

WP.15/AC.2/15/INF.9

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

Working Party on the Transport of Dangerous Goods
Joint Meeting of Experts on the Regulations annexed to the
European Agreement concerning the International Carriage
of Dangerous Goods by Inland Waterways (ADN)
(ADN Safety Committee)

Fifteenth session
Geneva, 24-28 August 2009
Agenda item 7

SPECIAL AUTHORIZATIONS, DEROGATIONS AND EQUIVALENTS

Special authorization requested by Shell and proposed entry for Table C

Submitted by the Government of the Netherlands

3.2.4.1 Model special authorization under section 1.5.2

Special authorization under 1.5.2 of ADN

Under 1.5.2 of ADN, the transport in tank vessels of the substance specified in the annex to this special authorization shall be authorized in the conditions referred to therein. Before transporting the substance, the carrier shall be required to have it added to the list referred to in 1.16.1.2.5 of ADN by a recognized classification society.

This special authorization shall be valid

.....

(places and/or routes of validity)

It shall be valid for two years from the date of signature, unless it is repealed at an earlier date.

Issuing State:

Competent authority:

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Date:

Signature:

3.2.4.2 Application form for special authorizations under section 1.5.2

For applications for special authorizations, please answer the following questions and points.*

Data are used for administrative purposes only and are treated confidentially.

Applicant

SHELL CHEMICALS EUROPE B.V.

P.O. Box 8610

3067GJ Rotterdam

The Netherlands

Summary of the application

Authorization for transport in tank vessels of IP Extraction Feed as a substance of Class 3

Annexes

(with brief description)

Application made:

At: S.C.E., Rotterdam

Date: 06-08-2009

Signature: J.van Berkel

1. General data on the dangerous substance

1.1 Is it a pure substance , a mixture X, a solution ?

1.2 Technical name Isoprene extraction Feed

1.3 Synonym. : Crude C5 stream , Raw C5 , Crude C5 , Isoprene Concentrate, Crude Isoprene, Hydrocarbons C5-rich-.

1.4 Trade name. Isoprene Extraction feed

*For questions not relevant to the subject of the application, write "not applicable".
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1.5 Structure formula and, for mixtures, composition and/or concentration.

Isoprene 10 – 25%

Dicyclopentadiene 2 - 5%

Cyclopentadiene 5 - 12%

Pentanes (N+Iso) 25 - 35%

1.3 Pentadiene 10 - 20%

Other Hydrocarbons 48 - 3%

1.6 Hazard class and, where applicable classification code, packing group.

Class 3, PG I, classification code F1,

1.7 UN No. 3295

2. Physico-chemical properties

2.1 State during transport:liquid

2.2 Density of liquid at 20 ° C 678 kg/M3

2.3 Transport temperature <25 degr. C

2.4 Melting point or range not applicable.

2.5 Boiling point or range 34 - 60 ° C.

2.6 Vapour pressure at 15 ° C –53.30 kPa, 30 ° C –16.62 kPa,
40° C 18.06 kPa 50 ° C 62.95 kPa

2.7 Cubic expansion coefficient 0,001546 K⁻¹

2.8 Solubility in water at 20 ° C

Saturation concentration 0,05 mg/l (negligible)

or

Miscibility with water at 15 ° C

Complete X partial none

2.9 Colour. Waterwhite to very slightly coloured

2.10 Odour. Unpleasant

2.11 Viscosity <1 mm²/s.

2.12 Flow time (ISO 2431-1996) not Applicable.

2.13 Solvent separation test not applicable .

2.14 pH of the substance or aqueous solution. 7

2.15 Other information. none

3. Technical safety properties

- 3.1 Auto-ignition temperature in accordance with IEC 60079-4 (corresponds to DIN 51 794) 350 ° C; where applicable, indicate the temperature class in accordance with EN 50 014: not applicable.
- 3.2 Flash-point <-20 degr. C (estimated value)
For flash-points up to 175 ° C
Closed-cup test methods - non-equilibrium procedure
ABEL method: EN ISO 13736:1997
ABEL-PENSKY method: DIN 51755-1:1974 and DIN 51755-2:1978 or AFNOR method: M07-019
PENSKY-MARTENS method: EN ISO 2719:2004
LUCHAIRE apparatus: French standard AFNOR T 60-103:1968
TAG method: ASTM D 56-02
Closed-cup test methods - equilibrium procedure
Rapid equilibrium procedure: EN ISO 3679:2004; ASTM D 3278-96:2004
Closed-cup equilibrium procedure: EN ISO 1523:2002; ASTM D 3941-90:2001
For flash-points above 175 ° C
In addition to the above-mentioned methods, the following open-cup test method may be applied:
CLEVELAND method: EN ISO 2592:2002; ASTM D 92-02b
- 3.3 Explosion limits:
Determination of upper and lower explosion limits in accordance with EN 1839:2004.
- 3.4 Maximum safe gap in accordance with IEC 60079-1:2003 between 1 and 12
- 3.5 Is the substance stabilized during transport? If so, provide data on the stabilizer:
Yes, Topanol A087 (specification in product 75 – 150 ppm)
- 3.6 Decomposition products in the event of combustion on contact with air or under the influence of an external fire: not applicable
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- 3.7 Is the substance fire intensifying? Yes
- 3.8 Abrasion (corrosion) not applicable mm/year.
- 3.9 Does the substance react with water or moist air by releasing flammable or toxic gases? No
Gases released: none
- 3.10 Does the substance react dangerously in any other way? No
- 3.11 Does the substance react dangerously when reheated? No

4. Physiological hazards

- 4.1 LD₅₀ and/or LC₅₀ value. Necrosis value (where applicable, other toxicity criteria in accordance with 2.2.61.1 of ADN).
CMR properties according to Categories 1A and 1B of chapters 3.5, 3.6 and 3.7 of GHS
LD₅₀: >2000 mg/kg Rabbit LC₅₀: >20 mg/l /4 hours Rat
- 4.2 Does decomposition or reaction produce substances posing physiological hazards? (Indicate which substances where known) No
- 4.3 Environmental properties (see 2.4.2.1 of ADN)
Acute toxicity:
LC₅₀ 96 hr for fish 1 <= 10 mg/l
EC₅₀ 48 hr for crustacea 1 <= 10 mg/l
ErC₅₀ 72 hr for algae 1 <= 10 mg/l
Chronic toxicity:

NOEC mg/l not applicable
BCF mg/l or log K_{ow} not applicable
Easily biodegradable no

5. Data on hazard potential

5.1 What specific damage is to be expected if the hazard characteristics produce their effect?

- Combustion
- Injury
- Corrosion
- Intoxication in the event of dermal absorption
- Intoxication in the event of absorption by inhalation
- Mechanical damage
- Destruction
- Fire
- Abrasion (corrosion to metals)
- Environmental pollution

6. Data on the transport equipment

6.1 Are particular loading requirements envisaged/necessary (what are they)?

Yes. Tankbarge type C 50 kPa,

7. Transport of dangerous substances in tanks

7.1 With which materials is the substance to be carried compatible?

Stainless steel, Zinc coating, Epoxy coating.

8. Technical safety requirements

8.1 Taking into account the current state of science and technology, what safety measures are necessary in the light of the hazards posed by the substance or liable to arise in the course of the transport process as a whole?

Prepurge barge tanks with inert gas (Nitrogen) to <0,5% O₂, maintain O₂ level; Max product temperature during transport 25 degr. C.

8.2 Additional safety measures

- Use of stationary or mobile techniques to measure flammable gases and flammable liquid vapours
- Use of stationary or mobile techniques (toximeters) to measure concentrations of toxic substances

Proposed entry for Table C

Annex

1	2	3a	3b	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
UN-NO. or substance Identification No.	Name and description	Class	Classification code	Packing groupe	Dangers	Type of tank vessel	Cargo tank design	Cargo tank type	Cargo tank equipment	Opening pressure of the high Velocity vent valve in kPa	Maximum degree of filling in %	Relative density at 20 °C	Type of sampling device	Pump room below deck permitted	Temperature Class	Explosion groupe	Ant-explosion protection required	Equipment required	Number of cones/blue lights	Additional requirements/Remarks
3295	HYDROCARBONS, LIQUID,N.O.S. CONTAINS ISOPRENE AND PENTADIENE (vp at 50 °C higher than 110 kPa), stabilized	3	F1	I	3, unst. (N2, CMR)	C	2	2	3	50	95	0,678 gr/ml	1	YES	T4 ³⁾	II B ⁴⁾	yes	PP,EX, A	1	3,27, 29