**UNITED NATIONS**

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**COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS AND ON THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS**

**Sub-Committee of Experts on the Transport of Dangerous Goods**
**(Twenty-second session, 2-6 December 2002, agenda item 4)**

## NEW AMENDMENT PROPOSALS

## Reclassification of UN 2936 Thiolactic Acid

**Transmitted by the expert from Germany**

1 Thiolactic acid is not produced in large quantities. The worldwide leading producer of this chemical has determined that it does not meet the criteria for class 6.1. However, according to company knowledge human experience from the use of Thiolactic acid in cosmetics indicates its corrosive potential on human skin. This justifies the transfer of UN 2936 THIOLACTIC ACID from Class 6.1 to Class 8. It is proposed to keep the protection level of Packing Group II, although specific animal experiments with a one-hour exposure of rabbit skin had not been performed and will not be performed in Germany due to animal protection legislation.

2 Detailed data are shown on annexed *Data sheet to be transmitted to the United Nations for new or amended classification of substances*. It should be noted that Thiolactic acid is a liquid.

3 The following amendment is proposed:

| UN No. | Name and description | Class or division | Subsid-iary risk | UN packing group | Special provi-sion | Limited quantities | Packing instruct-ion | Special provis-ions | portable tank con-struction | portable tank special provis-ion |
|---|---|---|---|---|---|---|---|---|---|---|
| 2936 | THIOLACTIC ACID | **8** | - | II | - | **1 L** | **P001 IBC02** | - | T7 | TP2 |

**ANNEX 1**

# DATA SHEET TO BE SUBMITTED TO THE UNITED NATIONS FOR NEW OR AMENDED CLASSIFICATION OF SUBSTANCES

Submitted by ***Germany*** Date ***22 August 2002***

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 ***Thiolactic acid***

1.2 Chemical formula ***C3 H6 O2 S***

1.3 Other names/synonyms ***2-Mercapto propionic acid***

1.4.1 UN Number ***2936*** 1.4.2 CAS number ***79-42-5***

1.5 Proposed classification for the Recommendations

1.5.1 proper shipping name (3.1.2[✍]) ***Thiolactic acid***

1.5.2 class/division ***8*** subsidiary risk(s)
packing group ***II***

1.5.3 proposed special provisions, if any -

1.5.4 proposed packing instruction(s) ***P 001; IBC 02***

## Section 2. PHYSICAL PROPERTIES

2.1 Melting point or range ***8-10*** °C

2.2 Boiling point or range ***99*** °C

2.3 Relative density at:

2.3.1 15 °C

2.3.2 20 °C ***1.1970***

2.3.3 50 °C

2.4 Vapour pressure at:

2.4.1 50 °C ***[30 °C: 0.2 hPa]***

2.4.2 65 °C

2.5 Viscosity at 20 C $m^2/s$

2.6 Solubility in water at 20 °C ***[fully]*** g/100 ml

2.7 Physical state at 20 °C (2.2.1.1✍) solid / ***liquid*** / gas

**2.8 Appearance at normal carriage temperatures, including colour and odour**

*Yellow liquid with disagreeable odour*

2.9 Other relevant physical properties

**Section 3. FLAMMABILITY**

3.1 Flammable vapour

3.1.1 Flash point (2.3.3✍) ***87*** °C

3.1.2 Is combustion sustained? (2.3.1.2✍) yes / no

3.2 Autoignition temperature °C

3.3 Flammability range (LEL/UEL) %

3.4 Is the substance a flammable solid? (2.4.2)

**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 / *no***

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 / ***no***

**4.2.1 If yes, give details...**

4.3 Is the substance a desensitized explosive? (2.4.2.4✍) yes / ***no***

**4.3.1 If yes, give details...**

4.4 Is the substance a self-reactive substance? (2.4.1✍) yes / ***no***

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 / ***no***

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 / ***no***

**4.5.1 If yes, give details...**

4.6 Is the substance liable to self-heating? (2.4.3✍) yes / **no**

**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: ***[not tested]***

4.10.1 mild steel mm/year at °C

4.10.2 aluminium mm/year at °C

4.10.3 other packing materials

(specify) mm/year at...

mm/year at ...

**4.11 Other relevant chemical properties**

**Section 5. HARMFUL BIOLOGICAL EFFECTS**

5.1 LD 50, oral (2.6.2.1.1✍) ***730*** mg/kg Animal species: ***rat***

5.2 LD 50, dermal (2.6.2.1.2✍) ***> 2000*** mg/kg Animal species: ***rat***

5.3 LC 50, inhalation (2.6.2.1.3✍) mg/litre Exposure time ***[not known]***

or ml/$m^3$ Animal species:

5.4 Saturated vapour concentration at 20 °C (2.6.2.2.4.3✍) ml/$m^3$

**5.5 Skin exposure (2.8✍) results Exposure time ...***[not tested]*

Animal species

5.6 Other data ...***Remark*: Dermal test with 66.6% dilution and adjusted pH***

5.7 Human experience ***Corrosive to skin, used in cosmetics in low concentration***

**Section 6. SUPPLEMENTARY INFORMATION**

6.1 Recommended emergency action

6.1.1 Fire (include suitable and unsuitable extinguishing agents)

***Water***

6.1.2 Spillage

***Dilute with water***

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) ***31A, 31B, 31N, 31H1, 31H2, 31HZ1***

**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)**

*UN; IMDG Amdt. 30-00;*

*T7; T4*

8.2. Minimum test pressure ***4 bar; 2.65 bar***

8.3 Minimum shell thickness ***see 6.7.2.4.2***

**8.4 Details of bottom openings, if any** *see 6.7.2.6.3*

8.5 Pressure relief arrangements ***normal***

8.6 Degree of filling ***TP2 (4.2.1.9.3)***

8.7 Unsuitable construction materials ***Aluminium, mild Steel***

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