Handling trade secret claims in the USA when authoring a Safety Data Sheet

Abstract: When authoring a Safety Data Sheet under Hazcom 2012, it is sometimes difficult to obtain the complete list of hazardous ingredients in a mixture, with CAS numbers and percentages and build an SDS from the ground up. Some suppliers may wish to keep some of the ingredients found in the mixture confidential and claim a trade secret and will thus not provide the CAS number(s) or sometimes even the percentage or percentage range of that ingredient. It is then very challenging to author an accurate and representative SDS without knowing what the product contains.

		th	he hazardous ingredie nsidering their 'maxi	ents shown in Section	on 3,	
Section 2 Horare	la idantification	fo	on' and their GHS cla und on the ECHA We nnex VI.		ECTION 2: Ha	
Section 2. Hazard	: This material is considered hazardous by the	e OSHA Hazard Commu	Ini Standard		2.1 Classification of t Product definition	
Classification of the substance or mixture	 (29 CFR 1910.1200). FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category SERIOUS EYE DAMAGE/ EYE IRRITATION GERM CELL MUTAGENICITY - Category 11 CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (SII Category 3 	y 1 N - Category 1 A IB pi INGLE EXPOSURE ar	Il label elements show rescribed by the above nd mandatory under the nal Rule SDS format.	ve mixture classification the HAZCOM 2012 (Classification acco Flam. Liq. 3, H226 Kin Corr. 1, H314 ye Dam. 1, H318 uta. 1B, H340 arc. 1A, H350	
GHS label elements				_	See Section 10 for m	
Hazard pictograms	් 🚯 🍙 🚯 🔇	! > "			2.2 Label elements Hazard pictograms	
Signal word	: Danger	•				
Hazard statements	: Flammable liquid and vapor. Causes severe skin burns and eye damage. May cause genetic defects. May cause cancer. May cause drowsiness and dizziness.				Signal word Hazard statements	
Precautionary statements						
General	: Read label before use. Keep out of reach of product container or label at hand.	of children. If medical adv	/ice is needed, have		Precautionary state	
Prevention	: Obtain special instructions before use. Do no been read and understood. Use personal proprotective gloves. Wear eye or face protecting from heat, hot surfaces, sparks, open flames Use explosion-proof electrical, ventilating, lig Use only non-sparking tools. Take precaution Keep container tightly closed. Use only out breathing vapor. Wash hands thoroughly after		Prevention			
Response	: IF exposed or concerned: Get medical atter air and keep at rest in a position comfortable CENTER or physician. IF SWALLOWED: In physician. Rinse mouth. Do NOT induce vo immediately all contaminated clothing. Rinse contaminated clothing before reuse. Immed IF IN EYES: Rinse cautiously with water for present and easy to do. Continue rinsing. In					
Storage	physician. : Store locked up. Store in a well-ventilated p	place Keep cool			Storage	
Disposal	: Dispose of contents and container in accord	A CONTRACTOR OF A CONTRACTOR O	nal, national and		Disposal	
Supplemental label	international regulations.Do not taste or swallow. Wash thoroughly a	after handling.			Hazardous ingredie	
elements Hazards not otherwise	: Causes severe digestive tract burns.				Supplemental label elements	
classified Section 3 Compo	osition/information on ingredi	ionte			Annex XVII - Restric on the manufacture	
Substance/mixture Other means of	: Mixture : Not available.	ients			placing on the mark use of certain dang substances, mixture articles	
identification			This table lists the 3	3 bazardous ingrer	\packaging r	
CAS number/other identifie CAS number	: Not applicable.		their concentration HAZCOM 2012. The tributions are unkno	ranges as stipulate eir respective haza own unless the rea	ed under ard(s) con- ader refers	
			to the ECHA websit	e or Annex VI clas	ON 2: Ha	
Section 3. Compo	osition/information on ingredi	ients	0		Containers to be f	
Product code	: Not available.				fastenings	
Ingredient name Acetone		10 - 30 67	AS number 7-64-1		Tactile warning of	
Sodium hydroxide Benzene Any concentration shown as a		0.1 - 1 71	310-73-2 1-43-2		2.3 Other hazards Other hazards whic	
There are no additional ingredient	s present which, within the current knowledge of the supp or the environment and hence require reporting in this sec	plier and in the concentration	s applicable, are		not result in classif	
Occupational exposure limits, if av					3.2 Mixtures	
KMK Regulatory Services	Tel : +1-888-GHS-7769 (447-7769) / +1-450-GH www.kmkregservices.com www.askdrluc.com		2/2		Product/ingredient	
K Regulatory Service	es Inc.				Acetone	
+1-450-447-7767					Sodium hydroxide	
Free, North America:	1-888-GHS-7769/447-7769					
: +1 450-435-0677					benzene	
ul: <u>Info@kmkregservi</u>	<u>ces.com</u>					
o site: <u>www.kmkregser</u>	vices.com					
· Luc Ségu	uin, PhD chemist				There are no additional ingre hazardous to health or the e section.	
		diagl Cai	00000		KMK Regulatory Ser	
	ourn. MSc. Biome		ences		KNIK Regulatory Ser	

The mixture classification shown here is ob-

KMK Regulatory Services inc. Society for Hazard Communication (SCHC) 2015 Spring Meeting,

San Francisco, California, US.



A solution to this challenge would be to do something similar to what is done in Europe and enter the hazards for each ingredient, as a pure so at 100% concentration, in section 3 of the SDS, next to that trade secret ingredient's name. This way, authoring an SDS for a mixture containing these 'trade secret ingredients' could be done based on the hazards shown in section 3, when considered at 100%, taking into account that ingredient's precise percentage or narrow percentage range, in order to calculate the applicable hazards in the final mixture. In addition, for any SDS, whether it contains ingredients claimed as trade secret or not, hazards shown in section 2 could be more easily correlated to the responsible ingredient(s) shown in section 3. This poster will discuss the Trade Secret enforced in the US, the approach taken in Europe and proposed solutions with examples.





	ingredients shown in Section 3	of this SDS, one											
	could not correctly perform the classification of the mixture on	ce diluted 1:20 in							Section 2. Hazards identification				
hazardous by the OSHA Hazard Cominategory 3 ATION - Category 1 EYE IRRITATION - Category 1 CITY - Category 1B egory 1A AN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) -		ion of each Trade hazards shown	ICS status cation of the nce or mixture	 This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 GERM CELL MUTAGENICITY - Category 1B CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 			BS	OSHA/HCS status Classification of the substance or mixture	 This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 GERM CELL MUTAGENICITY - Category 1B CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 				
GHS label elements Hazard pictograms									<u>GHS label elements</u> Hazard pictograms				
nd eye damage.		Signal word : Danger Hazard statements : Flammable liquid and vapor. Causes severe skin burns and eye damage.						Signal word Hazard statements	 nts Flammable liquid and vapor. Causes severe skin burns and eye damage. 				
dizziness.				May cause genetic May cause cancer. May cause drowsin	defects.					May cause genetic defect May cause cancer. May cause drowsiness a	ets.		
p out of reach of children. If medical	advice is needed, have	<u>Precau</u> Gener	<u>itionary statements</u> ral	: Read label before	use Keep out of	freach of children	If medical advice is needed		Precautionary statements General	: Read label before use	Keep out of rea	ch of children If medical advice is needed	
hand.			 Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. 					: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.					
ore use. Do not handle until all safety precautions have se personal protective equipment as required. Wear r face protection. Wear protective clothing. Keep away s, open flames and other ignition sources. No smoking. ventilating, lighting and all material-handling equipment.		ention	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.				 Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. 			nal protective equipment as required. Wear otection. Wear protective clothing. Keep away ames and other ignition sources. No smoking.			
Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area. Avoid thoroughly after handling. medical attention. IF INHALED: Remove victim to fresh on comfortable for breathing. Immediately call a POISON ALLOWED: Immediately call a POISON CENTER or IOT induce vomiting. IF ON SKIN (or hair): Take off clothing. Rinse skin with water or shower. Wash		onse	 Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash 				Response	 Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash 					
e reuse. Immediately call a POISON ly with water for several minutes. Re	emove contact lenses, if			contaminated cloth	ing before reuse	. Immediately cal	a POISON CENTER or physician. ninutes. Remove contact lenses, if			contaminated clothing be	efore reuse. Im	mediately call a POISON CENTER or physician. er for several minutes. Remove contact lenses, if	
tinue rinsing. Immediately call a POI	This table would result in the Tra			present and easy to			y call a POISON CENTER or			present and easy to do. (g. Immediately call a POISON CENTER or	
vell-ventilated place. Keep cool.	Potassium hydroxide under the L HAZCOM 2012 format.	JS approach and mar	ndatory	physician. : Store locked up. S	tore in a well-ver	ntilated place. Kee	ep cool.		Storage	physician. : Store locked up. Store ir	n a well-ventilat	ted place. Keep cool.	
ainer in accordance with all local, re	In the case where we need to ca	culate a 1:20 dilution of this : Dispose of contents and container in accordance with all local, regional, national and					CALLER AND THE AND THE ADDRESS OF TH		Disposal	: Dispose of contents and container in accordance with all local, regional, national and			
sh thoroughly after handling.	mixture, and without knowing th ard contribution of any of the 2			: Do not taste or swa		oughly after hand	ling.		Supplemental label	international regulations : Do not taste or swallov		where we need to calculate a 1:20 dilution of t	
t burns.	herein, we pretend the calculation of the health hazards of the						elements		d without knowing the identity of any of the 2 ⁻				
	diluted solution cannot be done If Proprietary Ingredient 1 was r		ogenicity,	: Causes severe dig	estive tract burns	5.			Hazards not otherwise classified	: Causes severe digestive		dients shown herein, we pretend the calculatio azards of the diluted solution can ONLY be dor	
n ingredients	the dilution would still be at 0.5%	% concentration, so it	it should be								correctly IF	the classification of each Trade Secret hazardo	
	 classified as a carcinogen. If Pro- opsible for carcinogenicity, it would be a carcinogenicity of the second second											given as per the 'Extended Section 3' approact specifically, a 1:20 dilution would make the fin	
	onsible for carcinogenicity, it would the mixture would ne longer be a		1% and									specifically, a 1:20 dilution would make the fin onger a carcinogen, to mention that alone.	
	And what if both contributed to t	the carcinogenicity ha									Not knowing	which of the 2 ingredients was responsible fo	
	What if both contributed to some		ther health hazards?				Here is our proposal for the discl					ifically, one could not be sure of that	
	so that the correct calculation ca	This poster proposes a simple approach to Extend Section 3, so that the correct calculation can always be done with						at 100% concentration, so as 'pure ould help the reader to better under-		conclusion because at 10% concentration level, ther be 0.5% of the Proprietary Ingredient 1, leaving the			
	or without having Trade Secret in						stand the final mixture classificat					inogen, which happens to be false in this case.	
							 SDS. In some cases, showing these has 				_		
n ingradianta						P 4	wer questions on final classificati ingredients are being disclosed.		own' hazardous				
n ingredients				That is another reason why we		are proposing this 'Extended Sec-		sition/information on ingredients					
% 10 - 30 5 - 10 0.1 - 1	CAS number 67-64-1 Trade Secret Trade Secret	Substan Other m identific		: Mixture : Not available.			tion 3' approach to be used at all Secret ingredients are disclosed a final classification.			: Mixture : Not available.			
or is due to batch variation.			mber/other identifie						CAS number/other identifier	The second			
ledge of the supplier and in the concentration of the supplier and in the concentration.	tions applicable, are	CAS nu Broduc	umber ct code	Not applicable.Not available.					CAS number Product code	: Not applicable.			
			ent name		CAS put	mber Pure Sube	tance Classification		Ingredient name	: Not available.	CAS number	Pure Substance Classification	
-7769) / +1-450-GHS-7767 (447-7767)	2/2	Acetone	ent nume	10	30 67-64-1	FLAMMABLE	LIQUIDS - Category 2		Acetone	10 - 30	67-64-1	FLAMMABLE LIQUIDS - Category 2	
ww.askdrluc.com www.ghssmart.com	2/2	Sodium hy	vdroxide	5 -	10 1310-73-2	2A SPECIFIC TAI EXPOSURE)	E DAMAGE/ EYE IRRITATION - Category RGET ORGAN TOXICITY (SINGLE Narcotic effects) - Category 3 TO METALS - Category 1		Proprietary Ingredient 1	5 - 10	Trade Secret	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 CORROSIVE TO METALS - Category 1	
		Benzene	Juloxide	0.1		SKIN CORRO SERIOUS EYE FLAMMABLE SKIN CORRO	SION/IRRITATION - Category 1A E DAMAGE/ EYE IRRITATION - Category 1 LIQUIDS - Category 2 SION/IRRITATION - Category 2		Proprietary Ingredient 2	0.1 - 1		SKIN CORROSION/IRRITATION - Category 1A SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 FLAMMABLE LIQUIDS - Category 2 SKIN CORROSION/IRRITATION - Category 2	
						GERM CELL I CARCINOGEI SPECIFIC TAI EXPOSURE)	E DAMAGE/ EYE IRRITATION - Category 2 //UTAGENICITY - Category 1B NICITY - Category 1A RGET ORGAN TOXICITY (REPEATED Category 1 HAZARD - Category 1					SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 GERM CELL MUTAGENICITY - Category 1B CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 ASPIRATION HAZARD - Category 1	
		There are	no additional ingredients	a range is to protect conf s present which, within the c or the environment and hence	urrent knowledge o	f the supplier and in t	on. he concentrations applicable, are		Any concentration shown as a There are no additional ingredients classified as hazardous to health or	present which, within the current I	knowledge of the	supplier and in the concentrations applicable, are	
		Occupatio	Occupational exposure limits, if available, are listed in Section 8.						Occupational exposure limits, if available, are listed in Section 8.				
		K	MK Regulatory Services			+1-450-GHS-7767 (44 drluc.com www.ghssr			KMK Regulatory Services Tel : +1-888-GHS-7769 (447-7769) / +1-450-GHS-7767 (447-7767) www.kmkregservices.com www.askdrluc.com www.askdrluc.com www.ghssmart.com				
			A										
				Refere	ences.								
Service	es, inc.			1- OS	HA, 29 CF	R Parts 19	10, 1915, 1917, 1918, an	d 1926, HAZ	COM 2012, Final Rule	e, 2012.			
											2006 of th	he European Parliament and of t	
				Counc	il on the R	edistration	Evaluation Authorisation	and Restric	tion of Chemicals (RE	ACH)			

3- Official ECHA Website for Annex VI and substance classifications, http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database