SAFETY DATA SHEET
ADDOCAT 118
according to Regulation (EC) No. 1907/2006

1. Identification of the substance/mixture and of the company/undertaking

   **Commercial Product Name**
   ADDOCAT 118

   **CAS-Nr.:** 6425-39-4

   **Use of the Substance/Mixture**
   Additives for use in the production of polyurethanes

   **Producer**
   Rhein Chemie Rheinau GmbH
   Duesseldorfer Strasse 23-27
   68219 Mannheim
   Germany
   Telephone +49 (0)621-8907-382
   Telefax +49 (0)621-8907-404
   E-Mail product.safety@rheinchemie.com

   **Emergency telephone number** +49 (0)621-8907-313

2. HAZARDS IDENTIFICATION

   **GHS Classification**
   Acute toxicity, Category 4
   Skin irritation, Category 2
   Eye irritation, Category 2
   H302: Harmful if swallowed.
   H315: Causes skin irritation.
   H319: Causes serious eye irritation.

   **Classification (67/548/EEC, 1999/45/EC)**
   Irritant
   Irritating to eyes and skin.

   **GHS-Labelling**
   
   **Symbol(s):** ![Exclamation mark]

   **Signal word:** Warning

   **Hazard statements:**
   H302: Harmful if swallowed.
   H315: Causes skin irritation.
   H319: Causes serious eye irritation.

   **Precautionary statements:**
   **Prevention:**
   P264 Wash skin thoroughly after handling.
   P270 Do not eat, drink or smoke when using this product.
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P280 Wear protective gloves/ eye protection/ face protection.

Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components
2,2-dimorpholinyl-diethylether

<table>
<thead>
<tr>
<th>Weight percent</th>
<th>CAS-No. Index No.</th>
<th>REACH No.</th>
<th>Classification according to EU Directives 67/548/EEC or 1999/45/EC</th>
<th>GHS Classification</th>
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<tbody>
<tr>
<td>100</td>
<td>6425-39-4</td>
<td>Xi, R36/38</td>
<td>Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319</td>
<td></td>
</tr>
</tbody>
</table>

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

General advice : Remove soiled or soaked clothing immediately.

Inhalation : Remove to fresh air.

Skin contact : After contact with skin, wash immediately with plenty of water and soap.

Eye contact : Contamination of the eyes must be treated by thorough irrigation with water for 15 minutes, with the eyelids held open. If necessary a doctor (or eye specialist) should be consulted.

Ingestion : If product is swallowed drink plenty of water immediately.
5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: water, foam, dry powder, CO2 (carbon dioxide)

Special protective equipment for fire-fighters: Firemen must wear self-contained breathing apparatus.

Further information: Contain contaminated firefighting water separately. Do not allow it to get into the sewerage system or waste water.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Put on protective equipment (see Chapter 8). Keep away from/remove sources of ignition.

Environmental precautions: Do not let product enter drains.

Methods for cleaning up: Take up with absorbent for chemicals or, if necessary with dry sand. Dispose of in accordance with regulations. For disposal measures see Chapter 13.

7. HANDLING AND STORAGE

Handling
Advice on safe handling: Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation or exhaust ventilation in the working area.

Advice on protection against fire and explosion: Take precautionary measures against static discharges. Keep away from sources of ignition - No smoking.

Storage
Requirements for storage areas and containers: Keep container dry and tightly closed in a cool and well ventilated place. Optimum storage temperature 10-30 °C. Further specific information see our: Technical Data Sheet.

Advice on common storage: Keep away from foodstuffs, drinks and tobacco. Keep away from acids.
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German storage class : 10
Combustible liquids not in Storage Class 3

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters
Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection : Required at inadequately ventilated workplaces.

Hand protection : Chemical-resistant protective gloves according to DIN/EN 374 are recommended.
Suitable materials for safety gloves: DIN EN 374-3: butyl rubber - IIR: thickness - 0,70 mm; breakthrough time >= 480 min.
Recommendation: contaminated gloves should be disposed of.
Avoid skin contact with the wetted surfaces of the protective gloves.

Eye protection : Safety glasses with side-shields

Skin and body protection : Wear suitable protective clothing.

Hygiene measures : Keep away from foodstuffs, drinks and tobacco. Wash hands before breaks and at end of work. Keep working clothes separate. Change contaminated or soaked clothing.

Environmental exposure controls

General advice : Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form : liquid

Colour : yellowish clear

Odour : like amine

Safety data

Flash point : 146 °C
1. Method: DIN EN 22719

Ignition temperature : approx. 210 °C

Molecular Weight : 244.33 g/mol
pH : 10.4
   at 100.00 g/l
   20 °C

Pour point : approx. -28 °C

Initial boiling point : 309 °C
   with decomposition

Vapour pressure : 0.71 hPa
   at 123 °C

Density : 1.0603 g/cm³
   at 20 °C
   Method: DIN 51757

Water solubility : miscible, hygroscopic

Partition coefficient: n-octanol/water : log Pow: -1.31
   calculated

Viscosity, dynamic : approx. 29 mPa.s
   at 20 °C

10. STABILITY AND REACTIVITY

Materials to avoid : Pay attention to exothermic reaction with acids.
   Note exothermic reaction with isocyanates.

Hazardous decomposition products : No thermal decomposition when stored and handled correctly.
   No hazardous decomposition products when stored and handled correctly.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50: > 2.000 mg/Kg
   Species: rat
   Method: OECD TG 423

Skin irritation : irritating
   Method: OECD Test Guideline 404
Primary skin irritation, rabbit:

Eye irritation : irritating
Method: OECD Test Guideline 405

Primary mucosae irritation, rabbit:

Further information : Contact with nitrosating agents (e.g. nitrites and nitrogen oxides) may cause the formation of nitrosamines under certain conditions. Nitrosamines have been found to be carcinogens in animal tests.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects
Toxicity to fish : LC50: > 2.150 mg/l
Exposure time: 96 h
Species: Zebra barbel (Danio rerio)
Method: OECD Guideline for Testing of Chemicals, No. 203

Elimination information (persistence and degradability)
Bioaccumulation : There are no indications that suggest the existence of bioaccumulation.

Biodegradability : Result: Not readily biodegradable.
0 - 10 %

Further information on ecology
Additional ecological information : Do not allow to escape into waterways, waste water or soil. Where low concentrations are discharged properly into adapted biological wastewater treatment plants, a disturbance of the degradation activity of the activated sludge is not expected.

13. DISPOSAL CONSIDERATIONS

Product : Dispose in accordance with applicable international, national and local laws, ordinances and statutes. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

Contaminated packaging : After containers have been emptied as thoroughly as possible (e.g. by pouring, scraping or draining until "drip-dry"), they can be sent to an appropriate collection point set up within the framework of the existing take-back scheme of the chemical
14. Transport information

Other information
Not dangerous cargo. Irritating to skin and eyes. Keep separated from foodstuffs.

15. Regulatory information

National legislation
Water contaminating class (Germany)
WGK 1: slightly water endangering (VWWWS A4)

Notification status
All ingredients are on the following inventories or are exempted from listing:
REACH; TSCA; AICS; DSL; ENCS (JP); ISHL (JP); KECEI (KR); PICCS (PH); INV (CN);
NZIOC; CH INV

16. OTHER INFORMATION

Text of R-phrases mentioned in Section 3
R36/38 Irritating to eyes and skin.

Full text of H-Statements referred to under sections 2 and 3.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.