

SAFETY DATA SHEET

AERODUX 185

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

Product name	AERODUX 185
Part No.	3511, 6002, 6003, 6509, 6514, 3512, 3515, 3514
Supplier	DYNEA ASA P.O.Box 160, N-2001 LILLESTRØM Tel: (47) 63897100 Fax: (47) 63897610
Contact person	Engineer Liv Marthe S. Føllesdal
Emergency telephones	DYNEA ASA, Lillestrøm +47 63897100

2. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS No.	Content	Symbol	Risk
PHENOL	108-95-2	15-25 %	T	R-24/25, 34
PHENOL RESORCINOL FORMALDEHYDE POLYMER		50-60 %	-	
RESORCINOL	108-46-3	1-5 %	Xn ,N	R-22, 36/38, 50
ETHANOL	64-17-5	5-10 %	F	R-11
WATER	7732-18-5	10-20 %	-	

Composition comments Harmful components are listed according to guideline for safety data sheets. Other components, not classified as harmful, are indicated by a hyphen (-) .
1,3 - BENZENDIOL: Conc. 0 - 10 % . Not classified.
1,3 - BENZENEDIOL = RESORCINOL

3. HAZARDS IDENTIFICATION

Toxic in contact with skin and if swallowed. Causes burns.

4. FIRST AID MEASURES

General SYMPTOMS AND EFFECTS
Accidents or over exposure to this chemical may cause poisoning in contact with skin or if swallowed.
Accidents and over-exposure to this chemical may cause burns to eyes, skin burns and burns in the respiratory system. (Especially by heating.)
Symptoms by poisoning are reduced consciousness, sickness and vomiting.
Symptoms of eye exposure are pain, tears, and reduced eyesight.
Symptoms of exposure to skin and mucous membranes are irritation or open wounds, discoloration and pain.
Symptoms by inhalation of fumes are coughing and difficulties with breathing.

GENERAL ADVICE CONCERNING FIRST AID
Remove victim immediately from source of exposure. Keep affected person under observation. Contact hospital, physician or Emergency Center for medical advice. Refer to the Safety Data Sheet for this chemical. When unconscious, loosen tight clothing and position in secured sideposition. In case of suspended respiratory / heart action: Start resuscitation.

Inhalation	If any indication of respiratory irritation and coughing or breathing difficulties, place the affected person in a half-sitting position. Provide rest, warmth and fresh air. For breathing difficulties oxygen may be necessary. Please be aware that the condition of the effected person may get worse.
Ingestion	Rinse mouth with water. As soon as possible, contact doctor / hospital for transport to hospital and continued treatment. If the victim is awake, give milk (preferred), vegetable oil (olive oil) or water. In case of vomiting, keep the head low to prevent blocking of respiratory tract and to prevent the chemical from entering the lungs.
Skin	Flush immediately contaminated skin with water. Important to remove the substance from the skin immediately. Immediately remove all contaminated clothing. Wash alternately with water and polyethylene glycol 400. Extensive contact and danger of penetration of the skin in quantities that may cause poisoning, it may be necessary to arrange transport to hospital for further observation and treatment, contact doctor/hospital.
Eyes	Promptly wash eyes with plenty of water while lifting the eye lids. Wash alternately with water and a solution of polyethylene glycol 400. Continue to rinse for at least 15 - 20 minutes. Immediately contact doctor / hospital for continued treatment or transport to hospital.

5. FIRE FIGHTING MEASURES

Extinguishing media	Fire can be extinguished using: Carbon dioxide (CO ₂). Powder. Water spray. Alcohol resistant foam. Sand.
Special fire fighting procedures	Move container from fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Do not scatter spilled material with more water than needed to fight the fire.
Unusual fire & explosion hazards	Flashpoint 37°C, but this product can not support combustion (tested according to ADR-regulations).
Hazardous combustion products	Acetaldehyde. Carbon monoxide (CO). Formaldehyde. Carbon dioxide (CO ₂).
Protective measures in fire	Fire personnel exposed of gases from the product is recommended to use respiratory protection. When fighting a fire, it may be necessary to wear a compressed-air breathing apparatus. Avoid skin contact/inhalation of dust/vapours. Gum boots, gloves and protective clothing should be used. (Also see section 8).

6. ACCIDENTAL RELEASE MEASURES

Personal precaution in spill	Evacuate the area. Individuals handling large quantities of spill have to wear all necessary protective equipment, including respiratory protection.
Precautions to protect environment	Limit the leakage field. Block up contaminated area. Runoff or release to sewer, waterway or ground is forbidden.
Spill cleanup methods	To prevent evaporation of phenol from larger spillages, the spillage can be covered by foam (alcohol resistant foam of the type PC-600 Light Water Brand ATC/AFFF, manufactured by 3M). Inform Authorities if large amounts are involved. Remove containers and flush area with water. Collect and reclaim or dispose in sealed containers in licensed waste. When cured, the resin may be disposed of on an ordinary landfill.

7. HANDLING AND STORAGE

Usage precautions	Avoid spilling, skin and eye contact. Provide good ventilation. Mechanical ventilation or local exhaust ventilation is required. Respiratory protection must be used if air concentration exceeds acceptable level. Polyethylene glycol should be available at the work-place. Eye wash facilities and emergency shower must be available when handling this product.
Usage description	Read and follow manufacturer's recommendations.

Storage precautions Keep in cool, dry, ventilated storage and closed containers. Use container made of: Phenol resistant material (e.g. PVC or neoprene).

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ingredient name	CAS No.	STD	LT Exp 8 Hrs	ST Exp 15 Min
PHENOL	108-95-2	OES.	5 ppm(Sk)	10 ppm(Sk)
RESORCINOL	108-46-3	OES.	10 ppm	20 ppm
ETHANOL	64-17-5	OES.	1000 ppm	No std.

Ingredient comments

OES = Occupational Exposure Standard.
Sk = Skinabsorption.

PHENOL: The Occupational Exposure Standards (OESs) of Phenol were established some years ago, and have recently been reviewed by an independent committee of experts in occupational health. Because of the information now available on the health effects of phenol, the committee could no longer identify a level which is both safe and practicably achievable. HSC is therefore consulting on the withdrawal of the current OESs from 2001.

For substances where no exposure limit is set, employers should determine their own working practices and in-house standards for control so that repeated exposure does not cause ill-health. Because no safe exposure limit for phenol could be identified, the Health and Safety Commission's Advisory Committee on Toxic Substances will consider, in due of course, setting a maximum exposure limit (MEL).

Protective equipment



Process conditions

Use engineering controls to reduce air contamination to permissible exposure level. Eye wash facilities must be available when handling this product. Polyethylene glycol should be available at the work-place.

Ventilation

Provide adequate general and local exhaust ventilation. Mechanical ventilation or local exhaust ventilation may be required.

Respirators

Respiratory protection must be used if air concentration exceeds acceptable level. Gas cartridge (organic substances). Gas cartridge (acid gases).

Protective gloves

Use protective gloves made of: Butyl rubber. Viton rubber (fluor rubber). P.T.F.E (Teflon). Neoprene.

Eye protection

Wear full face visor or shield.

Other Protection

Phenol durable boots. Wear rubber apron.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Fluid.		
Colour	Red brown.		
Odour	Phenolic.		
Physical data comments	Relevant ISO standards are used.		
Density/specific gravity (g/ml)	~ 1,15	Temperature (°C)	25
pH-value, conc. solution	6 - 8		

Viscosity (interval)	250 - 500 mPas	Temperature (°C)	25
Solubility description	Soluble in water. Soluble in: Organic solvents.		
Flash point (°C)	37, but can not support combustion (tested according to ADR regulations).	Method	PM Closed cup.

10. STABILITY AND REACTIVITY

Stability	The product is stable at the conditions of handling and storage indicated.
Hazardous decomp. products	Fire or high temperatures create: Toxic gases/vapours/fumes of: Acetaldehyde. Carbon monoxide (CO). Formaldehyde Carbon dioxide (CO ₂).

11. TOXICOLOGICAL INFORMATION

Toxic dose - LD 50:	2048 mg/kg (oral rat)
Toxicological information	<p>The test results for acute toxicity of the product refers to this product tested in the past. One essential observation is that the acute toxicity of phenolic resins in general is lower or weaker than predicted from the content of phenol in the resins. The reason for this is probably that the analytical methods available for free phenol in the product overestimates the bioavailability of the phenol.</p> <p>In order to avoid further extensive animal tests of products based on phenolic resins, European producers of phenolic resins have recommended to classify and label such products on the basis of the content of hazardous ingredients (as listed in section 2 of this safety data sheet). This may give an unnecessarily too strict classification for labelling as the acute toxicity for lethal effects is concerned.</p>
Health hazards, general	In industry toxic and corrosive properties represent the greatest danger. In case of serious poisonings, spasms, shock and unconsciousness may occur. Prolonged over-exposure may cause chronic poisoning with headache, dizziness and indigestion.
Inhalation	Severe pulmonary irritant.
Ingestion	Harmful if swallowed. May cause severe internal injury. May cause burns in mucous membranes, throat, oesophagus and stomach.
Skin	Limited absorption through intact skin, may cause poisoning. May cause chemical burns or irritation and dermatitis.
Eyes	Causes burns.

12. ECOLOGICAL INFORMATION

LC 50, 96 Hrs, Fish mg/l:	28 (Fenol)
EC 50, 48 Hrs, Daphnia, mg/l:	10 (Fenol)
Ecological information	1,3-Benzendiol is classified as dangerous for the environment.
Bio accumulation	Phenol: No bioaccumulation (BCF 7,6).
Degradability	Phenol resorcinol formaldehyde polymer: Slowly, not readily biodegradable (ISO/DIS 9408/OECD criteria). Phenol: readily biodegradeably. Phenol: BOD ₅ /COD:0.72.

13. DISPOSAL CONSIDERATIONS

Disposal methods	Confirm disposal procedures with environmental engineer and local regulations. When cured, the resin may be disposed of on an ordinary landfill. (European Waste Catalog: 08 04 04)
Waste class	EWC-code: 08 04 02.

14. TRANSPORT INFORMATION

Label for conveyance



ROAD TRANSPORT:

UN No. road	2810
ADR class No.	6.1
ADR class	Division 6.1: Toxic substances.
ADR item No.	25 (c)
Hazard No. (ADR)	60 Toxic or slightly toxic substance.
Hazard No. (ADR)	60
ADR label No.	6.1
Proper shipping name (national)	TOXIC LIQUID, ORGANIC N.O.S
Proper shipping name (international)	TOXIC LIQUID, ORGANIC, N.O.S.

RAIL TRANSPORT:

RID class No.	6.1
RID item No.	25 (c)

SEA TRANSPORT:

UN No. sea	2810
IMDG class	6.1
IMDG page No.	6270-1
IMDG pack GR.	III
EmS No.	6.1-02
MFAG table No.	305
Marine pollutant	No.

AIR TRANSPORT:

UN No., air	2810
ICAO class	6.1
Air pack GR.	III

15. REGULATORY INFORMATION

Label for supply



Risk phrases	R-24/25 Toxic in contact with skin and if swallowed. R-34 Causes burns.
Safety phrases	S-23 Do not breathe gas/fumes/vapour/spray. S-26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S-28 After contact with skin, wash immediately with plenty of polyethylene glycol and water. S-36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S-38 In case of insufficient ventilation, wear suitable respiratory equipment. S-45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
UK regulatory references	Classification, Packaging and Labelling Regulations 1997.
EU directives	Dangerous Substance Directive 67\548. Safety data sheet directive 91\155. Dangerous Preparations Directive 88\379.

16. OTHER INFORMATION

User notes:	The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.
Information sources	See also technical data sheet.
Revision date	2000-11-22
Rev. No./repl. SDS generated	1998-07-03
Signature	L.M.S. Føllesdal
Applications	ADHESIVE FOR THE WOOD INDUSTRY ADHESIVE FOR LOAD CARRYING WOOD CONSTRUCTIONS