SAFETY DATA SHEET

1. Identification

Product Name: 4-Acetamidophenol

Cat No.:
AC102330000; AC102330010; AC102330050; AC102330051; AC102332500

Synonyms: p-Hydroxyacetanilide; Paracetamol; Acetaminophen; APAP

Recommended Use: Laboratory chemicals.

Uses advised against: No Information available

Details of the supplier of the safety data sheet:

Company: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Entity / Business Name: Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number:
For information US: 001-800-ACROS-01
Europe: +32 14 57 52 11
Emergency Number US: 001-201-796-7100
Europe: +32 14 57 52 99
CHEMTREC Tel. No. US: 001-800-424-9300
Europe: 001-703-527-3887

2. Hazard(s) identification

Classification:
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute oral toxicity: Category 4

Label Elements:

Signal Word: Warning

Hazard Statements:
Harmful if swallowed

Precautionary Statements:
Prevention:
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Harmful to aquatic life with long lasting effects

### 3. Composition / information on ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaminophen (4-Hydroxyacetanilide)</td>
<td>103-90-2</td>
<td>98</td>
</tr>
</tbody>
</table>

### 4. First-aid measures

**Eye Contact**
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

**Skin Contact**
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Obtain medical attention.

**Inhalation**
Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Obtain medical attention.

**Ingestion**
Clean mouth with water. Get medical attention.

**Most important symptoms/effects**
No information available.

**Notes to Physician**
Treat symptomatically

### 5. Fire-fighting measures

**Suitable Extinguishing Media**
Water spray. Carbon dioxide (CO₂). Dry chemical. chemical foam.

**Unsuitable Extinguishing Media**
No information available

**Flash Point**
No information available

**Method**
No information available

**Autoignition Temperature**
540 °C / 1004 °F

**Explosion Limits**
Upper: No data available
Lower: No data available

**Sensitivity to Mechanical Impact**
No information available

**Sensitivity to Static Discharge**
No information available

**Specific Hazards Arising from the Chemical**
Keep product and empty container away from heat and sources of ignition.

**Hazardous Combustion Products**
Nitrogen oxides (NOx) Carbon monoxide (CO) Carbon dioxide (CO₂)

**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>0</td>
<td>N/A</td>
</tr>
</tbody>
</table>

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6. Accidental release measures

Personal Precautions
Ensure adequate ventilation. Use personal protective equipment.

Environmental Precautions
See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

Methods for Containment and Clean Up
Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. Handling and storage

Handling
Avoid contact with skin and eyes. Do not breathe dust. Do not breathe vapors or spray mist.

Storage
Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from direct sunlight.

8. Exposure controls / personal protection

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment
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.

Skin and body protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection
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.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>5.5-6.5</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>168 - 172 °C / 334.4 - 341.6 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability (solid,gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No information available</td>
</tr>
<tr>
<td>Relative Density</td>
<td>1.293</td>
</tr>
<tr>
<td>g/cm³</td>
<td></td>
</tr>
<tr>
<td>Solubility</td>
<td>14 g/L @ 20 °C</td>
</tr>
<tr>
<td>Partition coefficient; n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>540 °C / 1004 °F</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No information available</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>C8 H9 N O2</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>151.16</td>
</tr>
</tbody>
</table>
10. Stability and reactivity

Reactive Hazard
None known, based on information available

Stability
Light sensitive. Stable.

Conditions to Avoid
Exposure to light. Incompatible products.

Incompatible Materials
Acids, Strong oxidizing agents, alkaline

Hazardous Decomposition Products
Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO₂)

Hazardous Polymerization
Hazardous polymerization does not occur.

Hazardous Reactions
None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information
Product is harmful by ingestion

Component Information
Toxicologically Synergistic Products
No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation
No information available

Sensitization
No information available

Carcinogenicity
Did not show carcinogenic effects in animal experiments.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaminophen (4-Hydroxyacetanilide)</td>
<td>103-90-2</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects
Not mutagenic in AMES Test

Reproductive Effects
Animal testing did not show any effects on fertility.

Developmental Effects
No information available.

Teratogenicity
No information available.

STOT - single exposure
None known

STOT - repeated exposure
None known

Aspiration hazard
No information available

Symptoms / effects, both acute and delayed
No information available

Endocrine Disruptor Information
No information available

Other Adverse Effects
The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity
Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Do not empty into drains.
## 4-Acetamidophenol

### Revision Date
15-Dec-2014

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaminophen (4-Hydroxyacetanilide)</td>
<td>IC50 = 134 mg/l (72H)</td>
<td>814 mg/L LC50 96 h</td>
<td>EC50 = 1000 mg/L 30 min&lt;br&gt;EC50 = 1050 mg/L 15 min&lt;br&gt;EC50 = 1120 mg/L 5 min</td>
<td>50 mg/L EC50 48 h (OECD 202)</td>
</tr>
</tbody>
</table>

### Persistence and Degradability
No information available

### Bioaccumulation/ Accumulation
No information available.

### Mobility

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaminophen (4-Hydroxyacetanilide)</td>
<td>0.51</td>
</tr>
</tbody>
</table>

### 13. Disposal considerations

#### Waste Disposal Methods
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

<table>
<thead>
<tr>
<th>DOT</th>
<th>TDG</th>
<th>IATA</th>
<th>IMDG/IMO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
</tr>
</tbody>
</table>

### 15. Regulatory information

#### International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaminophen (4-Hydroxyacetanilide)</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>203-157-5</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

#### Legend:
- X - Listed
- E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
- F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- P - Indicates a commenced PMN substance
- R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
- T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
- XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
- Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
- Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

#### U.S. Federal Regulations

<table>
<thead>
<tr>
<th>TSCA 12(b)</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARA 313</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

#### SARA 311/312 Hazardous Categorization

| Acute Health Hazard | Yes |
| Chronic Health Hazard | No |
| Fire Hazard | No |
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard | No |
4-Acetamidophenol

Clean Water Act  
Not applicable

Clean Air Act  
Not applicable

OSHA  
Occupational Safety and Health Administration 
Not applicable

CERCLA  
Not applicable

California Proposition 65  
This product does not contain any Proposition 65 chemicals

State Right-to-Know  
Not applicable

U.S. Department of Transportation  
Reportable Quantity (RQ):  
N
DOT Marine Pollutant  
N
DOT Severe Marine Pollutant  
N

U.S. Department of Homeland Security  
This product does not contain any DHS chemicals.

Other International Regulations  
Mexico - Grade  
No information available

Canada  
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class  
D1B  Toxic materials

16. Other information

Prepared By  
Regulatory Affairs  
Thermo Fisher Scientific  
Email: EMSDS.RA@thermofisher.com

Creation Date  
08-Sep-2014

Revision Date  
15-Dec-2014

Print Date  
15-Dec-2014

Revision Summary  
This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer  
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.
End of SDS