COMMENTS AND RESPONSE TO COMMENTS ON CLH: PROPOSAL AND JUSTIFICATION

Comments provided during public consultation are made available in this table as submitted by the webform. Please note that the comments displayed below may have been accompanied by attachments which are not published in this table.

ECHA accepts no responsibility or liability for the content of this table.

Last data extracted on 07.05.2019

Substance name: silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica; pyrogenic, synthetic amorphous, nano, surface treated silicon dioxide
CAS number: 68909-20-6
EC number: 272-697-1
Dossier submitter: France

GENERAL COMMENTS

Date	Country	Organisation	Type of Organisation	Comment number
03.05.2019	Japan	Japan Business Machine and Information System Industries Association	Industry or trade association	1

Comment received

Japan Business Machine and Information System Industries Association (JBMIA) appreciates the opportunity to give our comments on the proposal for Harmonized Classification and Labelling for silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica; pyrogenic, synthetic amorphous, nano, surface treated silicon dioxide.

In the CLH report for silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica; pyrogenic, synthetic amorphous, nano, surface treated silicon dioxide, classification of the substance as STOT RE 2 is proposed.

The classification of the substance as STOT RE 2 is proposed based on the results of the 90-d inhalation rat study for Aerosil R 974 which is an analogous substance (IIIA6.4.3_01).

However, in the same report it is also stated that "all the observed effect were characteristic of an inflammation and were reversible" and "the effect could be mainly related to a pulmonary overload and no dose-response relationship could be established" for the study.

These effects are not intrinsic to the substance but are considered to be common to PSLT. Classification of substance in the CLP Regulations should not be given based on these results.

About JBMIA:
Japan Business Machine and Information System Industries Association (JBMIA) is the

industry organization which aims to contribute the development of the Japanese economy and the improvement of the office environment through the comprehensive development of the Japanese business machine and information system industries and rationalization thereof.
The advancement of information technology has brought about sophistication of the age of digitalization and networking and resulted in significant changes in the office environment accordingly. In response to the shift of business emphasis from the hardware to total business solutions including products, JBMIA carries out active committee/group activities regarding important issues that the industries are confronting in and outside Japan by conducting investigations and researches regarding the policy proposals, international cooperation, prevention of warming, environment preservation, standardization, product safety, etc., by deepening the association with the sales and software-related companies, as well as the manufacturers.

Japan Business Machine Information System Industries Association (JBMIA)
Address: Lila-Hijirizaka, 3-4-10 Minato-ku, Tokyo 108-0073 Japan
TEL: +81-3-6809-5010 FAX:+81-3-3451-1770
https://www.jbmia.or.jp/index.php

Date	Country	Organisation	Type of Organisation	Comment number
03.05.2019	Belgium	Association of Synthetic Amorphous Silica Producers (ASASP)	Industry or trade association	2

Comment received

The Members of the Association of Synthetic Amorphous Silica Producers, ASASP, a Cefic Sector Group, hereby take the opportunity to provide input to the public consultation on the proposed hazard classification of Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica (EC No. 272-697-1), i.e. AEROSIL® R 812 S, in the following abbreviated as 'HMDZ surface-treated SAS', as STOT RE 2 (H373) by the French Competent Authority.
During a careful review of the CLH proposal, ASASP realised that not all critical and up to date information pertaining to the inhalation hazard of HMDZ surface-treated SAS may have been considered by the French Competent Authority during their report drafting. ASASP requests for including the more recent information that was not presented in the original active biocide application for HMDZ surface-treated SAS under the Biocidal Products Directive 1998/8 for considering the French CLH proposal. Full references are provided in the accompanying reference list.
General comments:
The French Competent Authority justifies its proposal to classify HMDZ surface-treated SAS as STOT RE 2 (H373) based on effects reported for a 90-day rat inhalation toxicity study with AEROSIL® R 974, which was carried out by the contract laboratory TNO (TNO, 1987). AEROSIL® R 974 is a hydrophobic synthetic amorphous silica (SAS) and has been surface-treated with dichlorodimethylsilane (DDS). In 1991, based on material from the original study, TNO reported slight to moderate increase of lung collagen content with signs of focal interstitial fibrosis, granuloma like lesions and septal cellularity in the lungs of rats after inhalation exposure to AEROSIL® R 974 (Reuzel et al., 1991). The French Competent Authority considered these findings to meet the classification criteria for STOT RE 2 (H373). No further data or information was presented in the CLH Report for supporting the classification proposal.

Recently, a re-analysis of the lung tissue slides of the original TNO study was conducted by an expert pathology working group (PWG). This was carried out according to the current criteria for pathology assessment (EPL, 2016; Weber et al., 2018). This re-analysis clearly demonstrated that focal interstitial fibrosis, an irreversible disease, was not present in the lungs of the AEROSIL® R 974 exposed rats at any point in time. The study pathologist of the original TNO study, Dr. Ruud Woutersen, agreed with the outcome of the PWG's re-evaluation of the original lung slides in a subsequent statement (Woutersen, 2017).
The effects observed with AEROSIL® R 974 represent markers of typical inflammatory responses of the rat lung after continued high exposures to particles, which may persist over a long time (ECETOC, 2006). Ultimately, all effects of AEROSIL® R 974 were fully reversible and cannot be termed adverse according to WHO/IPCS definitions (WHO, 2004). Accordingly, the conditions that would trigger a STOT RE 2 classification as detailed in Paragraph 3.9.2.7.3 (Annex I) of the CLP Regulation (EC, 2008) and related ECHA guidance documents (ECHA, 2017) have not been met. ASASP thus disagrees with the French Competent Authority's interpretation of the TNO study and their conclusion that the effects observed in this study meet the CLP STOT RE 2 (H373) classification criteria.
ASASP also points out that, in addition to the incomplete interpretation of the TNO (1987) study, the CLH report does not consider the value of existing animal inhalation studies with similar SAS materials or epidemiological studies done in SAS production plants. The CLP Regulation requires the consideration of the weight of evidence of all relevant information pertaining to the hazard of a substance including physico-chemical properties, animal data or occupational exposure data. In particular, regarding HMDZ surface-treated SAS, the key information requiring consideration when assessing repeated dose toxicity via the inhalation route is
• SAS is rapidly cleared from the lung. SAS is soluble under physiological conditions and therefore has little persistence in the lung. Clearance occurs by hydrolysis or phagocytosis by alveolar macrophages.
• No intrinsic toxicity of SAS. There is no indication of systemic toxicity following repeated inhalation of SAS including AEROSIL® R 974 at the sole exposure concentration of 34.7 mg/m3.
• Effects induced in the lung by SAS-inhalation are reversible, hence adaptive and not adverse. Numerous inhalation toxicity studies have been conducted with hydrophilic and hydrophobic SAS, including AEROSIL® R 974. All SAS grades show a similar pattern of toxicity during inhalation toxicity studies, representing an adaptation of the lung to high and sustained particle exposure (e.g., transient increases in inflammation, markers of cell injury, and lung collagen content; macrophage accumulation). Both, hydrophilic and hydrophobic SAS do not induce progressive fibrosis in the lung. Hence, all effects are limited and fully reversible with no severe consequences on organ function.
• Epidemiological studies demonstrate absence of effects of worker exposure to SAS on lung function. SAS have a long history of production and use. No indication of pneumoconiosis or other exposure-related pulmonary diseases were observed in epidemiological studies. The particle sizes of commercial SAS handled do not penetrate the lung.
Considering all information, it is obvious to ASASP that HMDZ surface-treated SAS does not warrant a classification for specific target organ toxicity following repeated inhalation exposure. The proposal for a classification as STOT RE 2 (H373) by the French Competent Authority is neither based on a thorough evaluation of all available as well as up to date scientific information pertaining to the inhalation toxicity of SAS materials, nor on the appropriate consideration of the CLP criteria for a STOT RE 2 (H373) classification.
More detail, in particular with regard to the re-evaluation of the Reuzel study by the PWG, is provided in the attached pdf document entitled "ASASP1090a-CLH surface treated SAS

PBS". ASASP hereby explicitly refers to the expert reviews conducted and submitted to this public consultation by Professors W. Dekant and L. Levy.

ECHA note – An attachment was submitted with the comment above. Refer to public attachment ASASP1090a-CLH surface treated SAS PBS.pdf

Date	Country	Organisation	Type of Organisation	Comment number
10.04.2019	Germany		Individual	3

Comment received

The available rat inhalation toxicity study for AEROSIL® R 974, a hydrophobic synthetic amorphous silica (SAS), and a reevaluation of the reported lesion according to current standards were examined regarding consequences of the results for classification and labeling. In addition, relevant epidemiological data were evaluated. Classification of AEROSIL® R 812 S as STOT-RE 2 H373 is proposed based on results after repeated inhalation exposures of rats to AEROSIL® R 974 applying read-across. AEROSIL® R 974 inhalation was reported to induce the typical responses of the rat lung to high particle loads and focal interstitial fibrosis was diagnosed to be present in recovery groups sacrificed 13 and 26 weeks, but not 52 weeks after the termination of inhalation exposure. Slides from the study were reanalyzed applying current standards. The reanalysis of the original study sections clearly show that pulmonary effects following inhalation exposures to AEROSIL® R 974 were reversible after termination of exposure. AEROSIL® R 974 inhalation did not induce progressive fibrosis of the lung or systemic toxicity. As other SAS, AEROSIL® R 974 was rapidly cleared from lungs and lymph nodes after the end of the inhalation exposure periods. In addition, effects observed in the toxicity studies with AEROSIL® R 974 represent biomarkers of the reversible inflammation processes caused by the high particle loads. Therefore, changes in the lungs of AEROSIL® R 974-exposed animals are not adverse as they are reversible; "serious changes to the biochemistry or hematology of the organism" are not produced. A large number of occupational epidemiology studies do not give any indication for adverse lung effects in workers with occupational exposure to SAS. Due to the reversibility, the absence of any toxicity on other organs then the lung and of biochemical and hematological changes in experimental animals, and absence of adverse effects in the lungs of workers exposed to SAS, a classification of AEROSIL® R 812 S as STOT-RE 2 H373 is not warranted and is inconsistent with the guidance in EU legislation.
For details see uploaded pdf file.

ECHA note – An attachment was submitted with the comment above. Refer to confidential attachment SAS-CL-March-2019-ECHA.pdf

Date	Country	Organisation	Type of Organisation	Comment number
03.05.2019	Sweden		MemberState	4

Comment received

We note that the CLH-report is not a stand-alone document. A non-confidential Annex I is lacking, only a confidential annex Doc IIIA is available.
Available studies in the report are only very briefly described, not allowing independent assessment and conclusion by the reader.

Date	Country	Organisation	Type of Organisation	Comment number
30.04.2019	Netherlands	<confidential>	Company-Importer	5

Comment received

The proposal's scope is not made clear enough, and without more clarification, it will give rise to confusion among stakeholders, such as manufacturer, importers, and users of the substance identified with CAS 68909-20-6.

It is quite reasonable to limit the scope only to the "nano" form of the substance, as only the respirable particulate is expected to cause the adverse effect under discussion. If so, then the proposal, if made into regulation, should give much a clearer definition and the boundaries and not just the IUPAC names, EC No and CAS No for the substance for which the proposed regulation will apply. In line with the scope definition used in Table 1 on page 2 (Primary particle size - range covered by this dossier: 6.9-8.6 nm; shape of primary particles - spherical), exactly the same narrowing of the substance specification properties should be applied in the section 2.1 that summarizes the proposed harmonized classification and labelling in Table 5 at the bottom of page 5. In the column "Notes", the line "Resulting Annex VI entry if agreed by RAC and COM" should be amended by both qualifiers of primary particle size and shape of primary particles.

In addition, there should be guidance for the regulatory community how to apply the definition of the scope, including how to measure the parameters by which the business can determine whether the substance in question is in the scope or out of the scope. If no such guidance is given, then the purpose of "harmonized" classification and labelling will not be achieved, as each responsible party may apply the scope in different ways. Insofar it is necessary in our opinion not only to mention the required test equipment (TEM - Transmission Electron Microscopy) itself but also to specify the exact test method to be applied. The ideal standard would be a universally applicable OECD method for nano particles. In absence of such specific OECD method for TEM, ECHA should define the method(s) that is/are fully accepted for determination of the nano particle size in the EU.

Date	Country	Organisation	Type of Organisation	Comment number
29.04.2019	Netherlands		MemberState	6

Comment received

Read-across for environmental toxicity endpoints
The current proposal for no classification for environmental hazards is based on a read across. NL notices that the read across justification (beginning of section 10) is only based on physico/chemical characteristics of the substance (particle size, coating etc.). According to “Appendix R.6-1 for nanomaterials applicable to the Guidance on QSARs and Grouping of Chemicals” a robust read-across justification should be based on more aspects like toxicity, fate and toxicokinetics. For ecotoxicity there is no data for the target substance, this, together with the differences in coating, particle size and hydrophobicity, would normally make the read across not acceptable. However, it is noticed that the ecotoxicity endpoints for the read across substance are > 10 000 mg/L, these values are far above any trigger for environmental classification. Taken into account that the hydrophobicity of the target substance is higher than that of the read across substances which reduces the bioavailability for water organisms and as such probably also reduces the toxicity, it is considered unlikely that the target substance will show any toxicity in the considered tests. Nevertheless we are in the opinion that a more robust read-across

justification should be provided with reference to Appendix R.6-1 as mentioned above. When a more proper and more robust scientific justification is provided, we will agree with the proposal for no classification for environmental hazards.

Read-across for human toxicity endpoints.
The classification proposal is partly based on a read across with other surface treated, synthetic amorphous, nano surface treated silica. The substitute aerosil R 972 or R 974 differ in surface modification, i.e. with dichlorodimethylsilane instead of hexamethyl-silazane, however this is not believed to affect its toxicity because these groups have no particular activity themselves. However, it is unclear whether the coating is stable when the particles are taken up by the lysosomes of macrophages and, if not, whether different substances are formed within the microsomes. In addition, there may be differences in the rate at which the surface treatment is removed and the non-surface treated particles are present in the lysosomes. Please explain.
In addition, it should be explained to what extent the 'slightly lower' methyl-densities of the substitute aerosils (however, not defined), affect the available silanolgroups and whether this is of influence on the activity of these substances.

Like silanamine, aerosil R 972 and R 974 consist of spherical particles, however, these appear to be somewhat larger (12-16 nm compared to 6.9-8.6 nm according to the specifications) resulting in a smaller surface area. Though this could potentially result in a negative effect regarding inhalatory toxicity, with regard to the limited data available, and the precaution in drawing conclusions on the studies with aerosil R 972 and R 974, NL agrees with applying read-across if the questions above are sufficiently answered.

CARCINOGENICITY

Date	Country	Organisation	Type of Organisation	Comment number
29.04.2019	Netherlands		MemberState	7
Comment received				
No information was provided on the carcinogenicity after inhalation exposure. There is a concern for carcinogenicity after inhalation seen the increase in 8-OH-guanine DNA adducts in the lung. In addition, the provided oral study has several limitations. Therefore, it should be made clear that the conclusion for no classification is based on absence of data. This is also applicable to several other endpoints.				

Date	Country	Organisation	Type of Organisation	Comment number
03.05.2019	Sweden		MemberState	8
Comment received				
We would like to emphasize that the data do not allow to make a conclusion on the carcinogenic potential of Aerosil R 812 S and Aerosil R 812 based on available data. We prefer that it is stated in the CLH-report and/or RAC-opinion that classification is not warranted due to insufficient data.				

MUTAGENICITY

Date	Country	Organisation	Type of Organisation	Comment number
29.04.2019	Netherlands		MemberState	9
Comment received				

An increase in 8-OH-guanine DNA adducts was observed in lung cells after intratracheal installation. Even though this change may be only temporarily, it is a change of the structure of the DNA. Therefore, it fulfils the definition for genotoxicity ((Paragraph 3.5.1.3). Therefore, it cannot be concluded that all studies were negative. However, an increase in genotoxicity in somatic cells in the absence of positive mutagenicity tests in vivo or in vitro is insufficient for classification.

Date	Country	Organisation	Type of Organisation	Comment number
03.05.2019	Sweden		MemberState	10
Comment received				
We would like to emphasize that the data do not allow to make a conclusion on the mutagenic potential of Aerosil R 812 S and Aerosil R 812 based on available data. We prefer that it is stated in the CLH-report and/or RAC-opinion that classification is not warranted due to insufficient data.				

TOXICITY TO REPRODUCTION

Date	Country	Organisation	Type of Organisation	Comment number
29.04.2019	Netherlands		MemberState	11
Comment received				
An increase in missing sternebrae was reported for the developmental study in mice at the highest dose but considered not adverse for development. In our opinion missing sternebrea should be considered adverse and would warrant classification. However, also maternal mortality was reported at this dose level. Therefore, it could be argued that the developmental effect is secondary to the maternal toxicity. However, this requires additional information on the maternal toxicity such as the number of death mice and a justification. Regarding the read-across from non-surface treated SiO2 particles to surface treated SiO2 particles, see the general comments. In addition, the lower bioavailability of surface treated SiO2 particles should be better explained, as more hydrophobic substances (i.e. surface treated SiO2) usually tend to display a higher level of bioaccumulation.				

Date	Country	Organisation	Type of Organisation	Comment number
03.05.2019	Sweden		MemberState	12
Comment received				
Adverse effects on sexual function and fertility There is only one poorly described one-generation screening reproductive toxicity study available of Aerosil R 972. Since there were severe limitations of this study (e.g. no test guideline, no GLP, few parameters investigated, only one dose, only 2 males, mating ratio 1:5, mating period 14 days) the negative results are considered to be of limited value and hence not sufficient for concluding on the potential of Aerosil R 812 S and Aerosil R 812 to cause adverse effects on sexual function and fertility. Adverse effects on the development of the offspring Since there is no information on the characterisation of the (hydrophilic) tested material amorphous non surface-treated silica (Syloid, silica gel) it is difficult to judge the relevance of the four developmental toxicity studies included in the CLH proposal for the (hydrophobic) surface treated amorphous silicon dioxide (Aerosil R 812 S and Aerosil R				

812).
Moreover, since only examination of external gross abnormalities and no histophathology were done on the pups in the one-generation reproduction toxicity study we cannot support the DS conclusion that there were no malformations in rat pups in this study. Overall, the available data do not allow making a conclusion on the potential of Aerosil R 812 S and Aerosil R 812 to cause developmental toxicity.

OTHER HAZARDS AND ENDPOINTS – Specific Target Organ Toxicity Repeated Exposure

Date	Country	Organisation	Type of Organisation	Comment number
29.04.2019	Netherlands		MemberState	13
Comment received				
STOT SE It is stated that there are no studies available for STOT SE. However, acute studies are available after oral and inhalation exposure. We suggest comparing the effects observed in these studies with the STOT SE criteria. STOT RE The classification proposal is partly based on a read across with other surface treated, synthetic amorphous, nano surface treated silica. The current proposed classification STOT RE 2, H373 (lungs, inhalation) by the submitter is based on a read across from the results of a 90-d inhalation rat study with Aerosil R 974, in which slight to moderate significant increase of the lung collagen content with signs of focal interstitial fibrosis, on the granuloma-like lesions and on septal cellularity (still present at 52 weeks of recovery) after inhalation exposure to 35 mg/m3 for 6h/day Aerosil R 974 was seen. This finding is used in order to classify the substance with STOT RE 2 according to the threshold by effects observed at a dose between 20 – 200 mg/m3 during 6h/day. We agree that the results of this study justify classification in category 2. However, this study does not exclude classification in category 1 because no group is available with exposure below 35 mg/m3. Therefore, information from the 14 day range-finding study should be taken into account. For a 14-day study, the guidance value for STOT RE 1 is 120 mg/m3 when applying Haber's rule according to paragraph 3.9.2.9.5. At the dose level of 80 mg/m3, several adverse effects on the lung where observed. In addition, an increase in RBC was observed. This is a compensatory effect showing that the lung function was severely affected. Therefore, the effects observed at 80 mg/m3 warrant classification as STOT RE 1.				

Date	Country	Organisation	Type of Organisation	Comment number
26.04.2019	United Kingdom		Individual	14
Comment received				
see attached document ECHA note – An attachment was submitted with the comment above. Refer to public attachment BCP Opinion - Len Levy 26thApril 2019.docx				

Date	Country	Organisation	Type of Organisation	Comment number
03.05.2019	Sweden		MemberState	15

Comment received
We agree that a classification in STOT RE 2, H373 (lung) for pyrogenic, synthetic amorphous, nano, surface treated silicon dioxide is warranted based on findings in a 90-day inhalation repeated dose toxicity study of Aerosil R 974 in rat: slight to moderate significant increase of the lung collagen content with signs of focal interstitial fibrosis, granuloma-like lesions and septal cellularity (still present at 52 weeks of recovery) at 35 mg/m3. These findings are in agreement with effects considered to support classification for Category 1 and 2 as in listed in 3.8.2.1.7.3 (b) and (e). Moreover, we agree that the results from the available epidemiological study cannot be used as evidence of no effect and cannot rule out the pulmonary effect reported in rats.

Date	Country	Organisation	Type of Organisation	Comment number
03.05.2019	Japan	Japan Business Machine and Information System Industries Association	Industry or trade association	16

Comment received
Japan Business Machine and Information System Industries Association (JBMIA) appreciates the opportunity to give our comments on the proposal for Harmonized Classification and Labelling for silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica; pyrogenic, synthetic amorphous, nano, surface treated silicon dioxide. In the CLH report for silanamine, 1,1,1-trimethyl-N-(trimethylsilyl)-, hydrolysis products with silica; pyrogenic, synthetic amorphous, nano, surface treated silicon dioxide, classification of the substance as STOT RE 2 is proposed. The classification of the substance as STOT RE 2 is proposed based on the results of the 90-d inhalation rat study for Aerosil R 974 which is an analogous substance (IIIA6.4.3_01). However, in the same report it is also stated that "all the observed effect were characteristic of an inflammation and were reversible" and "the effect could be mainly related to a pulmonary overload and no dose-response relationship could be established" for the study. These effects are not intrinsic to the substance but are considered to be common to PSLT. Classification of substance in the CLP Regulations should not be given based on these results.   About JBMIA Japan Business Machine and Information System Industries Association (JBMIA) is the industry organization which aims to contribute the development of the Japanese economy and the improvement of the office environment through the comprehensive development of the Japanese business machine and information system industries and rationalization thereof. The advancement of information technology has brought about sophistication of the age of digitalization and networking and resulted in significant changes in the office

environment accordingly. In response to the shift of business emphasis from the hardware to total business solutions including products, JBMIA carries out active committee/group activities regarding important issues that the industries are confronting in and outside Japan by conducting investigations and researches regarding the policy proposals, international cooperation, prevention of warming, environment preservation, standardization, product safety, etc., by deepening the association with the sales and software-related companies, as well as the manufacturers.

Japan Business Machine Information System Industries Association (JBMIA)
Address: Lila-Hijirizaka, 3-4-10 Minato-ku, Tokyo 108-0073 Japan
TEL: +81-3-6809-5010 FAX:+81-3-3451-1770
https://www.jbmia.or.jp/index.php

OTHER HAZARDS AND ENDPOINTS – Hazardous to the Aquatic Environment

Date	Country	Organisation	Type of Organisation	Comment number
03.05.2019	Belgium		MemberState	17

Comment received

BE CA thanks ANSES for this CLH proposal but has following remarks:
- Tests were performed with the substances Aerosil R 972 and Aerosil R 974. Aerosil R972 and R 974 are somewhat less hydrophobic than Aerosil R 812 S due to the lower density of superficial methyl groups. However no values are given for the water solubility of R972 and R974.

- For poorly soluble substances with no toxicity recorded at levels in excess of the water solubility the LC50 may be considered to be > than the water solubility on the condition that the maximum dissolved concentrations are achieved (validated by measuring the concentrations) [CLP guidance, I.4.2.]. However in none of the available studies for the 3 trophic levels the actual exposure concentrations was determined (no analytical monitoring performed).
Furthermore, substance loss from the water cannot be excluded :
* Studies were all performed under static regime
* Notwithstanding that the substance is considered highly stable, it is however no guarantee for maintaining the concentration in the water as other factors can contribute to loss of test substance. Under conditions of normal handling and use, it is considered that the substance forms aggregates. The aggregates can form agglomerates. Furthermore the substance is expected to combine with soil or sediment organic matter and adopt the same behaviour as natural silica (strong adsorption). The formed agglomerates and particulates can lead to precipitation and rapid loss of the substance in the water. Except for the algae study where the suspensions were filtered, no information is given in the other studies whether particulate matter was present in the water nor information was given on possible precipitation.
* Furthermore it should be kept in mind that the substance is produced and used as nanoparticles. In particular, ECHA's Guidance on information requirements and chemical safety assessment (R7b and appendix R7-1) clearly indicates that ecotoxicity testing of nanomaterials needs to be carried out with accompanying analytics to monitor the exposure concentration.

Moreover for ecotoxicity testing of nanomaterials other aspects should be kept in mind/taken into consideration, amongst others:
o Low solubility does not automatically result in limited exposure of nanomaterials in the aquatic environment

o in most cases the dissolution rate (in the relevant test media) should be considered instead of solubility for nanomaterials.
o If acute toxicity testing is chosen, the conditions and test settings must be assessed in order to prove that the exposure concentration is adequate and duration is long enough to capture potential toxic effects
o if the substance is poorly water soluble or for nanoforms with low dissolution rate in the relevant test media (daphnia, fish) long-term testing shall be considered

Seen the above, we question the reliability of the available aquatic toxicity studies and are of the opinion that the studies are inadequate and invalid for classification purpose of this nanomaterial.

Date	Country	Organisation	Type of Organisation	Comment number
03.05.2019	United Kingdom		MemberState	18

Comment received

Comments on silanamine (CAS: 68909-20-6)
We are unsure how relevant the bioaccumulation assessment and related CLP criteria are to inorganic nanoparticles and whether these need to be considered differently and separately from non-nano forms of substances. Guidance is currently lacking on this under CLP - although proposals have been made under GHS (including by France) to consider nanomaterials separately. Whilst we do not envisage silicon dioxide to present a bioaccumulation hazard under normal circumstances, the bioavailability and uptake of these nanoparticles (which have been intentionally surface modified to affect their hydrophobicity) might well be different or operate through different mechanisms and timescales. It may be that due to this uncertainty at least a Chronic 4 'safety net' classification, as could be required for a potentially bioaccumulative substance, is warranted.

Again, whilst silicon dioxide would normally be expected to be inert and the available acute ecotoxicological data do indicate this, the biocidal products concerned are specifically formulated to have biological activity (to control 'fowl-infesting ectoparasites' in poultry houses). From the Biocides CA Report, the mode of action includes adsorption to and disruption of arthropod exoskeletons and potentially cell walls - so affecting water retention. This might not occur in the same way with aquatic organisms (although it does occur at 100% humidity). However, longer term toxicity, e.g. accumulation/uptake via fish gills and by filter feeders has not been investigated. We feel this activity and the potential mode of action on terrestrial vs. aquatic organisms need to be elaborated in more detail to determine whether it might also be relevant to any aquatic life over longer timescales. We note that testing specific to nanoparticles has not been conducted, although OECD test guidelines are in development. We are generally uncomfortable with substances manufactured to be biologically active, such as biocides and pesticides, not even having a 'safety net' environmental classification - and the uncertainties surrounding the available testing and biological activity may be sufficient to warrant this. We propose this be discussed further by the Dossier Submitter and the RAC.

PUBLIC ATTACHMENTS
1. ASASP1090a-CLH surface treated SAS PBS.pdf [Please refer to comment No. 2]
2. BCP Opinion - Len Levy 26thApril 2019.docx [Please refer to comment No. 14]

CONFIDENTIAL ATTACHMENTS
1. SAS-CL-March-2019-ECHA.pdf [Please refer to comment No. 3]