



Committee for Risk Assessment

RAC

Annex 2

Response to comments document (RCOM)

to the Opinion proposing harmonised classification and labelling at
Community level of

NITROBENZENE

ECHA/RAC/CLH-O-0000002350-87-01/A2

**Adopted
3 February 2012**

COMMENTS AND RESPONSE TO COMMENTS ON CLH: PROPOSAL AND JUSTIFICATION

[ECHA has compiled the comments received via internet that refer to several hazard classes and entered them under each of the relevant categories/headings as comprehensive as possible. Please note that some of the comments might occur under several headings when splitting the given information is not reasonable.]

Substance name: Nitrobenzene

CAS number: 98-95-3

EC number: 202-716-0

General comments

Date	Country / Person / Organisation / MSCA	Comment	Response	Rapporteur's comment
24/02 /2011	UK / MSCA	We support the proposal to classify nitrobenzene with R48/25 and R65. However, we do not support the proposal to classify nitrobenzene for effects on or via lactation (H362/R64). Please refer to our specific comments in the reproductive toxicity section.	Your support is appreciated.	Thank you for support for classification R48/25. The dossier submitter has withdrawn R65 since the existing data do not meet relevant classification criteria: surface tension above 33mN/m at 25 degrees. Data on kinematic viscosity not provided.
02/03 /2011	Sweden / Ing-Marie Olsson / MSCA	We agree with the submitting member state that the data as presented in the CLH dossier support classification of nitrobenzene with R52-53 (according to DSD) or Aquatic Chronic 3 (according to CLP).	Thank you for your support	Thank you for support
03/03 /2011	Spain / Manuel Carbo / MSCA	We are in agreement with the change on the classification proposal done by Germany.	Your support is appreciated.	Thank you for your note.

ANNEX 2 - COMMENTS AND RESPONSE TO COMMENTS ON CLH PROPOSAL ON NITROBENZENE

Date	Country / Person / Organisation / MSCA	Comment	Response	Rapporteur's comment
03/03 /2011	Ireland / Health and Safety Authority	The Irish CA is in agreement with the proposal for two Annex VI entries for nitrobenzene on the basis of the level of the impurity, benzene, contained within the substance.	Your support is appreciated.	Support for use in classification such impurity as benzene has been used
03/03 /2011	Portugal / Maria do Carmo Palma / Portuguese Environment Agency National Authority	<p>Considering the present proposal, we agree with the need to establish a revised harmonised classification & labelling for Nitrobenzene. We support the proposed Classification and Labelling for the environment as it fulfils the criteria established both in CLP Regulation and 67/548/EEC.</p> <p>Nevertheless we have some general remarks considering the two entries foreseen for this substance: Both entries have been identified by the same index number, but they could be two different entries, since they have different classifications. We also consider that it would be helpful to include an explanatory note for these two entries, specifying the reason for this spited entry. Additionally, we consider that the designation of these entries should be as follows: -Nitrobenzene (containing < 0.1% of impurities, each); -Nitrobenzene (containing ≥ 0.1% and < 0.3% of benzene, as an impurity).</p>	<p>Your support is appreciated.</p> <p>We agree and changed it accordingly.</p>	Thank you for support.

Carcinogenicity

Date	Country / Person / Organisation / MSCA	Comment	Response	Rapporteur's comment
24/02/2011	UK / MSCA	The current classification of nitrobenzene as Carc Cat 3 (R40) / Carc Cat 2 (H351) in Annex VI of the CLP Regulation is confirmed.	Thank you.	Agree
03/03/2011	Ireland / Health and Safety Authority	The Irish CA is in agreement with the proposed classification Carc. Cat. 1; R45 (Carc 1A- H350) for nitrobenzene containing ≥0.1% benzene.	Thank you.	Agree

Mutagenicity

Date	Country/ Person/ Organisation/ MSCA	Comment	Response	Rapporteur's comment
24/02/2011	UK / MSCA	We agree that the available data do not support classification of nitrobenzene for this endpoint.	Thank you.	Agree
03/03/2011	Ireland / Health and Safety Authority	The Irish CA is in agreement with the proposed classification Muta. Cat. 2; R46 (Mut 1B- H340) for nitrobenzene containing $\geq 0.1\%$ benzene.	Thank you.	Agree

Toxicity to reproduction

Date	Country / Person/ Organisa- tion/MSCA	Comment	Response	Rapporteur's comment
24/02 /2011	UK / MSCA	<p>Page 68- Effects on or via lactation- The dossier proposed to classify nitrobenzene for effects on or via lactation (R64 and H326), based on a low molecular weight, high octanol-water partition coefficient and an increased susceptibility of newborns to develop methaemoglobinemia (although there was no experimental evidence to indicate that this occurred in laboratory animals). We do not consider this information alone to be sufficient to justify the classification of nitrobenzene as R64 and H326 according to DSD and CLP criteria, respectively.</p> <p>The 'guidance on the application of the CLP</p>	<p>Thank you for your critical opinion. Following section 3.7.2 of EC Regulation No 1272/2008 (CLP), table 3.7.1.b, the argumentation is based on bullets (b) and (c), physicochemical properties and calculations on uptake, distribution, metabolism and excretion in mothers and newborns (not shown). The two-generation study adds plausibility for this argumentation <i>in vivo</i>. The newborns' increased vulnerability due to fetal-Hb, and increased accumulation due to reduced NADH-cyt b5-reductase and G6PD-activity, and reduced liver capacity supports the caveat laid down in the CLP guidance, "or where there is evidence that the offspring may be more sensitive to the substance's toxicity than adult." (CLP guidance section 3.7.2.2.2.ii)</p> <p>The Mitsumori (1994) study showed decreased body weights after lactation day 4 of pups of the low dose group too, which had been present</p>	<p>Agree with comments of UK/MSCA as alterations of pups development during lactation were rather small in the Dodds study and were due to maternal toxicity. The strong maternal toxicity was most probably a cause</p>

ANNEX 2 - COMMENTS AND RESPONSE TO COMMENTS ON CLH PROPOSAL ON NITROBENZENE

		<p>criteria' states that 'positive data should usually be available to show that a substance leads to an adverse effect in the offspring due to effects on lactation to support classification'. Classification without direct evidence can be considered, in exceptional circumstances, based on a quantitative comparison of the estimated transfer via the milk and the threshold for toxicity in the pups. The Mitsumori et al (1994) study, conducted <u>similar</u> to OECD TG 422, showed no evidence of toxicity induced via lactation, despite significant methaemoglobinemia and maternal toxicity observed in the male and female parents, respectively. In the absence of experimental evidence for toxicity during lactation, and without supportive evidence that nitrobenzene occurs in the milk at concentrations great enough to induce foetal toxicity, we consider that nitrobenzene does not meet the criteria for classification for effects on or via lactation.</p> <p>Page 68. Human data- We do not regard the Dollinger (1949) case study to be reliable because the substance was unidentified.</p>	<p>only in the middle and high dose group before. However, the Dodd (1987) two-generation study proves better suited to evaluate lactational toxicity than Mitsumori (1994), as the latter includes a mere four days post parturition and showed high mortality of dams in the high dose group. While maternal toxicity and methaemoglobinaemia (same animal/strain) were reported elsewhere (Mitsumori et al, 1994), all pups had started in the same range of body weight at parturition (Dodd et al. 1987). Dodd et al. then report lower body weights in weanlings (F1) of the high dose group, with significance at the end of the lactation period, which are fully reversible after an initial two-week recovery period in the F1-generation (before exposure commences during the second pre-mating phase). This clearly supports the concept of lactational toxicity.</p> <p>We do neither. The Dollinger case report was the initial reason to investigate the p/c-properties with regard to potential accumulation in milk.</p> <p>We propose to classify nitrobenzene as Lactation Hazard H362 (R64) due to its p/c-properties and suspected accumulation in milk, supported by the two-generation study, and the increased vulnerability of human newborns to the primary mode of action of acute toxicity, notwithstanding longer-term low-dose effects, which are among nitrobenzenes' classification.</p>	<p>of alterations in pups development as explained in the Background document.</p>
02/03 /2011	Netherlands & Belgium / Ronald Van den	R64/H362 (May cause harm to breast-fed children, reproductive toxicant). With respect to the proposed classification for effects during lactation (R64) we would like to	The argumentation is based on physicochemical properties and calculations on uptake, distribution, metabolism and excretion in mothers and newborns (not shown). The two-	Agree with these comments. No classification on effects on or via

ANNEX 2 - COMMENTS AND RESPONSE TO COMMENTS ON CLH PROPOSAL ON NITROBENZENE

<p>Bosch / The Aniline and Mono Nitrobenzene REACH consortium / Industry or Trade Association</p>	<p>emphasize, that the argumentation is largely based on assumptions (CLH Report, page 68/69). Though a higher susceptibility of neonates towards methaemoglobinaemia is scientifically confirmed (Goldstein et al. 1996), a correlation to an adverse effect in the fetus, to a critical MetHb-concentration in the fetal blood or to a critical MNB-concentration in breast feeding dams can not be demonstrated based on the current database. E.g. no effects during lactation were observed in neonates of a 2-Generation Inhalation Fertility study in rats (Dodd et al. 1985, 1987; see CLH Report, page 58/59). No signs of systemic toxicity indicative for an increased level of fetal methaemoglobine were identified.</p> <p>All observed effects (reduced fertility due to effects on male reproductive organs) were taken into account by classifying as reproductive toxicant Cat.3 (R62, CLH Report, page 58/59).</p> <p>The human case study cited in the discussion (Dollinger, 1949) was evaluated in the hazard assessment of the same report (CLH Report, page 17), with an agreed opinion that it was impossible to identify the causative agent responsible for the reported effect, we agree with this. This is the</p>	<p>generation animal study supports this argumentation. While maternal toxicity and methaemoglobinaemia (same animal/strain) were reported elsewhere (Mitsumori et al, 1994), all pups had started in the same range of body weight at parturition (Dodd et al. 1987). Dodd et al. then report lower body weights in weanlings (F1) of the high dose group, with significance at the end of the lactation period, which are fully reversible after an initial two-week recovery period in the F1-generation (before exposure commences during the second pre-mating phase). This clearly supports the concept of lactational toxicity. The Mitsumori (1994) study showed decreased body weights after lactation day 4 of pups of the low dose group too, which had been present only in the middle and high dose group before. EC regulation No 1272/2008: "3.7.1.5. Adverse effects on or via lactation are also included in reproductive toxicity, but for classification purposes, such effects are treated separately (see Table 3.7.1 (b)). This is because it is desirable to be able to classify substances specifically for an adverse effect on lactation so that a specific hazard warning about this effect can be provided for lactating mothers." The case study reported by Dollinger is not meant to prove hazardous properties in human subjects. Instead, its case study format is only an indicator. It was the initial reason to calculate possible exposure levels in breast fed babies, based on nitrobenzenes' physicochemical properties (mainly log P, the resulting milk/plasma-ratio), through which dangerous exposure levels are possible. The</p>	<p>lactation is proposed. Explanation in BD and DO.</p> <p>In fact it is argued in BD and draft opinion that existing data justify classification of nitrobenzene to Repr. Cat. 2; R60 as animal data are sufficient to prove effect on male fertility.</p>
---	---	--	---

ANNEX 2 - COMMENTS AND RESPONSE TO COMMENTS ON CLH PROPOSAL ON NITROBENZENE

		<p>current opinion making the report of no value in reaching a conclusion about classification and labeling.</p> <p>Our current Classification and Labelling Directives (Dir 67/548 and GHS/CLP) provide a clear guidance for classification for effects during lactation (Annex 6 to Directive 67/548, 4.2.3.3.; GHS, 3.7.1.). None of the indicated classification criteria are fulfilled for MNB, which in our opinion is not resulting in a classification for effects during lactation.</p>	<p>newborns' increased vulnerability due to fetal-Hb, and increased accumulation due to reduced NADH-cyt b5-reductase and G6PD-activity, and reduced liver capacity adds plausibility to the scenario.</p> <p>We propose to classify nitrobenzene as Lactation Hazard H362 (R64) due to its p/c-properties and suspected accumulation in milk, supported by the two-generation study, and the increased vulnerability of human newborns to the primary mode of action of acute toxicity, notwithstanding longer-term low-dose effects, which are among nitrobenzenes' classification.</p>	
02/03 /2011	Sweden / Ing-Marie Olsson / MSCA	<p>We agree that the classification as Reproductive toxicant Category 3, R64 (according to DSD) and Reproductive toxicant Category 2, H362 (according to CLP) and see that the reasoning is further supported by the fact that elevated methaemoglobin levels have been measured in the repeated toxicity inhalation studies</p>	<p>Your support is much appreciated.</p>	<p>Thank you, however I am of the opinion that based on several studies on two animal species exposed by gavage, inhalation and dermal route there is sufficient evidence that nitrobenzene affects spermatogenesis and reduce fertility of male rats therefore classification to category Repr. 1B or category Repr. Cat. 2. R60 is warranted</p>
03/03 /2011	Ireland / Health and Safety	<p>The Irish CA is not in agreement with the proposed classification R64 (H362). In our opinion, it has not been conclusively proven that nitrobenzene is</p>	<p>The case study reported by Dollinger is not meant to prove hazardous properties in human subjects. Instead, its case study format is only</p>	<p>Agree with these comments. No classification on</p>

ANNEX 2 - COMMENTS AND RESPONSE TO COMMENTS ON CLH PROPOSAL ON NITROBENZENE

	<p>Authority</p>	<p>the substance responsible for the effects seen in the reported study (Dollinger 1949). The dossier recommends that a cross-fostering study may be required during Substance Evaluation to distinguish between in utero and lactational exposure. This indicates a potential data gap, demonstrating that insufficient evidence is available to justify classification for lactational effects at this time.</p>	<p>an indicator. It was the initial reason to calculate possible exposure levels in breast fed babies, based on nitrobenzenes' physicochemical properties (mainly log P, the resulting milk/plasma-ratio), through which dangerous exposure levels are possible. The newborns' increased vulnerability due to fetal-Hb, and increased accumulation due to reduced NADH-cyt b5-reductase and G6PD-activity, and reduced liver capacity supports the caveat laid down in the CLP guidance, "or where there is evidence that the offspring may be more sensitive to the substance's toxicity than adult."</p> <p>We propose to classify nitrobenzene as Lactation Hazard H362 (R64) due to its p/c-properties and suspected accumulation in milk, supported by the two-generation study, and the increased vulnerability of human newborns to the primary mode of action of acute toxicity, notwithstanding longer-term low-dose effects, which are among nitrobenzenes' classification.</p>	<p>effects on or via lactation is proposed. Explanation in BD and DO.</p>
--	------------------	--	---	---

Respiratory sensitisation

Date	Country / Person / Organisation / MSCA	Comment	Response	Rapporteur's comment
No comments received.				

Other hazards and endpoints

Date	Country/ Person/ Organisation /MSCA	Comment	Response	Rapporteur's comment
24/02 /2011	UK / MSCA	Page 40. Repeated dose toxicity. We agree with the proposal to classify nitrobenzene for repeated dose toxicity (R48;25/ STOT-RE 1 (oral)).	Your support is appreciated.	Thank you for comment. Aspiration Hazard is not now proposed by DS as

ANNEX 2 - COMMENTS AND RESPONSE TO COMMENTS ON CLH PROPOSAL ON NITROBENZENE

Date	Country/ Person/ Organisation /MSCA	Comment	Response	Rapporteur's comment
		<p>Page 70. Aspiration hazard. We agree with the proposal to classify nitrobenzene for an aspiration hazard (R65/H304).</p>		<p>existing data do not meet classification criteria .</p>
01/03 /2011	Belgium / Denauw / Frederic / MSCA	<p>We support the environmental classification proposal by Germany to change the current classification of N R51/53 into R52/53(following dir. 67/548/EC). Following the criteria of regulation 1272/2008 nitrobenzene should be classified as aquatic Chronic 3, H412</p> <p>Some editorial or/and minor comments:</p> <ul style="list-style-type: none"> • Please refer in your proposal of GHS classification also to the hazard class and category • 4.1.2.2 screening tests : second paragraph (OECD301E) : <ul style="list-style-type: none"> - Please explain what is meant by "physicochemical batch" - When looking at different publically available tools, slightly different outcomes were found relating to the Koc value, but all within the same range. <p>Through calculation of the log Koc via the TGD equitation for phenols, anilines, benzo-nitriles, nitrobenzenes ($\log Koc=0.63\log Kow+0.90$) and through EUSES a Koc value of 118L/kg is obtained. The estimated Koc (EPISUITE 4.0-Koc win) is 226.4 L/kg (from MCI) and 147.1L/kg (from Log Kow =1.85). EPISUITE 4.0 -Koc</p>	<p>Thank you for your support. We have considered them in the updated dossier.</p>	<p>Thank you for support</p>

ANNEX 2 - COMMENTS AND RESPONSE TO COMMENTS ON CLH PROPOSAL ON NITROBENZENE

Date	Country/ Person/ Organisation /MSCA	Comment	Response	Rapporteur's comment
		<p>win also provides an experimental log K_{oc} (log K_{oc} =1.94, Schürman G. et al 2006)</p> <p>Following the criteria of Mensink et al, 1995 nitrobenzene is slightly mobile and shows potential to adsorb to soil and sediment.</p> <ul style="list-style-type: none"> • 4.1.3 Summary and discussion of persistence : editorial comment : "... did not achieve the pass level ..." 		
01/03 /2011	France / MSCA	<p>The recommendations agreed at the TC C&L to add classification T; R48/25 according to the directive 67/548/EEC for nitrobenzene for human health are supported in agreement with the classification proposed in the CLH report.</p> <p>In addition, the German CA proposed to classify nitrobenzene as reproductive toxicant H362 (R64 according to the directive 67/548/EEC) (p.68); and as aspiration toxicity category 1, H304 (Xn, R65 according to the directive 67/548/EEC) (p.69).</p> <p>These endpoints were not discussed to our knowledge at TC C&L and considering the available data, the recommendations for the classifications "reproductive toxicant H362" and "aspiration toxicity category 1, H304" regarding the classification of nitrobenzene for human health are supported.</p>	<p>Thank you for your support. We have considered them in the updated dossier.</p> <p>We added data of chronic toxicity</p> <p>Your support is much appreciated.</p> <p>Thank you for your support. We have considered them in the updated dossier.</p>	<p>Thank you for your support .</p> <p>Based on several studies on two animal species exposed by gavage, inhalation and dermal route there is sufficient evidence that nitrobenzene affects spermatogenesis and reduce fertility of male rats therefore classification to category Repr. 1B or category Repr. Cat. 2. R60 is warranted</p> <p>Aspiration Hazard is not now proposed by DS as existing data do not meet classification criteria .</p>

ANNEX 2 - COMMENTS AND RESPONSE TO COMMENTS ON CLH PROPOSAL ON NITROBENZENE

Date	Country/ Person/ Organisation /MSCA	Comment	Response	Rapporteur's comment
		<p>German CA proposed to change the current classification for Nitrobenzene – environmental hazard part - in tables 3.1 and 3.2 of Annex VI of EC Regulation No 67/548 and EC Regulation No 1272/2008 as follows:</p> <ul style="list-style-type: none"> • For impurities of less than 0.1% each: from N; R51-53 and Aquatic chronic 2 -H411 to N; R52-53 (Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment) and Aquatic chronic 3 - H412 (Harmful to aquatic life with long lasting effects) respectively. • For substance containing benzene as an impurity of equal or more than 0.1%: Also from R51-53 and H411 to R52-53 and H412. <p>Although the biodegradation pass level is not met (70% DOC or 60% ThOD or ThCO₂ within 28d), all the presented aquatic acute toxicity studies - in fish, crustacean and algae - show LC₅₀ values between 10 and 100mg/l. Regarding these results, the classification Aquatic chronic 3 - H412 (N; R52-53) may appear as appropriated. However, French CA would like to underline certain lacks which return less convincing the proposal and should therefore be completed to justify such changes in environmental hazard classification:</p> <p>1) Classification is related to impurities, but no link is made with the substance used in the studies. In addition to better manage this issue: "impurities of less than 0.1% each" should be clearly linked to the 5 impurities mentioned in this report (and is water considered as an</p>	<p>Because of the recent revision of the classification criteria for long-term hazards to the aquatic environment (Commission Regulation (EU) No 286/2011) a classification of nitrobenzene is not justified. The NOEC of all three trophic levels are > 1mg/l. A removal of the env. classification should be proposed. We will clarify the further steps.</p>	<p>Data on environmental hazards were compared with criteria given in second ATP of the CLP regulation</p>

ANNEX 2 - COMMENTS AND RESPONSE TO COMMENTS ON CLH PROPOSAL ON NITROBENZENE

Date	Country/ Person/ Organisation /MSCA	Comment	Response	Rapporteur's comment
		<p>impurity?), ranges of percentages instead of single percentage values should be used to describe each impurity, and the fact that total mentioned impurities can reach 2% whereas the purity is claimed 99.3% should be clarified.</p> <p>2) The proposal is to lower the aquatic hazard classification, but no new data or new way to use the data is explained; this history is needed and information should then be organized around.</p> <p>3) Some studies which can be found in RAR 2007 were omitted in this proposal, whereas they may point LC50 values close or under the limit value of 10mg/l which is important for discussing category 2 versus category 3 classifications. For example, the study in fish <i>Oryzias latipes</i> of Yoshioka et al., 1986b shows an EC50 48h equal to 1,8mg/l shouldn't have been omitted even test couldn't be validated (this must then be described).</p> <p>4) Page73: Only one fish early life stage test for nitrobenzene exists (Black et al., 1982), and isn't detailed whereas it could be crucial to discuss aquatic chronic toxicity. It's said in the proposal "A careful examination of the entire information provided by Black et al. gave no plausible reason for the inconsistency of the data. It was not possible to confirm the low effect values for the other substances. Hence it can be assumed that the values for nitrobenzene (e.g. 27 days NOEC < 1 µg/l) are not representative as well", but without any figures and/or explanations. This key point has to be detailed, notably: does it follows or is close to any guideline? As reasoning is that other tested substance are also incoherent, could be provided a comparison of benzene NOEC in this study and the range found by other authors? Could be added some experimental details for example precautions regarding the volatility or about the quantification method that</p>		

ANNEX 2 - COMMENTS AND RESPONSE TO COMMENTS ON CLH PROPOSAL ON NITROBENZENE

Date	Country/ Person/ Organisation /MSCA	Comment	Response	Rapporteur's comment
		<p>may explain different results?</p> <p>5) Similarly, a chronic study was conducted on Daphnia magna (Canton et al., 1985) which allowed the estimation of a NOEC (21 days) equal to 1.9 mg/l, but study was rejected because no full information about the test conditions was available. In fact when in RAR 2007 one can find some indications & guarantees that test was conducted under acceptable conditions (daphnids were obtained from standardised laboratory cultures, rules of the Dutch Standardisation Organisation were followed, etc). Last but not least, in RAR 2007 can be also found the study of Bringmann and KühnKühn (1978) which EC3 8d for Microcystis aeruginosa was calculated 1.9 mg/l.</p> <p>6) Elsewhere, it should be recalled that NOEC-values will be relevant when new GHS criteria (3rd revision, 2009) for chronic toxicity will be implemented into the CLP Regulation. Indeed, clarifications about chronic tests are already welcomed.</p>		
02/03 /2011	Netherlands & Belgium / Ronald Van den Bosch / The Aniline and Mono Nitrobenzene REACH consortium / Industry or Trade Association	<p>R65/H304 (May be fatal if swallowed and enters airways).</p> <p>As for the aspiration hazard classification, page 69/70, the conclusion that Nitrobenzene requires R65/H304 is not justified, we argue for no classification on two bases: The substance is not a hydrocarbon, a hydrocarbon is an organic compound consisting entirely of hydrogen and carbon.</p>	<p>Thank you for your critical opinion.</p> <p>Hydrocarbons were identified as aspiration hazards due to their extensive use in consumer products, e.g. lubricants or as fuels, and the experience from cases of accidental poisonings due to improper labelling (kerosene stored in foodstuff bottles). Therefore, the first basis for classification "hydrocarbon" should be</p>	<p>Thank you both parties for important discussion and provision of arguments to withdraw classification R65/H304. It important to note that the data on kinematic viscosity which is a base for classification into aspiration category are not given.</p>

ANNEX 2 - COMMENTS AND RESPONSE TO COMMENTS ON CLH PROPOSAL ON NITROBENZENE

Date	Country/ Person/ Organisation /MSCA	Comment	Response	Rapporteur's comment
		<p>The classification is not justified if surface tension is > 33 mN/m at 25 degrees. For nitro benzene, we have measured surface tension at 25 degrees of 42 mN/m. Both of the above arguments are clearly justified in ECHA ChR.7a guidance (may 2008). From the IUCLID: In accordance with column 2 of REACH Annex VII, the surface activity does not need to be tested as based on chemical structure, no surface activity is to be expected. Reference for surface tension of MNB is: Jasper, J.J., "The Surface Tension of Pure Liquid Compounds, " J Phys Chem Ref Data, 1, 4, 841-1009 (1972).</p>	<p>regarded as an example for classes of substances likely to exhibit such a hazardous property only, and not a selection criterion. The aspiration hazard can be assessed through the physicochemical properties <i>kinematic viscosity</i> and/or <i>surface tension</i>. (Craan, A. G. 1996, Int. J. of Injury Control and Safety Promotion, 3: 3, 153 - 164, DOI: 10.1080/09298349608945774)</p> <p>Surface tension is neither mentioned in EC regulation No 1272/2008 (e.g. CLP section 3.10.2.), nor its respective guidance, for the assessment of aspiration hazard. However, as REACH guidance R.7a describes a more comprehensive basis for this assessment, it is proposed to replace "hydrocarbons" with "and has a surface tension of 25 [33] mN/m or less, measured at 40°C [25°C]" by the next ATP to EC</p>	

ANNEX 2 - COMMENTS AND RESPONSE TO COMMENTS ON CLH PROPOSAL ON NITROBENZENE

Date	Country/ Person/ Organisation /MSCA	Comment	Response	Rapporteur's comment
			<p>regulation No 1272/2008 (CLP). To aid in expert judgement, the following parameters should be observed:</p> <ul style="list-style-type: none"> - a boiling point lower than 50°C, - hydrosolubility and -absence of nauseous or emetic properties <p>do not favor completion of the aspiration process (Craan, 1996).</p> <p>Also, the acute toxic effects of nitrobenzene outweigh classification with R65/H304. Yet for other cases, an adaptation of the regulation is proposed, to include the physicochemical parameter surface tension, instead of a substance class (hydrocarbons) to identify aspiration hazard.</p> <p>Therefore we withdraw the proposal to classify nitrobenzene with Aspiration Hazard Category 1, R65/H304, although it qualifies as a(n aromatic nitro-) hydrocarbon and has a low</p>	

ANNEX 2 - COMMENTS AND RESPONSE TO COMMENTS ON CLH PROPOSAL ON NITROBENZENE

Date	Country/ Person/ Organisation /MSCA	Comment	Response	Rapporteur's comment
			<p>kinematic viscosity. In spite of this, its polarity of 42 mN/m is clearly above those of "hydrocarbons" and leads to a surface tension in the range of alcohol in water (12% v/v), 46 mN/m.</p> <p>[The reference cited, J.J. Jasper 1972, is a review comprising data on the surface tension of NB collected from 1893-1967. More recently conducted studies on surface tension generally agree with the range of the value given here, being above 33 mN/m (25°C).]</p>	
03/03 /2011	Ireland / Health and Safety Authority	<p>Repeat dose toxicity: The Irish CA is in agreement with classifying for the oral route of exposure for repeat dose toxicity resulting in a classification of T; R48/23/24/25 (STOT-RE 1- H372) for both nitrobenzene entries in Annex VI.</p> <p>As the substance affects multiple organ systems through every route of exposure, the Irish CA would like to suggest the following associated hazard statement: "H372 Causes damage to organs through prolonged or repeated exposure".</p>	<p>Your support is appreciated.</p> <p>We agree with the proposal to omit "oral, dermal or inhalation" from the statement H372.</p>	<p>Thank you for support .</p> <p>Aspiration Hazard is not now proposed by DS as existing data do not meet classification criteria .</p>

ANNEX 2 - COMMENTS AND RESPONSE TO COMMENTS ON CLH PROPOSAL ON NITROBENZENE

Date	Country/ Person/ Organisation /MSCA	Comment	Response	Rapporteur's comment
		<p>Aspiration Hazard: The Irish CA is in agreement with the proposed classification Xn; R65 (Aspir. 1- H304) for both nitrobenzene entries in Annex VI.</p> <p>Environmental Hazard Assessment: The Irish CA is in agreement with the proposed classification of R52/53 for Table 3.1 of Annex VI to CLP and H412 for Table 3.2 of Annex VI to CLP.</p>	<p>Your support is appreciated.</p>	<p>Agree, thank you</p>