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

MSDS Name: Dysprosium, ingot, 99.9%
Catalog Numbers: AC317410000, AC317410100, AC317410250, AC317411000
Synonyms: None.
Company Identification (Europe): Acros Organics BVBA
Janssen Pharmaceuticalalaan 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 ****

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>%</th>
<th>EINECS#</th>
</tr>
</thead>
<tbody>
<tr>
<td>7429-91-6</td>
<td>Dysprosium</td>
<td>99.9</td>
<td>231-073-9</td>
</tr>
</tbody>
</table>

Hazard Symbols: None Listed.
Risk Phrases: None Listed.

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

EMERGENCY OVERVIEW
Moisture sensitive. Air sensitive. The toxicological properties of this material have not been fully investigated.

Potential Health Effects
Eye:
May cause eye irritation.
Skin:
May cause skin irritation.
Ingestion:
May cause irritation of the digestive tract. The toxicological properties of this substance have not been fully investigated.
Inhalation:
May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.
Chronic:
No information found.

**** 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 soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
Ingestion:
Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

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

Notes to Physician:
Antidote:
None reported.

**** 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.

Extinguishing Media:
Do NOT get water inside containers. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:
Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Provide ventilation. Place under an inert atmosphere. Do not get water inside containers.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:
Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Handle under an inert atmosphere. Store protected from air. Do not allow contact with water. Keep from contact with moist air and steam.

Storage:
Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Do not expose to air. Store protected from moisture. Store under an inert atmosphere.

**** 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 ventilation to keep airborne concentrations low.

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 a respirator's use.

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

Physical State: Shavings
Appearance: grey
Odor: Not available.

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: 1412 deg C
Autoignition Temperature: Not available.
Flash Point: Not available.
Explosion Limits, lower: Not available.
Explosion Limits, upper: Not available.

Decomposition Temperature: 1412 deg C
Solubility: 8.5500

Specific Gravity/Density: 8.5500

Molecular Formula: Dy

Molecular Weight: 162.50

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

Chemical Stability:
Tarnishes when exposed to moist air.

Conditions to Avoid:

Incompatible materials, dust generation, moisture, exposure to air.

Incompatibilities with Other Materials:
Strong oxidizing agents, strong acids, halogens, moisture, air.

Hazardous Decomposition Products:
Irritating and toxic fumes and gases.

Hazardous Polymerization: Has not been reported

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

RTECS#:
CAS# 7429-91-6 unlisted.
LD50/LC50:
Not available.

Carcinogenicity:

Dysprosium -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology:
No information available.

Teratogenicity:
No information available.

Reproductive Effects:
No information available.

Neurotoxicity:
No information available.

Mutagenicity:
No information available.

Other Studies:
No data available.

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

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Dispose of in a manner consistent with federal, state, and local regulations.

**** SECTION 14 - TRANSPORT INFORMATION ****

US DOT
No information available

Canadian TDG
No information available.

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

US FEDERAL

TSCA
CAS# 7429-91-6 is listed on the TSCA inventory.
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

Dysprosium 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 Symbols: Not available.
Risk Phrases:
Safety Phrases:
S 24/25  Avoid contact with skin and eyes.
S 28A  After contact with skin, wash immediately with plenty of water.
S 37  Wear suitable gloves.
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# 7429-91-6: No information available.

United Kingdom Occupational Exposure Limits

Canada

CAS# 7429-91-6 is listed on Canada's NDSL List.
CAS# 7429-91-6 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

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

MSDS Creation Date: 3/23/1999 Revision #1 Date: 8/02/2000

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.

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