILIPPINES:TWA 0.15 mg (Pb)/m3 OEL-THE PHILIPPI NES:TWA 2.5 mg(F)/m3 OEL-POLAND:TWA 1 mg(F)/m3 OEL-RUSSIA:STEL 0.005 ppm (0.01 mg(Pb)/m3) OEL-SWEDEN:TWA 0.05 mg(Pb)/m3 (resp. dust) OEL -SWEDEN:TWA 0.1 mg(Pb)/m3 (total dust) OEL-SWEDEN:TWA 2 mg(F)/m3 OEL - SWITZERLAND:TWA 0.1 mg(Pb)/m3 OEL-SWITZERLAND:TWA 1.8 ppm (1.5 mg(F) /m3);STEL 9.0 ppm OEL-THAILAND:TWA 0.2 mg(Pb)/m3 OEL-THAILAND:TWA 2. 5 mg(F)/m3 OEL-TURKEY:TWA 0.2 mg (Pb)/m3 OEL-TURKEY:TWA 2.5 mg(F)/m3 OEL-UNITED KINGDOM:TWA 0.15 mg(Pb)/m3 OEL-UNITED KINGDOM:TWA 2.5 mg(F)/m3 OEL IN BULGARIA, COLO

SECTION 16 : ADDITIONAL INFORMATION

MSDS Preparation Date: 9/02/1997

MSDS Revision Date:

Revision #2 Date: 8/02/2000

Disclaimer:

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.