



# MATERIAL SAFETY DATA SHEET

according to EC Directive 2001/58/EC  
DISPERSING ALUMINA ADS and ADW

Revision Number 3,  
January 20, 2006

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product code: 974

<b>Product name</b>	Dispersing Alumina ADS and ADW
<b>Synonyms</b>	ADS Series, ADW Series
<b>Manufacturer, importer, supplier</b>	Almatis GmbH Olof-Palme-Strasse 37 60439 Frankfurt am Main Germany  Almatis GmbH Giulinistrasse 2 67065 Ludwigshafen Germany
<b>Emergency telephone number</b>	CHEMTREC: +1-703-527-3887 +1-800-424-9300 Almatis: 501-776-4677
<b>Use of the Substance/Preparation</b>	Refractory
<b>Additional information available from:</b>	www.almatis.com

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS	Chemical Name	% Weight	EINECS - European Union*
1344-28-1	Aluminum oxide	>75	215-691-6
T/S	Proprietary inorganic modifier	0-5	T/S
T/S	Proprietary organic modifier	0-25	T/S

\* EINECS - European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

## 3. HAZARDS IDENTIFICATION

<b>Emergency Overview:</b> <ul style="list-style-type: none"><li>• Non-combustible</li><li>• Powdered material may form explosive dust-air mixtures</li></ul>	
<b>Eye contact</b>	<ul style="list-style-type: none"><li>• Contact with eyes may cause irritation</li></ul>
<b>Skin contact</b>	<ul style="list-style-type: none"><li>• May cause eye/skin irritation</li></ul>
<b>Inhalation</b>	<ul style="list-style-type: none"><li>• May cause irritation of respiratory tract</li></ul>
<b>Ingestion</b>	<ul style="list-style-type: none"><li>• Ingestion may cause irritation to mucous membranes</li></ul>
<b>Aggravated Medical Conditions</b>	<ul style="list-style-type: none"><li>• Asthma</li><li>• Lung irritation</li><li>• Dermatitis</li></ul>
<b>Classification</b>	Not dangerous

Canadian Hazard Symbol: Not applicable

## 4. FIRST AID MEASURES

<b>General advice</b>	<ul style="list-style-type: none"><li>• Show this safety data sheet to the doctor in attendance</li></ul>
<b>Skin contact</b>	<ul style="list-style-type: none"><li>• Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes</li></ul>

**MATERIAL SAFETY DATA SHEET DISPERSING ALUMINA ADS and ADW**

	<ul style="list-style-type: none"> <li>● If skin irritation persists, call a physician</li> </ul>
<b>Eye contact</b>	<ul style="list-style-type: none"> <li>● Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes</li> <li>● If symptoms persist, call a physician</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>● Move to fresh air</li> <li>● If breathing is difficult, give oxygen</li> <li>● If not breathing, give artificial respiration</li> <li>● Consult a physician if necessary</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>● Clean mouth with water and afterwards drink plenty of water</li> <li>● Never give anything by mouth to an unconscious person</li> <li>● Do not induce vomiting without medical advice</li> <li>● Consult a physician</li> </ul>

**5. FIRE-FIGHTING MEASURES**

<b>Suitable extinguishing media</b>	<ul style="list-style-type: none"> <li>● The product itself does not burn</li> <li>● Use extinguishing measures that are appropriate to local circumstances and the surrounding environment</li> </ul>
<b>Special protective equipment for firefighters</b>	<ul style="list-style-type: none"> <li>● Wear self-contained breathing apparatus and protective suit</li> </ul>

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal precautions</b>	<ul style="list-style-type: none"> <li>● Wear personal protective equipment</li> <li>● Avoid dust formation</li> </ul>
<b>Environmental precautions</b>	<ul style="list-style-type: none"> <li>● No special environmental precautions required</li> </ul>
<b>Methods for cleaning up</b>	<ul style="list-style-type: none"> <li>● Take up mechanically and collect in suitable container for disposal</li> </ul>

**7. HANDLING AND STORAGE**

**Handling**

<b>Technical measures/Precautions</b>	<ul style="list-style-type: none"> <li>● Keep away from open flames, hot surfaces and sources of ignition</li> </ul>
<b>Safe handling advice</b>	<ul style="list-style-type: none"> <li>● Avoid dust formation in confined areas</li> <li>● Fine dust dispersed in air may ignite</li> <li>● Take precautionary measures against static discharges</li> <li>● Keep away from sources of ignition - No smoking</li> </ul>

**Storage**

<b>Technical measures/Precautions</b>	<ul style="list-style-type: none"> <li>● Keep in a dry place</li> </ul>
<b>Incompatible products</b>	<ul style="list-style-type: none"> <li>● No information available</li> </ul>
<b>Specific use(s)</b>	<ul style="list-style-type: none"> <li>● None</li> </ul>

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Exposure Limit Values**

CAS	Chemical Name	% Weight	OSHA*	ACGIH*	MEL*	GOEL*
1344-28-1	Aluminum oxide	>75	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)	10 mg/m3 TWA (particulate matter containing no asbestos and < 1% crystalline silica)	N/A	3.0 mg/m3 6.0 mg/m3(a)
T/S	Proprietary inorganic modifier	0-5	N/A	N/A	N/A	
T/S	Proprietary organic modifier	0-25	N/A	N/A	N/A	

\* OSHA - Final PELs - Time Weighted Averages (TWAs)

\* ACGIH - Occupational Exposure Limits - TWAs

\* MEL - United Kingdom - Maximum Exposure Limits - (STELs)

\* GOEL - Germany - TRGS 900 - Occupational Exposure Limits – TWAs, (a) exempt facilities listed in 2.4(8) and (9)

**Personal protective equipment**

<b>Respiratory protection</b>	<ul style="list-style-type: none"> <li>In case of insufficient ventilation, wear suitable respiratory equipment</li> <li>When workers are facing concentrations above the exposure limit they must use appropriate certified respirators</li> </ul>
<b>Hand protection</b>	<ul style="list-style-type: none"> <li>Wear suitable protective gloves</li> </ul>
<b>Eye protection</b>	<ul style="list-style-type: none"> <li>Tightly fitting safety goggles</li> <li>Safety glasses with side-shields</li> </ul>
<b>Skin and body protection</b>	<ul style="list-style-type: none"> <li>No special protective equipment required</li> </ul>
<b>Hygiene measures</b>	<ul style="list-style-type: none"> <li>When using, do not eat, drink or smoke</li> <li>Regular cleaning of equipment, work area and clothing</li> <li>Keep away from food, drink and animal feeding stuffs</li> </ul>
<b>Environmental exposure controls</b>	<ul style="list-style-type: none"> <li>No information available</li> </ul>

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**General Information**

<b>Form</b>	<ul style="list-style-type: none"> <li>Powder.</li> </ul>
<b>Colour</b>	<ul style="list-style-type: none"> <li>Yellow tint</li> </ul>
<b>Odour</b>	None

**Important Health Safety and Environmental Information**

<b>Melting Point/Range</b>	Not determined
<b>Boiling point/range</b>	Not determined
<b>Flash point</b>	Not applicable
<b>Autoignition temperature</b>	Does not ignite
<b>Risk of explosion</b>	Risk of dust explosion
<b>Density</b>	3.9 g/cm3
<b>Bulk density</b>	900-1000 kg/m3.
<b>Water solubility</b>	Partly soluble
<b>pH</b>	6.00 to 9.00
<b>Solubility in other solvents</b>	No information available
<b>Vapour density</b>	No information available.

**10. STABILITY AND REACTIVITY**

<b>Stability</b>	<ul style="list-style-type: none"> <li>Stable under normal conditions</li> </ul>
<b>Conditions to avoid</b>	<ul style="list-style-type: none"> <li>No decomposition if stored and applied as directed</li> </ul>
<b>Materials to avoid</b>	<ul style="list-style-type: none"> <li>No information available</li> </ul>
<b>Hazardous decomposition products</b>	<ul style="list-style-type: none"> <li>Carbon dioxide (CO<sub>2</sub>)</li> <li>Carbon monoxide</li> </ul>
<b>Polymerization</b>	<ul style="list-style-type: none"> <li>Hazardous polymerisation does not occur</li> </ul>
<b>Reactions</b>	<ul style="list-style-type: none"> <li>None under normal processing</li> </ul>

**11. TOXICOLOGICAL INFORMATION****Local effects**

<b>Skin irritation</b>	May cause skin irritation and/or dermatitis.
<b>Eye irritation</b>	Contact with eyes may cause irritation.
<b>Inhalation</b>	May cause irritation of respiratory tract.
<b>Ingestion</b>	Ingestion may cause irritation to mucous membranes.
<b>Additional advice</b>	The following toxicological data shown are those obtained from tests on products of similar composition (in accordance with EC-Directive 1999/45/EC): No information available

**Long term Effects**

<b>Skin contact</b>	No information available
<b>Eye contact</b>	No information available
<b>Inhalation</b>	No information available
<b>Ingestion</b>	No information available
<b>Additional advice</b>	

**12. ECOLOGICAL INFORMATION**

<b>Additional ecological information</b>	No information available.
<b>Ecotoxicity effects</b>	<ul style="list-style-type: none"> <li>Water hazard class 1 (German Regulation): slightly hazardous for water</li> </ul>

**13. DISPOSAL CONSIDERATIONS**

<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations.
<b>Contaminated packaging</b>	Empty containers should be taken for local recycling, recovery or waste disposal.
<b>Further information</b>	Can be landfilled, when in compliance with local regulations.

**14. TRANSPORT INFORMATION**

<b>DOT</b>	<b>Not regulated</b>
<b>ADR</b>	<b>Not regulated</b>
<b>RID</b>	<b>Not regulated</b>
<b>IATA-DGR</b>	<b>Not regulated</b>
<b>ICAO</b>	<b>Not regulated</b>
<b>Further information</b>	<b>Not regulated</b>

**15. REGULATORY INFORMATION**

The preparation is non-dangerous in accordance with Directive 1999/45/EC

<b>Contains</b>	Not applicable
<b>Labelling</b>	Not applicable

**MATERIAL SAFETY DATA SHEET DISPERSING ALUMINA ADS and ADW**

<b>Indication of danger</b>	Not dangerous
<b>R-phrases(s)</b>	Not applicable
<b>S-phrases(s)</b>	Not applicable

**U.S. Inventories**

CAS	Chemical Name	% Weight	TSCA*	CERCLA/SARA*	NJRTK*	MRTKL*	PRTK*
1344-28-1	Aluminum oxide	>75	Present	N/A	sn 2891	N/A	Environmental hazard
T/S	Proprietary inorganic modifier	0-5	N/A	N/A	T/S	N/A	N/A
T/S	Proprietary organic modifier	0-25	N/A	N/A	T/S	N/A	N/A

- \* TSCA - United States - Section 8 (b) Inventory (TSCA)
- \* CERCLA/SARA - Hazardous Substances and their Reportable Quantities
- \* NJRTK - New Jersey - Department of Health RTK List
- \* MRTKL - Massachusetts - Right To Know List
- \* PRTK - Pennsylvania - RTK (Right to Know) List

**International Inventories**

CAS	Chemical Name	% Weight	AICS - Australia*	EINECS - European Union*	ENCS*	TSCA*	DSL - Canada*	IECSC*	ECL*
1344-28-1	Aluminum oxide	>75	Present	215-691-6	1-23	N/A	Present	Present	KE-01012
T/S	Proprietary inorganic modifier	0-5	N/A	T/S	T/S	N/A	N/A	N/A	N/A
T/S	Proprietary organic modifier	0-25	N/A	T/S	T/S	N/A	N/A	N/A	N/A

- \* AICS - Australia - Inventory of Chemical Substances (AICS)
- \* EINECS - European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)
- \* ENCS - Japan Existing and New Chemical Substances (ENCS)
- \* TSCA - (Toxic Substances Control Act) - Export Notification
- \* DSL - Canada - Domestic Substances List (DSL)
- \* IECSC - China - Inventory of Existing Chemical Substances Manufactured or Imported in China
- \* ECL - Korea - Existing and Evaluated Chemical Substances (ECL)

**16. OTHER INFORMATION**

**Prepared By** Sidney J. DeGarmo, CIH  
 Almatris Inc.  
 PO BOX 300  
 Bauxite AR 72011  
 USA

501-776-4677.

**Literary reference  
 Other information**

ACGIH - American Conference of Governmental Industrial Hygienist  
 AICS - Australian Inventory of Chemical Substances  
 CAS - Chemical Abstract Services  
 CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act  
 CFR - Code of Federal Regulation  
 CPR - Cardio-pulmonary Resuscitation  
 DOT - Department of Transportation  
 DSL - Domestic Substances List (Canada)  
 ECL - Korea - Existing and Evaluated Chemical Substances

**MATERIAL SAFETY DATA SHEET DISPERSING ALUMINA ADS and ADW**

EINECS - European Inventory of Existing Commercial Chemical Substances  
ENCS - Japan - Existing and New Chemical Substances  
EWC - European Waste Catalogue  
IARC - International Agency for Research on Cancer  
IECSC – China – Inventory of Existing Chemical Substances Manufactured or Imported in China  
LC - Lethal Concentration  
LD - Lethal Dose  
MAK - Maximum Workplace Concentration (Germany) "maximale Arbeitsplatz-Konzentration"  
N/A - Not Available or Not Applicable  
NDSL - Non - Domestic Substances List (Canada)  
NIOSH - National Institute for Occupational Safety and Health  
NTP - National Toxicology Program  
OEL - Occupational Exposure Limit  
OSHA - Occupational Safety and Health Administration  
PIN - Product Identification Number  
RCRA - Resources Conservation and Recovery Act  
SARA - Superfund Amendments and Reauthorization Act  
STEL - Short Term Exposure Limit  
TCLP - Toxic Chemicals Leachate Program  
TDG - Transportation of Dangerous Goods  
TLV - Threshold Limit Value  
TSCA - Toxic Substances Control Act  
TWA - Time Weighted Average  
WGK - Water Hazard Class (Wassergefährungsklasse)  
WHMIS - Workplace Hazardous Materials Information System

End of Safety Data Sheet