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COMITÉ D'EXPERTS DU TRANSPORT DES
MARCHANDISES DANGEREUSES ET DU SYSTÈME
GÉNÉRAL HARMONISÉ DE CLASSIFICATION ET
D'ÉTIQUETAGE DES PRODUITS CHIMIQUES

Sous-Comité d'experts du transport
des marchandises dangereuses

Vingt-sixième session, 29 novembre-3 décembre 2004
Point 3 b) de l'ordre du jour provisoire

QUESTIONS EN SUSPENS OU PROPOSITIONS D'AMENDEMENTS
AUX RECOMMANDATIONS RELATIVES AUX
MARCHANDISES DANGEREUSES

Matières autoréactives

Nouvelle préparation à ajouter à la liste du 2.4.2.3.2.3

Communication du Japon

La nouvelle préparation mentionnée ci-dessous satisfait aux critères du numéro ONU 3228, type E. La formule de renseignements et le procès-verbal d'épreuve sont joints au présent document en tant qu'annexes 1 et 2 respectivement. Un agrément pour le transport maritime de ces produits a déjà été délivré par le Ministère japonais de l'aménagement du territoire, de l'infrastructure et des transports.

Ces produits sont transportés du Japon vers les États-Unis d'Amérique et la Chine depuis plusieurs années et aucun incident ou accident n'a été observé.

Il est proposé d'ajouter cette préparation pour les matières autoréactives à la liste du 2.4.2.3.2.3 afin d'autoriser le transport dans les conditions appropriées.

Proposition

Ajouter la préparation suivante à la liste des matières autoréactives déjà classées au 2.4.2.3.2.3:

Matière autoréactive:	Diazo-naphtoquinone-1,2 sulfonate-5 du polymère acétone-pyrogallol
Concentration (%):	100
Méthode d'emballage:	OP8
Température de régulation:	Néant
Température critique:	Néant
Rubrique générique ONU:	3228
Remarques:	Néant.

Annex 1 (ENGLISH ONLY)**DATA SHEET TO BE SUBMITTED TO THE UNITED NATIONS
FOR NEW OR AMENDED CLASSIFICATION OF SUBSTANCES**Submitted by **Japan** Date **May 25, 2004**

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 **Acetone-pyrogallol copolymer 1,2-Naphthoquinonediazido-5-sulphonate**
- 1.2 Chemical formula **C₂₄H₂₁N₃O₆S₁**
- 1.3 Other names/synonyms **Acetone-pyrogallol copolymer 2-Diazo-1-naphthol-5-sulphonate**
UN number **UN3228**
CAS number **68584-99-6**
- 1.5 Proposed classification for the Recommendations
- 1.5.1 proper shipping name (3.1.2¹) **Self-reactive solid type E**
- 1.5.2 class/division **4.1** subsidiary risk(s) **None**
packing group **II**
- 1.5.3 proposed special provisions, if any **274**
- 1.5.4 proposed packing instruction(s) **P520**

Section 2. PHYSICAL PROPERTIES

- 2.1 Melting point or range **>290 °C**
- 2.2 Boiling point or range **not applicable**
- 2.3 Relative density at :
- 2.3.1 15 °C.....**600kg/m³**
- 2.3.2 20 °C.....**600kg/m³**
- 2.3.3 50 °C.....**600kg/m³**
- 2.4 Vapour pressure at :
- 2.4.1 50 °C.....**not applicable**
- 2.4.2 65 °C.....**not applicable**
- 2.5 Viscosity at 20 °C² **not applicable**

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

² See definition of "liquid" in 1.2.1 of the Model Regulations on the Transport of Dangerous Goods.

- 2.6 Solubility in water at 20 °C **not soluble**
- 2.7 Physical state at 20°C (2.2.1.1¹) **solid**/~~liquid~~/~~gas~~²
- 2.8 Appearance at normal transport temperatures, including colour and odour.....
Yellow powder , odourless
- 2.9 Other relevant physical properties
.....

Section 3. FLAMMABILITY

- 3.1 Flammable vapour
 - 3.1.1 Flash point (2.3.3¹) **not applicable**
 - 3.1.2 Is combustion sustained? (2.3.1.3¹) ~~yes~~ **no**
- 3.2 Autoignition temperature **not known**
- 3.3 Flammability range (LEL/UEL)..... **not known**
- 3.4 Is the substance a flammable solid? (2.4.2¹) ~~yes~~ **no**
 - 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 2.1.1.1? (2.1¹) ~~yes~~ **no**
 - 4.2.1 If yes, give details.....
 -
 -

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

- 4.3 Is the substance a desensitized explosive? (2.4.2.4¹) ~~yes~~ **no**
4.3.1 If yes, give details.....
.....
.....
- 4.4 Is the substance a self-reactive substance? (2.4.1¹)..... **yes** / ~~no~~
If yes, state:
4.4.1 exit box of flow chart Exit E
What is the self-accelerating decomposition temperature (SADT) for a 50 kg package? 65°C
Is the temperature control required? (2.4.2.3.4¹)..... ~~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? (2.4.3¹) ~~yes~~ **no**
4.5.1 If yes, give details.....
.....
.....
- 4.6 Is the substance liable to self-heating? (2.4.3¹) ~~yes~~ **no**
4.6.1 If yes, give details.....
.....
.....
- 4.7 Is the substance an organic peroxide (2.5.1¹) ~~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? 65 °C
Is temperature control required? (2.5.3.4.1¹) 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? (2.4.4¹) ~~yes~~ **no**
4.8.1 If yes, give details.....
.....
.....

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

4.9 Does the substance have oxidizing properties (2.5.1¹) ~~yes~~ no

4.9.1 If yes, give details.....
.....

4.10 Corrosivity (2.8¹) to:..... **Not corrosive**

4.10.1 mild steelmm/year at °C

4.10.2 aluminium.....mm/year at..... °C

4.10.3 other packaging materials (specify)
.....mm/year at..... °C

.....mm/year at..... °C

4.11 Other relevant chemical properties

.....
.....

Section 5. HARMFUL BIOLOGICAL EFFECTS

5.1 LD₅₀, oral (2.6.2.1.1¹) **19400**mg/kg Animal species rat

5.2 LD₅₀, dermal (2.6.2.1.2¹).....mg/kg Animal species

5.3 LC₅₀, inhalation (2.6.2.1.3¹)mg/litre Exposure time hours
orml/m³ Animal species

5.4 Saturated vapour concentration at 20 °C (2.6.2.2.4.3¹) **not applicable**

5.5 Skin exposure (2.8¹) results Exposure time24 hours
Animal species..... rabbits

5.6 Other data

.....

5.7 Human experience

.....

Section 6. SUPPLEMENTARY INFORMATION

6.1 Recommended emergency action

6.1.1 Fire (include suitable and unsuitable extinguishing agents)

Use Dry chemical, CO₂ as extinguish media

6.1.2 Spillage

Eliminate all ignition sources. Do not touch or walk through spilled material by naked hands. Take up with spilled material using clean non-sparking tools and place into loosely covered plastic containers for later disposal. Prevent entry into floor drains, storm sewer, waterways or confined areas.

¹ This and similar 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 Bulk Containers (6.8¹) ~~yes~~ no

6.2.2 Intermediate Bulk Containers (6.5¹)? ~~yes~~ no

6.2.3 Portable tanks (6.7¹)? ~~yes~~ no

If yes, give details in Sections 7, 8 and/or 9.

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

7.1 Proposed type(s)

Section 8. INTERMEDIATE BULK CONTAINERS (IBCs) (only complete if yes in 6.2.2)

8.1 Proposed type(s).....

Section 9. MULTIMODAL TANK TRANSPORT (only complete if yes in 6.2.3)

9.1 Description of proposed tank (including IMO tank type if known).....

9.2 Minimum test pressure

9.3 Minimum shell thickness

9.4 Details of bottom openings, if any

9.5 Pressure relief arrangements

9.6 Degree of filling

9.7 Unsuitable construction materials

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

Annex 2 (ENGLISH ONLY)**TEST REPORT**

1. Name of the Self-reactive solid: ACETONE-PYROGALLOL COPOLYMER
1,2-NAPHTHOQUINONEDIAZIDO-5-SULPHONATE

2. General data
 - 2.1 Composition : 100%
 - 2.2 Molecular formula : C₂₄H₂₁N₂O₆S₁
 - 2.3 Physical form : Solid
 - 2.4 Colour : Yellow
 - 2.5 Density : 600kg/m³
 - 2.6 Particle diameter : None

3. Detonation (test series A)
Box 1 of the flow chart : Does it propagate a detonation?
 - 3.1 Method : BAM 50/60 steel tube test (test A.1)
 - 3.2 Sample conditions : Temperature 26 °C, Humidity 70%
 - 3.3 Observations : Fragmented part of the tube: 11.6 cm
 - 3.4 Result : No
 - 3.5 Exit : 1.3

4. Deflagration (test series C)
Box 5 of the flow chart : Can it propagate a deflagration?
 - 4.1 Method 1 : Time/pressure test (test C.1)
 - 4.2 Sample conditions : Temperature 18 °C, Humidity 76%
 - 4.3 Observations : No pressure rise to 300psi
 - 4.4 Result : No
 - 4.5 Method 2 : Deflagration test (test C.2)
 - 4.6 Sample conditions : Temperature 16 °C , Humidity 74%
 - 4.7 Observations : Deflagration rate 0.15 mm/s
 - 4.8 Result : No
 - 4.9 Final result : No
 - 4.10 Exit : 5.3

5. Heating under confinement (test series E)
Box 9 of the flow chart : What is the effect of heating it under defined confinement?
 - 5.1 Method 1 : Koenen test (test E.1)
 - 5.2 Sample conditions : Temperature 20 °C, Humidity 91% , Mass 13.9 g
 - 5.3 Observations : Limiting diameter less than 1.0 mm
 - 5.4 Result : Low
 - 5.5 Method 2 : Dutch pressure vessel test (test E.2)
 - 5.6 Sample conditions : Temperature 18 °C, Humidity 89% , Mass 50 g
 - 5.7 Observations : Limiting diameter less than 1.0 mm

- 5.8 Result : No
- 5.9 Final result : No
- 5.10 Exit : 9.4
6. Thermal stability (outside of the flow chart: test series H)
- 6.1 Method : Heat accumulation storage test (test H.4)
- 6.2 Sample conditions : Dewar vessel
(Diameter 60mm, Height 180mm , Mass 500 cc)
- 6.3 Observations : at 60 °C no exothermal reaction
at 65°C self-promotion decomposition,
SADT 65 °C
- 6.4 Result : Control temperature is not required
7. General remarks : The classification scheme is given in Fig.1
8. Proposed assignment
- 8.1 Proper shipping name : SELF-REACTIVE SOLID TYPE E
- 8.2 UN number : 3228
- 8.3 Division : 4.1
- 8.4 Technical name : ACETONE-PYROGALLOL COPOLYMER
1,2-NAPHTHOQUINONEDIAZIDO-5-SULPHONATE
- 8.5 Concentration : 100%
- 8.6 Subsidiary risks : None
- 8.7 Packing group : II
- 8.8 Packing Method : OP8
- 8.9 Control temperature : None
- 8.10 Emergency temperature : None

* * * *

Figure 1: FLOW CHART SCHEME FOR SELF-REACTIVE SUBSTANCES

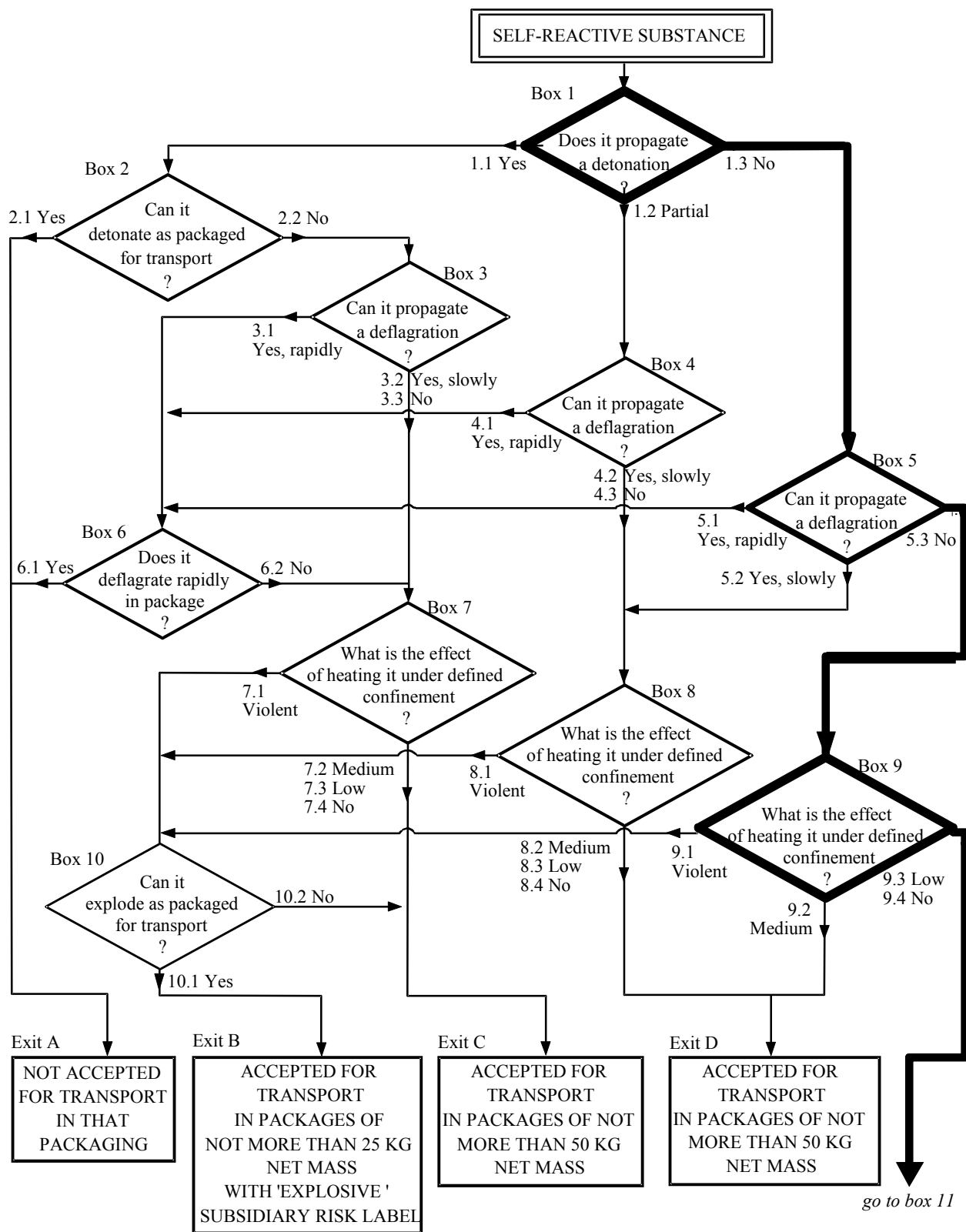


Figure1: FLOW CHART SCHEME FOR SELF-REACTIVE SUBSTANCES (cont'd)

