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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

Thirty-fourth session
Geneva, 1-9 December 2008
Item 4 of the provisional agenda

LISTING, CLASSIFICATION AND PACKING

Thiourea dioxide (UN 3341): Subsidiary risk 6.1

Submitted by the expert from Germany¹

Introduction

1. Following a series of accidents, the Sub-Committee, at its twelfth session in 1996, included Thiourea dioxide in the Dangerous Goods List under entry UN 3341, Division 4.2, Packing Group (PG) II or III.
2. According to available experimental data, Thiourea dioxide also fulfils the criteria for classification under Division 6.1: an acute inhalation toxicity study was performed according to OECD test guideline 403 with a nebulised aqueous solution. From the results an LC₅₀ value of 0.656 mg/l/1 h (equivalent to 0,164 mg/l/4 h) can be determined, which falls into the range for classification under Division 6.1, PG II.

¹ In accordance with the programme of work of the Sub-Committee for 2007-2008 approved by the Committee at its third session (refer to ST/SG/AC.10/C.3/60 para. 100 and ST/SG/AC.10/34, para. 14)

3. According to the UN Model Regulations, paragraph 2.0.3, (Precedence of hazard characteristics), Thiourea dioxide would thus need to be classified either

- (a) Under Division 4.2, subsidiary risk 6.1 in cases where its Division 4.2 characteristics fall into PG II; or
- (b) Under Division 6.1, subsidiary risk 4.2 in cases where its Division 4.2 characteristics fall into PG III.

In both cases, the substance would need to be transported according to the provisions assigned to the PG II performance level since the Division 6.1 characteristics fall into PG II in any case. For pragmatic reasons, the expert from Germany proposes to retain the present listing under Division 4.2, PG II only, and amend entry UN 3341 to add the subsidiary risk of 6.1 as outlined below.

4. The relevant data for assignment to Division 6.1 (not to Division 4.2 as it is not affected by this proposal) are contained in the Annex to this document.

Proposal

- 5. In Chapter 3.2, dangerous goods list,
 - a) Amend entry for UN 3341, PG II, to read:

UN No.	Name and description	Class or division	Subsidiary risk	UN packing group	Special provisions	Limited and excepted quantities		Packagings and IBC's		Portable tanks and bulk containers	
						(7a)	(7b)	Packing instruction	Special provisions	Instruction	Special provisions
(1)	(2)	(3)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9)	(10)	(11)
3341	THIOUREA DIOXIDE	4.2	6.1	II	-	0	E2	P002 IBC06	B2	T3	TP 33

- b) Delete the entry for UN 3341, PG III:

Annex
(English only)

Section 5. HARMFUL BIOLOGICAL EFFECTS

- 5.1 LD₅₀, oral (2.6.2.1.1¹)..... **1120** mg/kg Animal species **rat**.....
 LD₅₀, oral (2.6.2.1.1¹)..... **1486** mg/kg Animal species **mouse**
- 5.2 LD₅₀, dermal (2.6.2.1.2¹)..... **>2000** mg/kg Animal species **rat**.....
- 5.3 LC₅₀, inhalation (2.6.2.1.3¹) **0.164** mg/l Exposure time **4** hours
 or..... ml/m³ Animal species **rat**.....
- 5.4 Saturated vapour concentration at 20 °C (2.6.2.2.4.3¹) **not applicable**
- 5.5 Skin exposure (2.8¹) results **irritating** Exposure time **24** hours
 Animal species **rabbit**
- 5.6 Other data
Fish (*Poecilia reticulata*), LC₅₀ (96 h): 416 mg/l
Aquatic invertebrates (*Daphnia magna*), EC₅₀ (24 h): 390 mg/l
Aquatic plants (*Scenedesmus subspicatus*), EC₅₀ (72 h): 32 mg/l
- 5.7 Human experience
Airborne dust may irritate eyes, skin, or respiratory tract. Direct or continuous contact may irritate skin.

¹ This references are to chapters and paragraphs in the Model Regulations on the Transport of Dangerous Goods.