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**DATA SHEET TO BE SUBMITTED TO THE UNITED NATIONS  
FOR NEW OR AMENDED CLASSIFICATION OF SUBSTANCES****Reference document ST/SG/AC.10/C.3/2000/48****UN 1153 Ethylene glycol diethyl ether****Transmitted by the expert from Germany**

Supply all relevant information including sources of basic classification data. Data should relate to the product in the form to be transported. State test methods. Answer all questions – if necessary state "not known" or "not applicable" – If data is not available in the form requested, provide what is available with details. Delete inappropriate words.

**Section 1. SUBSTANCE IDENTITY**

- |       |   |  |
|-------|---|--|
| 1.1   | Chemical name                                   | Ethylene glycol diethyl ether                        |
| 1.2   | Chemical formula                                | C <sub>6</sub> H <sub>14</sub> O <sub>2</sub>        |
| 1.3   | Other names/synonyms                            | 1,2-Diethoxyethane, Diethylcellosolve, Diethylglycol |
| 1.4.1 | UN Number                                       | 1153   |
| 1.4.2 | CAS number                                      | 629-14-1   |
| 1.5   | Proposed classification for the Recommendations |  |
| 1.5.1 | proper shipping name (3.1.2*)                   | Ethylene glycol diethyl ether                        |
| 1.5.2 | class/division                                  | 3 subsidiary risk(s) no                              |
|       | packing group                                   | II   |
| 1.5.3 | proposed special provisions, if any             | no   |
| 1.5.4 | proposed packing instruction(s)                 | no   |

**Section 2. PHYSICAL PROPERTIES**

- |       |                        |            |
|-------|------------------------|------------|
| 2.1   | Melting point or range | -74 °C     |
| 2.2   | Boiling point or range | 120-122 °C |
| 2.3   | Relative density at:   |            |
| 2.3.1 | 15 °C                  | not known  |
| 2.3.2 | 20 °C                  | 0.84       |
| 2.3.3 | 50 °C                  | not known  |

2.4	Vapour pressure at:	
2.4.1	50 °C	6.5 kPa
2.4.2	65 °C	12.8 kPa
2.5	Viscosity at 20 °C	0.77 mm <sup>2</sup> /s
2.6	Solubility in water at 20 °C	slightly g/100 ml
2.7	Physical state at 20 °C (2.2.1.1*)	solid / <b>liquid</b> / gas
2.8	Appearance at normal carriage temperatures, including colour and odour colourless liquid, ether-like odour	
2.9	Other relevant physical properties	not known

### Section 3. FLAMMABILITY

3.1	Flammable vapour	
3.1.1	Flash point (2.3.3*) 19 °C closed cup (ISO 3679)	
3.1.2	Is combustion sustained? (2.3.1.2*)	<b>yes</b> / no
3.2	Autoignition temperature	175 °C
3.3	Flammability range (LEL/UEL)	1.2 / 11.9 % by volume (estimated)
3.4	Is the substance a flammable solid? (2.4.2)	yes / <b>no</b>
3.4.1	If yes, give details ...	

### Section 4. CHEMICAL PROPERTIES

4.1	Does the substance require inhibition/stabilization or other treatment such as nitrogen blanket to prevent hazardous reactivity?	
		yes / <b>no</b>
	If yes, state	
4.1.1	Inhibitor/stabilizer used ...	
4.1.2	Alternative method ...	
4.1.3	Time effective at 55 °C ...	
4.1.4	Conditions rendering it ineffective ...	
4.2	Is the substance an explosive according to paragraph 2.1.1*?	yes / <b>no</b>
4.2.1	If yes, give details ...	
4.3	Is the substance a desensitized explosive? (2.4.2.4*)	yes / <b>no</b>
4.3.1	If yes, give details ...	
4.4	Is the substance a self-reactive substance? (2.4.1*)	yes / <b>no</b>
	If yes, state	
4.4.1	exit box of flow chart	
	What is the self-accelerating decomposition temperature (SADT) for a 50 kg package? ... °C	
	Is the temperature control required? (2.4.2.3.4*)	yes / <b>no</b>
4.4.2	proposed control temperature for a 50 kg package ... °C	
4.4.3	proposed emergency temperature for a 50 kg package ... °C	
4.5	Is the substance pyrophoric? (2.4.3*)	yes / <b>no</b>
4.5.1	If yes, give details ...	
4.6	Is the substance liable to self-heating? (2.4.3*)	yes / <b>no</b>

- 4.6.1 If yes, give details ...
- 4.7 Is the substance an organic peroxide (2.5.1\*) yes / **no**  
If yes state
- 4.7.1 exit box of flow chart
- What is the self-accelerating decomposition temperature (SADT) for a 50 kg package? ... °C
- Is the temperature control required? (2.5.3.4.1\*) yes / **no**
- 4.7.2 proposed control temperature for a 50 kg package ... °C
- 4.7.3 proposed emergency temperature for a 50 kg package ... °C
- 4.8 Does the substance in contact with water emit flammable gases (2.4.4\*) yes / **no**
- 4.8.1 If yes, give details ...
- 4.9 Does the substance have oxidizing properties (2.5.1) yes / **no**
- 4.9.1 If yes, give details ...
- 4.10 Corrosivity (2.8\*) to:
- 4.10.1 mild steel less than 6.25 mm/year at 55 °C
- 4.10.2 aluminium less than 6.25 mm/year at 55 °C
- 4.10.3 other packing materials ... mm/year at ...  
(specify) **no** ... mm/year at ...
- 4.11 Other relevant chemical properties not known

## Section 5. HARMFUL BIOLOGICAL EFFECTS

- 5.1 LD 50, oral (2.6.2.1.1\*) 4390 mg/kg Animal species: rat
- 5.2 LD 50, dermal (2.6.2.1.2\*) no relevant toxicity expected
- 5.3 LC 50, inhalation (2.6.2.1.3\*) 38.64 mg/litre Exposure time 4 hours  
or 8000 ml/m<sup>3</sup> Animal species: rat
- 5.4 Saturated vapour concentration at 20 °C (2.6.2.2.4.3\*) 12 500 ml/m<sup>3</sup>
- 5.5 Skin exposure (2.8\*) results not appreciably irritating  
Exposure time ... hours/minutes  
Animal species guinea pigs, rabbits, dogs
- 5.6 Other data ...
- 5.7 Human experience no reported instances of any adverse effects  
(Petty's Industrial Hygiene & Toxicology, vol 2C, 1982)

## Section 6. SUPPLEMENTARY INFORMATION

- 6.1 Recommended emergency action
- 6.1.1 Fire (include suitable and unsuitable extinguishing agents)  
suitable are dry chemical powder, carbon dioxide, water spray and appropriate foam
- 6.1.2 Spillage  
Absorb on sand or vermiculit and place in closed containers for disposal; ventilate area and wash spill site after material pickup is complete

\* References are to chapters and paragraphs in the Model Regulations on the Transport of Dangerous Goods

- 6.2 Is it proposed to transport the substance in:
- 6.2.1 Intermediate Bulk Containers (6.5\*) **yes** / no
- 6.2.2 Portable tanks (6.7\*) **yes** / no
- If yes, give details in Sections 7. and/or 8.

**Section 7. INTERMEDIATE BULK CONTAINERS (IBCs)**  
(only complete if yes in 6.2.1)

7.1 Proposed type(s) IBC02

**Section 8. MULTIMODAL TANK TRANSPORT**  
(only complete if yes in 6.2.2)

- 8.1 Description of proposed tank (including IMO tank type if known) T4  
T2 (Amdt. 29-98) [ T4 (Amdt. 30-2000) ]
- 8.2 Minimum test pressure 2.65 bar
- 8.3 Minimum shell thickness see 6.7.2.4.2 \* (nothing special)
- 8.4 Details of bottom openings, if any see 6.7.2.6.3 \* (with 3 closures)
- 8.5 Pressure relief arrangements normal
- 8.6 Degree of filling 97 %
- 8.7 Unsuitable construction materials **no**
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