

MATERIAL SAFETY DATA SHEET-v4

Product AEC substrate

Cat. no. R007R.0000

Pan Path

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

Identification of the product

Name : AEC substrate

Product code : R007R.0000

Produced and Marketed by

PanPath B.V.

Science Park Amsterdam

Kruislaan 406, 1098 SM Amsterdam, the Netherlands

Tel +31 20 751 2030 - Fax +31 20 751 2031

2. COMPOSITION AND INFORMATION ON INGREDIENTS

- N,N-Dimethylformamid (CAS-no. 68-12-2; EEC-No. 200-679-5; Molecular formula C₃H₇NO)
- 3-Amino-9-Ethylcarbazole, Tech., 90% (CAS-No. 132-32-1; EINECS No. 205-057-7; Molecular weight 210.28; R: 23/24/25 40; S: T)

3. IDENTIFICATION OF HAZARDS AND EFFECTS

Conditions to avoid

Overheating.

Substances to avoid

Acids. Incompatible with strong, oxidizing agents, acid chlorides, chloroformats, reductional compounds.

Hazardous combustion or decomposition products

By thermal disintegration, it is possible that CO, CO₂, NO's and nitrogen can occur.

Fire and explosion hazards

Inflammable. Emits toxic fumes under fire conditions. Keep away from inflammable sources.

4. FIRST AID MEASURES

EXPOSURE	FIRST AID MEASURES
Inhalation	Fresh air. Consult doctor if feeling unwell.
Eye contact	Flush with copious amounts of water with eyelid held wide open. Summon eye specialist if necessary.
Skin contact	Wash with copious amounts of water. Remove contaminated clothing.
Ingestion	Summon doctor immediately! Watch out for vomiting: danger of breathing difficulties. Keep bronchial tubes free.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media : water spray, carbon dioxide, dry chemical powder or appropriate foam.

Special fire fighting procedure : not required.

6. ACCIDENTAL RELEASE MEASURES

Take up with liquid-absorbent material. Forward for disposal and clean up affected area. Replace contaminated clothing immediately.

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7. HANDLING & STORAGE INFORMATION

Handling information

No special requirements.

Storage information

Store at 2-8 °C.

8. PERSONAL PRECAUTIONS & PROTECTION

Personal precautions

The usual precautions taken when handling chemicals should be observed. Refer to product data sheet for recommended specific use. Do not inhale vapors, do not get in eyes, on skin or clothing. Wash hands thoroughly after handling.

Personal protection

Respiratory protection : Required when vapors/aerosols are generated. Preferably work in a chemical fume hood or wear adequate mask with filter (according to DIN 3181 for vapors of organic compounds).

Skin protection : Required. Wear suitable protective clothing and gloves.

Eye protection : Required. Wear safety glasses or goggles.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	liquid	Flashing point:	no data available
Color:	brown	Explosion limits:	no data available
Odor:	odorless	Vapor pressure:	no data available
pH (20 °C):	no data available	Relative density:	no data available
Viscosity _{dynamic} (20°C):	no data available	Solubility in water:	completely
Boiling range:	no data available	log P(o/w):	no data available
Melting point:	no data available		
Autoflammability:	no data available		

10. STABILITY & REACTIVITY

Stability

Heat-sensitive. Hygroscopic; explosive with air in vapor/gassy phase.

Reactivity

No data available.

11. TOXICOLOGICAL INFORMATION

Toxicological information

The chemical, physical and toxicological characteristics have not been determined yet. ACGIH, AIRC, NIOSH, NTP, OSHA, OR ca Prop 65, however, does not list AEC, as a carcinogen. It is possible that DMF contains carcinogenic compounds.

Acute effects

May be harmful by inhalation, ingestion or skin absorption. Vapor or mist is irritating to the eyes, mucous membranes and upper respiratory tract. Causes skin irritation.

Chronic effects

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May cause birth defects. Alcohol intolerance is still possible until 4 days after you have been in contact with DMF.

12. ECOLOGICAL INFORMATION

Biologic degradation : no data available.

Behavior in environmental compartments : no data available.

Ecotoxic effects : no data available.

13. DISPOSAL CONSIDERATIONS

Product: there are no uniform EC regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste.

Packaging: disposal in accordance with local provisions. Contaminated packages should be treated the same as the product itself.

14. TRANSPORT INFORMATION

This product is not subject to current regulations for transportation of hazardous goods.

15. REGULATORY INFORMATION

Labeling according to ECC directives.

<u>R</u>	<u>S</u>	<u>SYMBOL</u>
23/24/25, 40	24/25, 53	T
61-20/21-36	53-45	

Label precautionary statements: harmful by inhalation, in contact with skin and if swallowed. May cause birth defects. Irritating to eyes, respiratory system and skin.

16. ADDITIONAL INFORMATION (IF APPLICABLE)

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product. We make no warranty express or implied, with respect to the information and assume no liability. Product users should determine the suitability of this information for their own uses.