

SAFETY DATA SHEET



UK

Product: **AD345 1K THINNER**

AD345

Print Date: 26.08.2004

Version: 3.1

Revision Date: 16.08.2004

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

Identification of the substance or preparation

- Commercial Product Name: AD345 1K THINNER
- Intended use of the substance/preparation: Coating for professional use

Manufacturer, importer, supplier

- Producer/Supplier: DuPont (U.K.) Limited
- Street/Box: Freshwater Road
- Telephone: 0044 20 8598 4250
- Responsible Department: Regulatory Affairs
- Telephone: 0049 202 529 2571
- Emergency telephone: (02871) 861.313

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization of the product

- Description: mixture of solvents
- Hazardous components:
Substances presenting a health or environmental hazard within the meaning of the DSD 67/548/EEC incl. 28. ATP

EINECS-No.	CAS-No.	Chemical Name	Concentration	Classification
203-625-9	108-88-3	toluene	25,00 - < 50,00 %	F; R11 Xn; R20
200-662-2	67-64-1	acetone	25,00 - < 50,00 %	Xi; R36 R66 R67 F; R11
200-661-7	67-63-0	propan-2-ol	10,00 - < 12,50 %	F; R11 Xi; R36 R67
215-535-7	1330-20-7	xylene	7,00 - < 10,00 %	R10 Xn; R20/21 Xi; R38
203-603-9	108-65-6	2-methoxy-1-methylethyl acetate	5,00 - < 7,00 %	R10 Xi; R36
204-658-1	123-86-4	n-butyl acetate	5,00 - < 7,00 %	R10 R66 R67
211-047-3	628-63-7	Pentyl acetate	2,00 - < 3,00 %	R10 R66
202-849-4	100-41-4	ethylbenzene	2,00 - < 3,00 %	F; R11 Xn; R20
210-843-8	624-41-9	2-methylbutyl acetate	1,00 - < 2,00 %	R10 R66

- Additional advice:
See full text of R-phrases in chapter 16.

3. HAZARDS IDENTIFICATION

The product is classified as dangerous in accordance with Directive 1999/45/EC.

- Human health hazards:
Classification : - highly flammable - harmful - irritant
Highly flammable. Harmful by inhalation and in contact with skin. Irritating to eyes.

4. FIRST AID MEASURES

- General advice:
When symptoms persist or in all cases of doubt seek medical advice. Never give anything by mouth to an unconscious person.
- Inhalation:

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Remove to fresh air. Keep patient warm and at rest. If breathing is irregular or stopped, administer artificial respiration. If unconscious place in recovery position and seek medical advice.

- Skin contact:
Do NOT use solvents or thinners. Take off all contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognized skin cleanser.
- Eye contact:
Remove contact lenses. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. Seek medical advice.
- Ingestion:
If accidentally swallowed obtain immediate medical attention. Keep at rest. Do not induce vomiting.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media:
alcohol-resistant foam, carbon dioxide (CO₂), dry powder, water spray
- Extinguishing media which must not be used for safety reasons:
high volume water jet
- Special exposure hazards from the product itself, combustion products, resulting arising gases:
Fire will produce dense black smoke containing hazardous combustion products (see heading 10).
Exposure to decomposition products may be a hazard to health.
- Special protective equipment for fire-fighters:
Respiratory protective device may be required.
- Additional advice:
Cool closed containers exposed to fire with water spray.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions:
Keep away from sources of ignition. Comply with safety directives (see chapters 7 and 8). Air out the room. Do not inhale vapours.
- Environmental precautions:
Do not let product enter drains. Notify the respective authorities in accordance with local law in the case of contamination of rivers, lakes or waste water systems.
- Methods for cleaning up:
Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations. Clean preferably with a detergent; avoid use of solvents.

7. HANDLING AND STORAGE

Handling

- Safe handling advice:
Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Preparation may charge electrostatically: always use grounded leads when transferring from one container to another. Operators should wear antistatic footwear and clothing. No sparking tools should be used. Avoid skin and eye contact. Do not breathe vapours or spray mist. Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Comply with the health and safety at work laws. When operators, whether spraying or not, have to work inside the spraybooth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. Particularly for spray mist the sustained certain compliance with the limitation on respirable dust is improbable. Particularly for spray mist compliance with the limitation on respirable dust is improbable.
- Advice on protection against fire and explosion:
Solvent vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

Storage

- Requirements for storage areas and containers:
Keep containers tightly closed. Never use pressure to empty container: container is not a pressure vessel. No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage. < 21 °C: Store in accordance with the conditions of licence necessary under the Petroleum (Consolidation) Act 1928 (GB) Petroleum (Consolidation) Act 1929 (NI) Cellulose Solution Regulations 1939 and the Dangerous Substances Act 1972 (IRL). Further guidance is contained in HSE Guidance Note HS(G)51, Storage of Flammable Liquids in Containers. 21 to 32 °C: The Storage and use of this product is subject to the requirements of the Highly Flammable Liquids and Liquefied Petroleum Gases Regulations 1972 (GB), Highly Flammable Liquids and Liquefied Petroleum Gases Regulations 1975 (NI) Cellulose Solution Regulations 1939 and the Dangerous Substances Act 1972

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(IRL). Up to 50 litres may be kept in a work room provided it is kept in a fireproof cupboard or bin. Larger quantities must be kept in a separate storeroom conforming to the structural requirements of the Regulations. Further guidance is contained in HSE Guidance HS(G)51, Storage of Flammable Liquid in Containers. > 32 °C: Although the storage of this product is not subject to specific statutory requirements, the principles contained in HSE Guidance Note HS(G)51, Storage of Flammable Liquids in Containers, should be observed.

- Advice on common storage:
Keep away from oxidising agents and strongly acid or alkaline materials.
- Additional information on storage conditions:
Always keep in containers of same material as the original one. Observe label precautions. Place away from sources of heat and direct sunlight. Keep away from sources of ignition.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

All personal protective equipment should be in conformity with the Provision & Use of COSHH.

Additional technical information on the plant

Provide adequate ventilation. This should be achieved by a good general extraction and -if practically feasible- by the use of a local exhaust ventilation. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

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Exposure limit values

CAS-No.	Chemical Name	Type	Value	Note
108-88-3	toluene	STEL	574,00 mg/m3 150,00 ml/m3	1
		TWA	191,00 mg/m3 50,00 ml/m3	
67-64-1	acetone	STEL	3.620,00 mg/m3 1.500,00 ml/m3	
		TWA	1.210,00 mg/m3 500,00 ml/m3	
67-63-0	propan-2-ol	TWA	999,00 mg/m3 400,00 ml/m3	
		STEL	1.250,00 mg/m3 500,00 ml/m3	
1330-20-7	xylene	TWA	220,00 mg/m3 50,00 ml/m3	
		STEL	441,00 mg/m3 100,00 ml/m3	
108-65-6	2-methoxy-1-methylethyl acetate	TWA	274,00 mg/m3 50,00 ml/m3	
		STEL	584,00 mg/m3 100,00 ml/m3	
123-86-4	n-butyl acetate	STEL	966,00 mg/m3 200,00 ml/m3	
		TWA	724,00 mg/m3 150,00 ml/m3	
100-41-4	ethylbenzene	STEL	552,00 mg/m3 125,00 ml/m3	
		TWA	441,00 mg/m3 100,00 ml/m3	
624-41-9	2-methylbutyl acetate	STEL	676,00 mg/m3 125,00 ml/m3	
		TWA	541,00 mg/m3 100,00 ml/m3	

- Additional advice:
according to HSE Guidance Note EH40 (2003) unless otherwise stated. If the product is sprayed inhalation of aerosol dusts must be controlled to the OEL values in EH 40. Further information on respiratory protective equipment is available in HSE publication "Respiratory Protective Equipment" Third Edition ISBN 011886382 7.

Exposure controls

- Respiratory protection:
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- Hand :

Glove material	Glove thickness	Break through time
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¹ Note:

H: Skin resorbitive

Y: There is no need to fear risk of fetal damage if complying with the MWC and the BWST values.

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xylene	nitrile rubber	0,33 mm	30 minute
	Viton	0,7 mm	480 minute
n-butyl acetate	nitrile rubber	0,33 mm	30 minute
	Viton	0,7 mm	10 minute

The protective glove should be checked in each case for their work specific suitability (e.g. mechanical stability, product compatibility, and anti-static properties). When the intended use is for spray application a nitrile glove of the chemical resistance group 3 (e.g. Dermatril® glove) is to be used. After contamination, the glove has to be changed. If immersing the hands into the product is not avoidable (e.g. maintenance work) a butyl or fluorocarbon rubber glove should be used. When skin exposure may occur to materials specified in chapter 2 of this SDS, advice should be sought from the glove supplier as to appropriate type to use with this product and the permeation breakthrough times. Cleaning solvents or viscosity adjustment thinners require special hand protection, a fluorocarbon rubber glove should be used. Solvents are to be used only for adjusting the viscosity. Care should be taken when working with sharp edged articles as these can easily damage the gloves and make them ineffective. The instructions and information provided by the glove supplier on use, storage, maintenance and replacement must be followed. Damaged gloves or those showing signs of wear should be replaced immediately. Preventive skin protection such as skin protective cream is recommended. Work tasks should be arranged in such a way that gloves do not have to be worn continuously.

- Eye protection:

Wear protective eyewear for protection against solvent spatter.

- Skin protection:

Personnel should wear antistatic clothings made of natural fiber or of high temperature resistant synthetic fiber.

- Protective measures / Hygiene measures:

Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use organic solvents!

Environmental exposure controls

Do not let product enter drains.

For ecological information refer to chapter 12.

9. PHYSICAL AND CHEMICAL PROPERTIES

General information (appearance)

Physical state: liquid

Colour: colourless

Important health, safety and environmental information

	Value	Method
- Flash point:	-7 °C	DIN 53213/ISO 1523
- Ignition temperature:	272 °C	DIN 51794
- Lower explosion limit (Vol.):	1,4 % (V)	
- Upper explosion limit (Vol.):	9,7 % (V)	
- Vapour pressure (20 °C):	81,8 hPa	
- Relative density (20 °C):	0,84 g/cm ³	
- Water solubility:	insoluble	
- Viscosity (23 °C):	20 - 60 s	ISO 2431-1993 4,0 mm
- Solvent separation test:	<3%	ADR/RID

10. STABILITY AND REACTIVITY

- Conditions to avoid:

Stable under recommended storage and handling conditions (see section 7).

- Materials to avoid:

Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

- Hazardous decomposition products:

When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, oxides of nitrogen.

11. TOXICOLOGICAL INFORMATION

Practical experience

- Further observations:

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nervous system.

Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin

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resulting in non-allergic contact dermatitis and absorption through the skin.
The liquid splashed in the eyes may cause irritation and reversible damage.
Through skin resorption, solvents can cause some of the effects described here.

General observations

There are no data available on the product itself. See sections 2 and 15 for details.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity

- **Acute toxicity aquatic invertebrates :**

EINECS-No.	Chemical Name	Species	Exposure time	Value	Type	Method
203-625-9	toluene	Daphnia		10 - 100 mg/l	EC50	
200-662-2	acetone	Daphnia	48 hour	> 100 mg/l	EC50	
EINECS-No.	Chemical Name	Species	Exposure time	Value	Type	Method

204-658-1	n-butyl acetate	Daphnia	24 hour	72,8 mg/l	EC50	
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- **Acute and extended toxicity of fishes :**

EINECS-No.	Chemical Name	Species	Exposure time	Value	Type	Method
203-625-9	toluene	Pimephales promelas		1 - 10 mg/l	LC50	
EINECS-No.	Chemical Name	Species	Exposure time	Value	Type	Method
204-658-1	n-butyl acetate	Golden orfe	48 hour	71 mg/l	LC50	DIN 38412

- **Toxicity with aquatic plants :**

EINECS-No.	Chemical Name	Species	Exposure time	Value	Type	Method
203-625-9	toluene	Chlorella pyrenoidosa		> 100 mg/l	EC50	
EINECS-No.	Chemical Name	Species	Exposure time	Value	Type	Method
204-658-1	n-butyl acetate	scenedesmus quadricauda	192 hour	21 mg/l	EC50	

- **Toxicity with micro organisms :**

EINECS-No.	Chemical Name	Species	Exposure time	Value	Type	Method
203-625-9	toluene	Bacteria, unspecified		> 100 mg/l	EC50	
EINECS-No.	Chemical Name	Species	Exposure time	Value	Type	Method
204-658-1	n-butyl acetate	Pseudomonas putida	18 hour	959 mg/l	EC50	DIN 38412

Mobility

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Other adverse effects

The preparation was evaluated in accordance with the conventional method of the preparation directive 1999/45/EG and was not classified as environmental dangerous.

Additional ecological information

There are no data available on the product itself. The product should not be allowed to enter drains or watercourses. Do not let product enter drains.

13. DISPOSAL CONSIDERATIONS

Product

- Recommendation:

The conversion into energy disposal process is recommended. To the extent not possible only the hazardous waste incineration is suitable.

Uncleaned packaging

- Recommendation:

Properly emptied containers are to be scrap processed or reconditioned. Improperly emptied containers are considered hazardous waste (waste key number 150110). Do not allow into drains or watercourses or

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dispose of where ground or surface waters may be affected. Waste, including emptied containers, are controlled wastes, and should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act (GB), or of the EC (Toxic and Dangerous Waste) Regulations 1982 (IRL). If fully drained containers are compacted they can be regarded as Controlled Waste and disposed of in accordance with the requirements of the Control of Pollution Act 1974 and the Environmental Protection Act 1990 (GB), the Pollution Control and Local Government (NI) Order 1978 (NI) or of the EC (Waste) Regulations 1979 and the EC (Toxic & Dangerous Waste) Regulations 1982 (IRL).

14. TRANSPORT INFORMATION

Transport only in accordance with the requirements of the Carriage of Dangerous Goods by Road and Rail (Classification, Packaging and Labeling), ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport.

Land transport

ADR/RID :

- Class: 3
- UN-No: 1263
- Proper shipping name: PAINT RELATED MATERIAL
- Packing group: II
- Release of danger:

Sea transport

IMDG:

- Class: 3
- UN-No: 1263
- EmS: 3-05
- Marine pollutant: NO

- Proper technical name: PAINT RELATED MATERIAL
- Packing group: II
- Release of danger:

Air transport

ICAO/IATA:

- Class: 3
- UN/ID No.: 1263
- Proper technical name: PAINT RELATED MATERIAL
- Packing group: II
- Release of danger:

15. REGULATORY INFORMATION

In accordance with the CHIP Regulations 2002 the product is labelled as follows:

- Symbol and indicating of hazard:
 - Xn Harmful
 - F Highly flammable
 - Contains: toluene

- R-phrase(s):
 - R11 Highly flammable.
 - R20/21 Harmful by inhalation and in contact with skin.
 - R36 Irritating to eyes.
 - R66 Repeated exposure may cause skin dryness or cracking.

- S-phrase(s):
 - S 9 Keep container in a well-ventilated place.
 - S16 Keep away from sources of ignition. - No smoking.
 - S23 Do not breathe vapour.
 - S24/25 Avoid contact with skin and eyes.
 - S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 - S33 Take precautionary measures against static discharges.
 - S36/37 Wear suitable protective clothing and gloves.
 - S46 If swallowed, seek medical advice immediately and show this container or label.
 - S51 Use only in well ventilated areas.
 - S98 Do not ingest!

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- Other directives, limitations and prohibitory regulations:
Restricted to professional users.

16. OTHER INFORMATION

Full text of R phrases with no. appearing in section 2:

R10	Flammable.
R11	Highly flammable.
R20	Harmful by inhalation.
R20/21	Harmful by inhalation and in contact with skin.
R36	Irritating to eyes.
R38	Irritating to skin.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.

Further information

The information of this SDS is based on the present state of our knowledge and meets the requirements of EU and national laws. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. The information given in this SDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.