Type: other: EC50(CNS)
Species: rat
Sex:
Number of Animals:
Vehicle:
Exposure time: 10 minute(s)
Value: 200000 ppm
Method: other: procedure as detailed in paper by Clark and Tinston (see Reference).
Year: 1982 **GLP:** no data
Test substance: other TS
Remark: EC50(CNS) is the effective concentration causing either stimulation or depression of the central nervous system (CNS) in half the animals tested.
Groups of 6 male or 6 female specific pathogen-free (SPS) Alderley Park rats were exposed to various concentrations of isobutane in air for 10 minutes. Where deaths occurred, they were during, not after, exposure and were associated with stimulant effects on the central nervous system (CNS). Recovery from non-lethal exposure was rapid, and affected animals appeared normal within 10 minutes.
Source: Phillips Petroleum Company Norway Tananger
Test substance: Isobutane, CAS No. 75-28-5

(131)

Type: other: pulmonary compliance
Species: rat
Sex:
Number of Animals:
Vehicle:
Exposure time:
Value:
Method: other: procedure as detailed in paper by Friedman, Cammarato and Aviado (see Reference).
Year: 1973 **GLP:** no data
Test substance: other TS
Remark: Isobutane produced a decrease in pulmonary compliance and inthe tidal volume of the rat.
Source: Compañia Española de Petroleos CEPSA Madrid
Test substance: Isobutane, CAS No. 75-28-5

(137)

Type: other: pulmonary compliance
Species: rat
Sex:
Number of Animals:
Vehicle:
Exposure time:
Value:
Method: other: procedure as detailed in paper by Friedman, Cammarato and Aviado (see Reference).
Year: 1973 **GLP:** no data
Test substance: other TS
Remark: Isobutane produced a decrease in pulmonary compliance and in

the tidal volume of the rat.
Source: Texaco Ltd Pembroke-Dyfed
Test substance: Isobutane, CAS No. 75-28-5

(138)

Type: other: pulmonary compliance
Species: rat
Sex:
Number of Animals:
Vehicle:
Exposure time:
Value:
Method: other: procedure as detailed in paper by Friedman, Cammarato and Aviado (see Reference).
Year: 1973 **GLP:** no data
Test substance: other TS
Remark: Isobutane produced a decrease in pulmonary compliance and in the tidal volume of the rat.
Source: OK Raffinaderi AB Göteborg
Test substance: Isobutane, CAS No. 75-28-5

(138)

Type: other: pulmonary compliance
Species: rat
Sex:
Number of Animals:
Vehicle:
Exposure time:
Value:
Method: other: procedure as detailed in paper by Friedman, Cammarato and Aviado (see Reference).
Year: 1973 **GLP:** no data
Test substance: other TS
Remark: Isobutane produced a decrease in pulmonary compliance and in the tidal volume of the rat.
Source: Skandinaviska Raffinaderi AB Lysekil
Test substance: Isobutane, CAS No. 75-28-5

(138)

Type: other: pulmonary compliance
Species: rat
Sex:
Number of Animals:
Vehicle:
Exposure time:
Value:
Method: other: procedure as detailed in paper by Friedman, Cammarato and Aviado (see Reference).
Year: 1973 **GLP:** no data
Test substance: other TS
Remark: Isobutane produced a decrease in pulmonary compliance and in the tidal volume of the rat.
Source: Phillips Petroleum Company Norway Tananger
Test substance: Isobutane, CAS No. 75-28-5

(139)

Type: LC50
Species: mouse
Sex:
Number of Animals:
Vehicle:
Exposure time: 2 hour(s)
Value: 680 mg/l
Method: other: procedure as detailed in paper by Shugaev (see Reference).
Year: 1969 **GLP:** no data
Test substance: other TS
Remark: Mice were exposed to a range of butane concentrations in airfor 2 hours. Following exposure, hydrocarbon accumulation in the animals' brains was determined.

The n-butane concentration found in mouse brain was very close to that found in rat brain.
Source: Compañia Española de Petroleos CEPSA Madrid
Test substance: n-Butane, CAS No. 106-97-8

(128)

Type: LC50
Species: mouse
Sex:
Number of Animals:
Vehicle:
Exposure time: 2 hour(s)
Value: 680 mg/l
Method: other: procedure as detailed in paper by Shugaev (see Reference).
Year: 1969 **GLP:** no data
Test substance: other TS
Remark: Mice were exposed to a range of butane concentrations in air for 2 hours. Following exposure, hydrocarbon accumulation in the animals' brains was determined.

The n-butane concentration found in mouse brain was very close to that found in rat brain.
Source: Texaco Ltd Pembroke-Dyfed
Test substance: n-Butane, CAS No. 106-97-8

(130)

Type: LC50
Species: mouse
Sex:
Number of Animals:
Vehicle:
Exposure time: 2 hour(s)
Value: 680 mg/l
Method: other: procedure as detailed in paper by Shugaev (see Reference).
Year: 1969 **GLP:** no data
Test substance: other TS
Remark: Mice were exposed to a range of butane concentrations in air for 2 hours. Following exposure, hydrocarbon accumulation in the animals' brains was determined.

The n-butane concentration found in mouse brain was very close to that found in rat brain.
Source: OK Raffinaderi AB Göteborg
Test substance: n-Butane, CAS No. 106-97-8

(130)

Type: LC50
Species: mouse
Sex:
Number of Animals:
Vehicle:
Exposure time: 2 hour(s)
Value: 680 mg/l
Method: other: procedure as detailed in paper by Shugaev (see Reference).
Year: 1969 **GLP:** no data
Test substance: other TS
Remark: Mice were exposed to a range of butane concentrations in air for 2 hours. Following exposure, hydrocarbon accumulation in the animals' brains was determined.

The n-butane concentration found in mouse brain was very close to that found in rat brain.
Source: Skandinaviska Raffinaderi AB Lysekil
Test substance: n-Butane, CAS No. 106-97-8

(130)

Type: LC50
Species: mouse
Sex:
Number of Animals:
Vehicle:
Exposure time: 2 hour(s)
Value: 680 mg/l
Method: other: procedure as detailed in paper by Shugaev (see Reference).
Year: 1969 **GLP:** no data
Test substance: other TS
Remark: Mice were exposed to a range of butane concentrations in air

for 2 hours. Following exposure, hydrocarbon accumulation in the animals' brains was determined.

The n-butane concentration found in mouse brain was very close to that found in rat brain.

Source: Phillips Petroleum Company Norway Tananger
Test substance: n-Butane, CAS No. 106-97-8

(132)

Type: other: toxic effects
Species: mouse
Sex:
Number of Animals:
Vehicle:
Exposure time: unspecified
Value: ca. 183 - 366 mg/l
Method: other: no data
Year: **GLP:** no data
Test substance: no data
Source: BASF AG Ludwigshafen
Test substance: Exposure to 20% (ca. 366 mg/l) sensitized heart to epinephrine. Exposure to 10-20 % (ca. 183-366 mg/l) resultedin bronchoconstriction and respiratory depression. Only secondary literature; no further data.
propane; no further data

(140) (141) (134)

Type: other: toxic effects
Species: cat
Sex:
Number of Animals:
Vehicle:
Exposure time: unspecified
Value:
Method: other: no data
Year: **GLP:** no data
Test substance: no data
Result: Exposure of cats by inhalation to 89% (%vol in air) resultedin decreased blood pressure; however, this was below the anesthetic exposure.
Source: BASF AG Ludwigshafen
Test substance: propane; no further data

(142) (136)

Type:	other: toxic effects
Species:	cat
Sex:	
Number of Animals:	
Vehicle:	
Exposure time:	unspecified
Value:	ca. 1150 mg/l
Method:	other: no data
Year:	**GLP:** no data
Test substance:	no data
Result:	After inhalation of a 63% propane concentration in air (ca. 1150 mg/l), mild anesthesia was observed. Only secondary literature; no further data.
Source:	BASF AG Ludwigshafen
Test substance:	propane; no further data

(143)

Type:	other: EC50 (cardiac sensitization to adrenaline)
Species:	dog
Sex:	
Number of Animals:	
Vehicle:	
Exposure time:	5 minute(s)
Value:	180000 ppm
Method:	other: Clark and Tinston, Human Toxicol., 1, 239-247, (1982)
Year:	**GLP:** no data
Test substance:	as prescribed by 1.1 - 1.4
Remark:	Die EC50 wurde mit 18 Vol. % angegeben.
Source:	BASF AG Ludwigshafen

(144)

Type:	other: EC50 (cardiac sensitization to adrenaline)
Species:	dog
Sex:	
Number of Animals:	
Vehicle:	
Exposure time:	5 minute(s)
Value:	ca. 329 mg/l
Method:	other: no data
Year:	**GLP:** no data
Test substance:	no data
Remark:	Original value: EC50 = 18 % (v/v) (180000 ppm).
Source:	BASF AG Ludwigshafen
Test substance:	propane; no further data

(145) (136)

Type: other: EC50(cardiac sensitization to adrenaline)
Species: dog
Sex:
Number of Animals:
Vehicle:
Exposure time: 5 minute(s)
Value: 180000 ppm
Method: other: procedure as detailed in paper by Clark and Tinston (see Reference).
Year: 1982 **GLP:** no data
Test substance: other TS
Remark: Dogs were exposed to hydrocarbon/air mixtures for five minutes for the determination of EC50(CS).
EC50(cardiac sensitization to adrenaline) is the effective concentration causing cardiac sensitization to adrenaline inhalf the animals tested.
Source: Compañia Española de Petroleos CEPSA Madrid
Test substance: Propane, CAS No. 74-98-6

(127)

Type: other: EC50(cardiac sensitization to adrenaline)
Species: dog
Sex:
Number of Animals:
Vehicle:
Exposure time: 5 minute(s)
Value: 70000 ppm
Method: other: procedure as detailed in paper by Clark and Tinston (see Reference).
Year: 1982 **GLP:** no data
Test substance: other TS
Remark: Dogs were exposed to hydrocarbon/air mixtures for five minutes for the determination of EC50(CS).
EC50(cardiac sensitization to adrenaline) is the effective concentration causing cardiac sensitization to adrenaline inhalf the animals tested.
Source: Compañia Española de Petroleos CEPSA Madrid
Test substance: Isobutane, CAS No. 75-28-5

(127)

Type: other: EC50(cardiac sensitization to adrenaline)
Species: dog
Sex:
Number of Animals:
Vehicle:
Exposure time: 5 minute(s)
Value: 180000 ppm
Method: other: procedure as detailed in paper by Clark and Tinston (see Reference).
Year: 1982 **GLP:** no data
Test substance: other TS
Remark: Dogs were exposed to hydrocarbon/air mixtures for five minutes for the determination of EC50(CS).
EC50(cardiac sensitization to adrenaline) is the effective

concentration causing cardiac sensitization to adrenaline in half the animals tested.
Source: Texaco Ltd Pembroke-Dyfed
Test substance: Propane, CAS No. 74-98-6

(129)

Type: other: EC50(cardiac sensitization to adrenaline)
Species: dog
Sex:
Number of Animals:
Vehicle:
Exposure time: 5 minute(s)
Value: 70000 ppm
Method: other: procedure as detailed in paper by Clark and Tinston (see Reference).
Year: 1982 **GLP:** no data
Test substance: other TS
Remark: Dogs were exposed to hydrocarbon/air mixtures for five minutes for the determination of EC50(CS).
EC50(cardiac sensitization to adrenaline) is the effective concentration causing cardiac sensitization to adrenaline in half the animals tested.
Source: Texaco Ltd Pembroke-Dyfed
Test substance: Isobutane, CAS No. 75-28-5

(129)

Type: other: EC50(cardiac sensitization to adrenaline)
Species: dog
Sex:
Number of Animals:
Vehicle:
Exposure time: 5 minute(s)
Value: 180000 ppm
Method: other: procedure as detailed in paper by Clark and Tinston (see Reference).
Year: 1982 **GLP:** no data
Test substance: other TS
Remark: Dogs were exposed to hydrocarbon/air mixtures for five minutes for the determination of EC50(CS).
EC50(cardiac sensitization to adrenaline) is the effective concentration causing cardiac sensitization to adrenaline in half the animals tested.
Source: OK Raffinaderi AB Göteborg
Test substance: Propane, CAS No. 74-98-6

(129)

Type: other: EC50(cardiac sensitization to adrenaline)
Species: dog
Sex:
Number of Animals:
Vehicle:
Exposure time: 5 minute(s)
Value: 70000 ppm
Method: other: procedure as detailed in paper by Clark and Tinston (see Reference).
Year: 1982 **GLP:** no data
Test substance: other TS
Remark: Dogs were exposed to hydrocarbon/air mixtures for five minutes for the determination of EC50(CS).
EC50(cardiac sensitization to adrenaline) is the effective concentration causing cardiac sensitization to adrenaline in half the animals tested.
Source: OK Raffinaderi AB Göteborg
Test substance: Isobutane, CAS No. 75-28-5

(129)

Type: other: EC50(cardiac sensitization to adrenaline)
Species: dog
Sex:
Number of Animals:
Vehicle:
Exposure time: 5 minute(s)
Value: 180000 ppm
Method: other: procedure as detailed in paper by Clark and Tinston (see Reference).
Year: 1982 **GLP:** no data
Test substance: other TS
Remark: Dogs were exposed to hydrocarbon/air mixtures for five minutes for the determination of EC50(CS).
EC50(cardiac sensitization to adrenaline) is the effective concentration causing cardiac sensitization to adrenaline in half the animals tested.
Source: Skandinaviska Raffinaderi AB Lysekil
Test substance: Propane, CAS No. 74-98-6

(129)

Type: other: EC50(cardiac sensitization to adrenaline)
Species: dog
Sex:
Number of Animals:
Vehicle:
Exposure time: 5 minute(s)
Value: 70000 ppm
Method: other: procedure as detailed in paper by Clark and Tinston (see Reference).
Year: 1982 **GLP:** no data
Test substance: other TS
Remark: Dogs were exposed to hydrocarbon/air mixtures for five minutes for the determination of EC50(CS).
EC50(cardiac sensitization to adrenaline) is the effective

concentration causing cardiac sensitization to adrenaline in half the animals tested.
Source: Skandinaviska Raffinaderi AB Lysekil
Test substance: Isobutane, CAS No. 75-28-5

(129)

Type: other: EC50(cardiac sensitization to adrenaline)
Species: dog
Sex:
Number of Animals:
Vehicle:
Exposure time: 5 minute(s)
Value: 180000 ppm
Method: other: procedure as detailed in paper by Clark and Tinston (see Reference).
Year: 1982 **GLP:** no data
Test substance: other TS
Remark: Dogs were exposed to hydrocarbon/air mixtures for five minutes for the determination of EC50(CS).
EC50(cardiac sensitization to adrenaline) is the effective concentration causing cardiac sensitization to adrenaline in half the animals tested.
Source: Phillips Petroleum Company Norway Tananger
Test substance: Propane, CAS No. 74-98-6

(131)

Type: other: EC50(cardiac sensitization to adrenaline)
Species: dog
Sex:
Number of Animals:
Vehicle:
Exposure time: 5 minute(s)
Value: 70000 ppm
Method: other: procedure as detailed in paper by Clark and Tinston (see Reference).
Year: 1982 **GLP:** no data
Test substance: other TS
Remark: Dogs were exposed to hydrocarbon/air mixtures for five minutes for the determination of EC50(CS).
EC50(cardiac sensitization to adrenaline) is the effective concentration causing cardiac sensitization to adrenaline in half the animals tested.
Source: Phillips Petroleum Company Norway Tananger
Test substance: Isobutane, CAS No. 75-28-5

(131)

Type: other: acute toxic effects on the heart
Species: dog
Sex:
Number of Animals:
Vehicle:
Exposure time: 5 minute(s)
Value: ca. 183 mg/l
Method: other: no data
Year: **GLP:** no data
Test substance: no data
Remark: Exposure to 100000 ml/m3 (100000 ppm = 10%; ca. 183 mg/l) resulted in a weak sensitization of the heart to adrenalin. Electrocardiography revealed ventricular fibrillation. Only secondary literature; no further data.
Source: BASF AG Ludwigshafen
Test substance: propane; no further data

(146)

Type: other: cardiac sensitization to epinephrine
Species: dog
Sex:
Number of Animals:
Vehicle:
Exposure time: 10 minute(s)
Value:
Method: other: procedure as detailed in paper by Krantz, Carr and Vitcha (see Reference).
Year: 1948 **GLP:** no data
Test substance: other TS
Remark: Test Method

Dogs in groups of 2 to 12 were exposed to individual liquid or gaseous hydrocarbons in air at concentrations of 10% to 90%, following intravenous injection with epinephrine. Cardiac sensitization was determined from electrocardiogram recordings of anaesthetized animals.
Test Results

All hydrocarbons tested, except ethylene, caused cardiac sensitization.

None of the twelve dogs exposed to ethylene demonstrated cardiac sensitization. Two of the four dogs exposed to ethane were sensitized. Most of the dogs exposed to the other hydrocarbons were sensitized.
Source: Compañia Española de Petroleos CEPSA Madrid
Test substance: Test Substances - test substances used were: ethane, propane, propylene, butane, isobutane, 2-butene, cyclobutane, cyclobutene, cyclopentane, isopentane and 2,2-dimethyl butane.

(147)

Type: other: cardiac sensitization to epinephrine
Species: dog
Sex:
Number of Animals:
Vehicle:
Exposure time: 10 minute(s)
Value:
Method: other: procedure as detailed in paper by Krantz, Carr and Vitcha (see Reference).
Year: 1948 **GLP:** no data
Test substance: other TS
Remark: Test Method

Dogs in groups of 2 to 12 were exposed to individual liquid or gaseous hydrocarbons in air at concentrations of 10% to 90%, following intravenous injection with epinephrine. Cardiac sensitization was determined from electrocardiogram recordings of anaesthetized animals.
Test Results

All hydrocarbons tested, except ethylene, caused cardiac sensitization.

None of the twelve dogs exposed to ethylene demonstrated cardiac sensitization. Two of the four dogs exposed to ethane were sensitized. Most of the dogs exposed to the other hydrocarbons were sensitized.
Source: Texaco Ltd Pembroke-Dyfed
Test substance: Test Substances - test substances used were: ethane, propane, propylene, butane, isobutane, 2-butene, cyclobutane, cyclobutene, cyclopentane, isopentane and 2,2-dimethyl butane.

(148)

Type: other: cardiac sensitization to epinephrine
Species: dog
Sex:
Number of Animals:
Vehicle:
Exposure time: 10 minute(s)
Value:
Method: other: procedure as detailed in paper by Krantz, Carr and Vitcha (see Reference).
Year: 1948 **GLP:** no data
Test substance: other TS
Remark: Test Method

Dogs in groups of 2 to 12 were exposed to individual liquid or gaseous hydrocarbons in air at concentrations of 10% to 90%, following intravenous injection with epinephrine. Cardiac sensitization was determined from electrocardiogram recordings of anaesthetized animals.
Test Results

All hydrocarbons tested, except ethylene, caused cardiac

sensitization.

None of the twelve dogs exposed to ethylene demonstrated cardiac sensitization. Two of the four dogs exposed to ethane were sensitized. Most of the dogs exposed to the other hydrocarbons were sensitized.

Source: OK Raffinaderi AB Göteborg

Test substance: Test Substances - test substances used were: ethane, propane, propylene, butane, isobutane, 2-butene, cyclobutane, cyclobutene, cyclopentane, isopentane and 2,2-dimethyl butane.

(148)

Type: other: cardiac sensitization to epinephrine
Species: dog
Sex:
Number of Animals:
Vehicle:
Exposure time: 10 minute(s)
Value:
Method: other: procedure as detailed in paper by Krantz, Carr and Vitcha (see Reference).
Year: 1948 **GLP:** no data
Test substance: other TS
Remark: Test Method

Dogs in groups of 2 to 12 were exposed to individual liquid or gaseous hydrocarbons in air at concentrations of 10% to 90%, following intravenous injection with epinephrine. Cardiac sensitization was determined from electrocardiogram recordings of anaesthetized animals.
Test Results

All hydrocarbons tested, except ethylene, caused cardiac sensitization.

None of the twelve dogs exposed to ethylene demonstrated cardiac sensitization. Two of the four dogs exposed to ethane were sensitized. Most of the dogs exposed to the other hydrocarbons were sensitized.

Source: Skandinaviska Raffinaderi AB Lysekil

Test substance: Test Substances - test substances used were: ethane, propane, propylene, butane, isobutane, 2-butene, cyclobutane, cyclobutene, cyclopentane, isopentane and 2,2-dimethyl butane.

(148)

Type: other: cardiac sensitization to epinephrine
Species: dog
Sex:
Number of Animals:
Vehicle:
Exposure time: 10 minute(s)
Value:
Method: other: procedure as detailed in paper by Krantz, Carr and Vitcha (see Reference).
Year: 1948 **GLP:** no data
Test substance: other TS
Remark: Test Method

Dogs in groups of 2 to 12 were exposed to individual liquid or gaseous hydrocarbons in air at concentrations of 10% to 90%, following intravenous injection with epinephrine.
Cardiac sensitization was determined from electrocardiogram recordings of anaesthetized animals.
Test Results

All hydrocarbons tested, except ethylene, caused cardiac sensitization.

None of the twelve dogs exposed to ethylene demonstrated cardiac sensitization. Two of the four dogs exposed to ethane were sensitized. Most of the dogs exposed to the other hydrocarbons were sensitized.
Source: Phillips Petroleum Company Norway Tananger
Test substance: Test Substances - test substances used were: ethane, propane, propylene, butane, isobutane, 2-butene, cyclobutane, cyclobutene, cyclopentane, isopentane and 2,2-dimethyl butane.

(149)

Type: other: toxic effects
Species: dog
Sex:
Number of Animals:
Vehicle:
Exposure time: unspecified
Value: ca. 18.3 - 60.4
Method: other: no data
Year: **GLP:** no data
Test substance: no data
Result: Exposure of dogs to 10000 ppm (1%; ca. 18.3 mg/l) caused hemodynamic changes, exposure to 25000 ppm (2.5%; ca. 45.8 mg/l) resulted in blood pressure changes. Decreased inotropism of the heart, decreased mean aortic pressure, stroke volume, and cardiac output and increased pulmonary vascular resistance were reported following exposure to 33000 ppm (3.3%; ca. 60.4 mg/l).
Source: BASF AG Ludwigshafen
Test substance: propane; no further data

(150) (151) (134) (152)

Type: other
Species: guinea pig
Sex:
Number of Animals:
Vehicle:
Exposure time:
Value:
Method: other
Year: **GLP:** no data
Test substance: as prescribed by 1.1 - 1.4
Remark: Meerschweinchen wurden 5; 30 oder 120 min. gegenueber 2.4 - 2.9 Vol.% bzw. 4.7 - 5.5 Vol.% Propan exponiert.
In der niederen Konzentration wurde unregelmaessige Atmung beschrieben.
In der hohen Konzentration wurde bei kurzer Expositionsdauer Tremor, bei laengerer Expositionsdauer Brechreiz, Erbrechen und Benommenheit beschrieben. Die Symptome waren reversibel, bei der Sektion wurden keine behandlungsbedingten Effekte festgestellt.
Die Studie liegt nur als Sekundaerzitat vor.
Source: BASF AG Ludwigshafen

(153)

Type: other: toxic effects
Species: guinea pig
Sex:
Number of Animals:
Vehicle:
Exposure time: unspecified
Value: ca. 43.9 - 100.6 mg/l
Method: other
Year: **GLP:** no data
Test substance: no data
Remark: Exposure to 2.4-2.9% and 4.9-5.5% by volume (ca. 43.9-53.1 and 89.7-100.6 mg/l, respectively) for periods of 5, 30, 60, or 120 min. resulted in irregular breathing, tremors, stupor, and CNS depression. At the lower concentration, the first sign of toxicity was irregular breathing. At the higher concentraion, tremors were ovservedduring the first 5 minutes; longer periods of exposure resulted in nausea, retching, ataxia, and narcosis. These effects were rapidly reversible upon cessation of exposure. Necropsy revealed no substance-related effects. Only secondary literature; no further data.
Source: BASF AG Ludwigshafen
Test substance: propane; no further data

(154) (155) (156)

Type: other: toxic effects
Species: guinea pig
Sex:
Number of Animals:
Vehicle:
Exposure time: 1 hour(s)
Value: ca. 91.5 mg/l
Method: other: no data
Year: **GLP:** no data
Test substance: no data
Result: Exposure to 5% (ca. 91.5 mg/l) for 1 hour resulted in stupor. No further data.
Source: BASF AG Ludwigshafen
Test substance: propane; no further data

(141)

Type: other: toxic effects
Species: monkey
Sex:
Number of Animals:
Vehicle:
Exposure time: 15 minute(s)
Value: ca. 183 - 366 mg/l
Method: other: no data
Year: **GLP:** no data
Test substance: no data
Result: Groups of 3 anesthetized rhesus monkeys (Macaca mulatta) were exposed to 10 and 20% (ca. 183 and 366 mg/l, respectively) for 5 and 15 min., respectively. Heart rate, myocardial contractility and blood pressure were unaffected.A substance-related bronchoconstriction and respiratory depression were observed.
Source: BASF AG Ludwigshafen
Test substance: propane; no further data

(157) (158) (134) (159) (136)

5.1.3 Acute Dermal Toxicity

-

5.1.4 Acute Toxicity, other Routes

-

5.2 Corrosiveness and Irritation

5.2.1 Skin Irritation

Species: rabbit
Concentration:

Exposure:
Exposure Time:
Number of Animals:
PDII:
Result: irritating
EC classificat.:
Method: other: no data
Year: **GLP:** no data
Test substance: other TS
Remark: only secondary literature
Source: BASF AG Ludwigshafen
Test substance: mixture of n-propane and isobutane (ca. 13-14% n-propane)
(140)

Species: human
Concentration:

Exposure:
Exposure Time:
Number of Animals:
PDII:
Result: corrosive
EC classificat.: corrosive (causes burns)
Method: other
Year: **GLP:** no data
Test substance: no data
Method: no data available
Remark: data valid for liquified propane
no evidences for gaseous propane
Source: LIQUIGAS S.p.A. MILANO

Species: other
Concentration:

Exposure:
Exposure Time:
Number of Animals:
PDII:
Result:
EC classificat.:
Method:
Year: **GLP:**
Test substance:
Remark: Propan (Gas) wirkt nicht reizend an der Haut, der direkte Kontakt mit der fluessigen Substanz kann jedoch zu Aetzungen und Erfrierungen fuehren.
Source: BASF AG Ludwigshafen

(160)

Species: other
Concentration:

Exposure:
Exposure Time:
Number of Animals:
PDII:
Result:
EC classificat.:
Method:
Year: **GLP:** no data
Test substance: no data
Remark: Propane gas is not irritating to the skin. Direct contact with liquified propane causes burns and frostbite.
Source: BASF AG Ludwigshafen
Test substance: propane; no further data

(159) (136) (160)

5.2.2 Eye Irritation

Species: rabbit
Concentration:
Dose:
Exposure Time:
Comment:
Number of Animals:
Result: not irritating
EC classificat.: not irritating
Method: other: procedure as detailed in book by Grant (see Reference).
Year: **GLP:** no data
Test substance: other TS
Remark: Injection of liquid butane into the anterior eye chamber of rabbits did not cause disturbance, and all effects disappeared in 2-4 days.
Source: Compañia Española de Petroleos CEPSA Madrid
Test substance: n-Butane, CAS No. 106-97-8

(161)

Species: rabbit
Concentration:
Dose:
Exposure Time:
Comment:
Number of Animals:
Result: not irritating
EC classificat.: not irritating
Method: other: procedure as detailed in book by Grant (see Reference).
Year: **GLP:** no data
Test substance: other TS
Remark: Injection of liquid butane into the anterior eye chamber of rabbits did not cause disturbance, and all effects

disappeared in 2-4 days.
Source: Texaco Ltd Pembroke-Dyfed
Test substance: n-Butane, CAS No. 106-97-8
(162)

Species: rabbit
Concentration:
Dose:
Exposure Time:
Comment:
Number of Animals:
Result: not irritating
EC classificat.: not irritating
Method: other: procedure as detailed in book by Grant (see Reference).
Year: **GLP:** no data
Test substance: other TS
Remark: Injection of liquid butane into the anterior eye chamber of rabbits did not cause disturbance, and all effects disappeared in 2-4 days.
Source: OK Raffinaderi AB Göteborg
Test substance: n-Butane, CAS No. 106-97-8
(162)

Species: rabbit
Concentration:
Dose:
Exposure Time:
Comment:
Number of Animals:
Result: not irritating
EC classificat.: not irritating
Method: other: procedure as detailed in book by Grant (see Reference).
Year: **GLP:** no data
Test substance: other TS
Remark: Injection of liquid butane into the anterior eye chamber of rabbits did not cause disturbance, and all effects disappeared in 2-4 days.
Source: Skandinaviska Raffinaderi AB Lysekil
Test substance: n-Butane, CAS No. 106-97-8
(162)

Species: rabbit
Concentration:
Dose:
Exposure Time:
Comment:
Number of Animals:
Result: not irritating
EC classificat.: not irritating
Method: other: procedure as detailed in book by Grant (see Reference).
Year: **GLP:** no data
Test substance: other TS
Remark: Injection of liquid butane into the anterior eye chamber of rabbits did not cause disturbance, and all effects

disappeared in 2-4 days.
Source: Phillips Petroleum Company Norway Tananger
Test substance: n-Butane, CAS No. 106-97-8

(163)

Species: human
Concentration:
Dose:
Exposure Time:
Comment:
Number of Animals:
Result: slightly irritating
EC classificat.: irritating
Method: other
Year: **GLP:** no data
Test substance: no data
Method: no data available
Remark: data valid for liquified propane
no evidences for gaseous propane
Source: LIQUIGAS S.p.A. MILANO

Species: other
Concentration:
Dose:
Exposure Time:
Comment:
Number of Animals:
Result:
EC classificat.:
Method:
Year: **GLP:**
Test substance:
Remark: Propan (Gas) wirkt nicht reizend an den Augen.
Source: BASF AG Ludwigshafen

(164)

Species: other
Concentration:
Dose:
Exposure Time:
Comment:
Number of Animals:
Result:
EC classificat.:
Method:
Year: **GLP:** no data
Test substance: no data
Remark: Gaseous propane is not an irritant to the eyes.
Source: BASF AG Ludwigshafen
Test substance: propane; no further data

(159) (136) (165)