KOCH.

KOCH AGRONOMIC SERVICES, LLC

# Material Safety Data Sheet

				la		DOT
NFPA		HMIS Health 1	WHMIS		TDG	DOT
Health	mability nstability	Health     1       Flammability     0       Physical hazards     0       Suggested PPE     E			-	
1. Produc	t and C	Company Iden	ntification			
Product name	SiFi 35	-0-10 Fertilizer				
Synonym				Enviro	prepared by the onment, Health & Safety tment on:	\$+/\$%20%(.
Material uses	Fertilizer			Versio	on	1.01
Product Code					In Case of Eme	
MSDS Number	8121000				Call CHEMTREC day USA/Canada - 1.800. Outside USA/Canada	424.9300
Manufacturer	4111 E 3	ronomic Services, LLC. 7th St North KS 67220		pleas http://	nore information on KAS or o e go to: /www.kasturf.com ntact us at Toll-Free:855-22	
2. Hazaro	ds Iden	tification				
Physical state		Solid.				
Odor		Odorless.				
OSHA/HCS state	us	This material is co Standard (29 CFR		s by th	e OSHA Hazard Comr	nunication
Routes of entry		Inhalation. Ingestion	Inhalation. Ingestion. Dermal contact.			
Potential acute	<u>health effe</u>	cts				
Inhalation		No known significa	int effects or critical	l hazaı	rds.	
Ingestion		No known significa	int effects or critical	l hazaı	rds.	
Skin		No known significa	int effects or critical	l hazaı	rds.	
Eyes No know		No known significa	int effects or critical	l hazaı	rds.	
Potential chroni	ic health ef	fects				
Chronic effects		Contains material t	that may cause targ	get org	an damage, based on	animal data.
Carcinogenicity	,	No known significa	int effects or critical	l hazaı	rds.	
Mutagenicity		No known significa	int effects or critical	l hazaı	rds.	
Teratogenicity		No known significa	int effects or critical	l hazaı	rds.	
Developmental	effects	No known significa	int effects or critical	l hazaı	rds.	
Fertility effects No known significant effects or critic		int effects or critica	l hazaı	rds.		
Target organs		tract, upper respira	tory tract, skin.	-	e to the following organ mage to the following o	-
						Pager

# 2. Hazards Identification

Over-exposure signs/symptoms		
Inhalation	No specific data.	
Ingestion	No specific data.	
Skin	No specific data.	
Eyes	No specific data.	
Medical conditions aggravated by over- exposure	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.	

See toxicological information (Section 11)

3. Composition	/ Information on Ingredients	
United States		
<u>Name</u>		CAS number <u>%</u>
urea potassium chloride Limestone		57-13-640 - 807447-40-75 - 201317-65-30.9 - 4.5
<u>Canada</u>		
<u>Name</u>		CAS number %
urea Limestone		57-13-640 - 801317-65-30.9 - 4.5
<u>Mexico</u>		<b>Classification</b>
<u>Name</u>	CAS number UN number % IDLH	<u>H F R Special</u>
Limestone	1317-65-3 Not 0.9 - 4.5 - available.	0 0 0

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First Aid M	leasures
Eye contact	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical advice if symptoms or conditions persist.
Skin contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Seek medical advice if irritation or symptoms persist.
Inhalation	If inhalation occurs, remove individual(s) to fresh air. Loosen restrictive clothing items if necessary. If individual has irregular or difficulty breathing or is under respiratory arrest seek medical attention immediately. If other conditions or symptoms develop contact a physician.
Ingestion	If ingestion occurs, rinse mouth with copious amounts of water. Do Not induce vomiting unless directed to do so by trained medical personnel. Do Not give anything by mouth to unconcious individuals. Seek immediate medical attention.
Protection of first- aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

# 4. First Aid Measures

Notes to physician

In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5. Fire-fighting	Measures
Flammability of the product	No specific fire or explosion hazard.
Extinguishing media	
Suitable	Use an extinguishing agent suitable for the surrounding fire.
Not suitable	None known.
Special exposure hazards	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Hazardous thermal decomposition products	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides halogenated compounds metal oxide/oxides
Special protective equipment for fire- fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

# 6. Accidental Release Measures

Personal precautions	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, or air).
Methods for cleaning up	
Small spill	Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
Large spill	Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

# 7. Handling and Storage

### 7. Handling and Storage

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Handling	Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Storage	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Keep out of reach of children.

# 8. Exposure Controls / Personal Protection

United States	
Ingredient	Exposure limits
urea	AIHA WEEL (United States, 5/2010).
	TWA: 10 mg/m <sup>3</sup> 8 hour(s).
Limestone	OSHA PEL (United States, 6/2010).
	TWA: 5 mg/m <sup>3</sup> 8 hour(s). Form: Respirable fraction
	TWA: 15 mg/m <sup>3</sup> 8 hour(s). Form: Total dust

#### <u>Canada</u> **Occupational exposure limits** TWA (8 hours) STEL (15 mins) Ceiling Ingredient List name mg/m³ Other mg/m³ Other mg/m³ Other Notations ppm ppm ppm AB 4/2009 Limestone 10 [3] BC 9/2010 20 \_ \_ \_ \_ \_ 3 [a] 10 [b] -\_ \_ -[c] [d] ON 6/2008 -10 ----QC 6/2008 10 ---US AIHA 5/2010 urea 10

[3]Skin sensitization

Form: [a]Respirable dust [b]Total dust [c]total dust [d]Total dust.

<u>Mexico</u>

Ingredient	Exposure limits	
Limestone	NOM-010-STPS (Mexico, 9/2000). LMPE-PPT: 10 mg/m <sup>3</sup> 8 hour(s). LMPE-CT: 20 mg/m <sup>3</sup> 15 minute(s).	
	Consult local authorities for acceptable exposure limits.	
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.	
Engineering measures	No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.	

# 8. Exposure Controls / Personal Protection

8. Exposure C	ontrois / Personal Protection
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Personal protection	
Respiratory	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Hands	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eyes	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to dusts.
Skin	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Personal protective equipment (Pictograms)	
<u>Environmental exposure</u> <u>controls</u>	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

# 9. Physical and Chemical Properties

Physical state	Solid.
Color	multiple colors
Odor	Odorless.
VOC	0 % (w/w)

# 10. Stability and Reactivity

Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Hazardous polymerization	Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	No specific data.
Materials to avoid	No specific data.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

# 10. Stability and Reactivity

Conditions of reactivity

Non-flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.

Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge.

# 11. Toxicological Information

### **United States**

Acute toxicity

Product/ingredient name	•	Result		Species	Dose		Exposure
urea		LD50 Ora	l I	Rat - Male, Female	1430	0 mg/kg	-
potassium chloride Limestone		LD50 Ora TDLo Intraveno	1	Rat Rat	2600 30 m	mg/kg g/kg	-
Conclusion/Summary	Very low toxici	ity to humar	ns or anim	als.			
Chronic toxicity							
Conclusion/Summary	Very low toxic	ity to humar	ns or anim	als.			
Product/ingredient name	)	Result		Species	Score	Exposure	Observation
urea		Skin - Ede Skin -	ema	Rabbit Rabbit	0	-	-
		Erythema	/Eschar	Rabbil	0	-	-
		Eyes - Co opacity		Rabbit	0.9	-	-
		Eyes - Iris	s lesion	Rabbit	0.4	-	-
Skin	Not considere	d a sensitize	er				
Respiratory	Not considere	d a sensitize	er				
<b>Carcinogenicity</b>							
Conclusion/Summary	Not classified	as carcinog	enic, tera	togenic and n	nutagenic		
<b>Classification</b>							
Product/ingredient name		CGIH	IARC				
urea		A5	4	EPA -	NIOS -	H NTP -	OSHA -
urea <u>Mutagenicity</u>		45		- -	-	H NIP -	OSHA -
	Not classified		4	-	_	H NIP -	OSHA -
Mutagenicity			4	-	_	H NIP -	OSHA -
<u>Mutagenicity</u> Conclusion/Summary		as carcinog	4 enic, tera	- togenic and n	nutagenic	H NIP	OSHA -
Mutagenicity Conclusion/Summary Teratogenicity	Not classified	as carcinog	4 enic, tera	- togenic and n	nutagenic	H NIP	OSHA -
<u>Mutagenicity</u> Conclusion/Summary <u>Teratogenicity</u> Conclusion/Summary	Not classified	as carcinog as carcinog	4 enic, tera enic, tera	- togenic and n togenic and n	nutagenic	H NIP	OSHA -
Mutagenicity Conclusion/Summary <u>Teratogenicity</u> Conclusion/Summary <u>Reproductive toxicity</u>	Not classified	as carcinog as carcinog	4 enic, tera enic, tera	- togenic and n togenic and n	nutagenic	H NIP	OSHA _
Mutagenicity Conclusion/Summary <u>Teratogenicity</u> Conclusion/Summary <u>Reproductive toxicity</u> Conclusion/Summary	Not classified	as carcinog as carcinog	4 enic, tera enic, tera	- togenic and n togenic and n	nutagenic		OSHA 

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<u>11. Toxicologi</u>	<u>cal Inforn</u>					
Limestone		TDLo Intravenous	Rat	30 m	g/kg	-
urea		LD50 Oral	Rat - Male, Female	1430	0 mg/kg	-
Conclusion/Summary	Very low toxici	ty to humans or anii	mals.			
Chronic toxicity						
Conclusion/Summary	Very low toxici	ty to humans or anii	mals.			
Product/ingredient name urea	,	<b>Result</b> Skin - Edema Skin -	<b>Species</b> Rabbit Rabbit	<b>Score</b> 0 0	Exposure - -	Observation - -
		Erythema/Eschar Eyes - Cornea opacity		0.9	-	-
		Eyes - Iris lesion	Rabbit	0.4	-	-
<u>Sensitizer</u>						
Conclusion/Summary	Not available.					
Skin	Not considered	d a sensitizer				
Respiratory	Not considered	d a sensitizer				
<u>Carcinogenicity</u>						
Conclusion/Summary	Not classified	as carcinogenic, ter	atogenic and n	nutagenic		
<u>Classification</u>						
Product/ingredient name urea		ACGIH IARC	EPA -	NIOS -	H NTP	OSHA -
<u>Mutagenicity</u>						
Conclusion/Summary	Not classified	as carcinogenic, ter	atogenic and n	nutagenic		
<u>Teratogenicity</u>						
Conclusion/Summary	Not classified	as carcinogenic, ter	atogenic and n	nutagenic		
Reproductive toxicity						
Conclusion/Summary	Not considered	d to be toxic to the r	eproductive sy	stem.		
<u>Mexico</u>						
Acute toxicity						
Product/ingredient name Limestone		<b>Result</b> TDLo Intravenous	<b>Species</b> Rat	<b>Dos</b> 30 m		Exposure -
	Very low toxici	ty to humans or ani	mals.			
Conclusion/Summary						
Conclusion/Summary <u>Chronic toxicity</u>						
-	Very low toxici	ty to humans or anii	mals.			
Chronic toxicity	Very low toxici	ty to humans or anii	mals.			
Chronic toxicity Conclusion/Summary	Very low toxici	ty to humans or anii	mals.			

	cal Informatio					
<u>Carcinogenicity</u>						
Conclusion/Summary	Not classified as carcir	nogenic, terato	genic and muta	igenic		
<u>Classification</u>						
Product/ingredient name urea	ACGIH A5	IARC 4	EPA -	NIOSH N	TP	OSHA -
<u>Mutagenicity</u>						
Conclusion/Summary	Not classified as carcir	nogenic, terato	genic and muta	igenic		
<u>Teratogenicity</u>						
Conclusion/Summary	Not classified as carcir	lot classified as carcinogenic, teratogenic and mutagenic				
Reproductive toxicity						
Conclusion/Summary	Not considered to be to	oxic to the rep	roductive syster	n.		
12. Ecological	Information					
Environmental effects	No known significa	nt effects or cr	itical hazards.			
United States						
Aquatic ecotoxicity						
Product/ingredient name urea	Test -	A 2	<b>Result</b> cute LC50 2500 mg/l resh water	<b>Species</b> Fish - Tilapia mossambica	<b>E</b> x 96 ho	<b>xposure</b> ours
potassium chloride	-	rr w	cute LC50 337 Ig/L Fresh ater	Daphnia - Wate flea - Daphnia magna		
	-	8 1	cute LC50 80000 to 020000 ug/L resh water	Fish - Fathead minnow - Pimephales promelas - 1 to days	96 hc	ours
Conclusion/Summary	Very low toxicity to	humans or an	imals.			
<u>Canada</u>						
Aquatic ecotoxicity						
Product/ingredient name urea	Test -	A 2	<b>Result</b> cute LC50 2500 mg/l resh water	<b>Species</b> Fish - Tilapia mossambica	<b>E</b> x 96 ho	<b>cposure</b> ours
Conclusion/Summary	Very low toxicity to	humans or an	imals.			
<u>Mexico</u>						

# 13. Disposal Considerations

Waste disposal	The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled
	containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport Information						
Regulatory information	UN number	Shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.	-	-	-		-
	1		PG*	: Packir	ng group	1

### **Regulatory Information** 15. **United States HCS Classification** Target organ effects **U.S. Federal regulations** TSCA 8(a) IUR Exempt/Partial exemption: Not determined **United States inventory (TSCA 8b)**: All components are listed or exempted. SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 302/304 emergency planning and notification: No products were found. SARA 302/304/311/312 hazardous chemicals: urea; potassium chloride; Limestone SARA 311/312 MSDS distribution - chemical inventory - hazard identification: potassium chloride: Immediate (acute) health hazard, Delayed (chronic) health hazard; Limestone: Immediate (acute) health hazard Clean Air Act (CAA) 112 accidental release prevention: No products were found. **Clean Air Act Section** Not listed 112(b) Hazardous Air **Pollutants (HAPs)** Clean Air Act Section 602 Not listed **Class I Substances**

15. Regulatory	nformation			
Clean Air Act Section 602 Class II Substances	Not listed			
DEA List I Chemicals (Precursor Chemicals)	Not listed			
DEA List II Chemicals (Essential Chemicals)	Not listed			
State regulations	Connecticut Hazardo Florida substances: Illinois Chemical Saf Illinois Toxic Substa are listed. Louisiana Reporting Louisiana Spill: None Massachusetts Spill: Massachusetts Subs CARBONATE Michigan Critical Ma Minnesota Hazardou New Jersey Hazardo CARBONATE; LIMES New Jersey Spill: No New Jersey Spill: No New Jersey Toxic Ca New York Acutely Ha New York Toxic Che Pennsylvania RTK H LIMESTONE	bus Material Surve None of the compor- ety Act: None of the composition of the compo- e of the components None of the compo- stances: The following terial: None of the compo- substances: Nor- us Substances: Nor- us Substances: The TONE ne of the componen- tastrophe Prevent azardous Substance mical Release Rep- azardous Substance	e components are listed <b>Employee Act</b> : None onents are listed. s are listed. onents are listed. ing components are listed. components are listed. ne of the components are he following component	ents are listed. d. of the components ed: CALCIUM are listed. s are listed: CALCIUM omponents are listed. onents are listed. mponents are listed. aponents are listed.
<u>California Prop. 65</u>			a tha Otata af Oalifarai	
WARNING: This product cor Ingredient name	ntains less than 0.1% of <u>Cancer</u>	a chemical known to Reproductive	o the State of California No significant risk level	a to cause cancer. <u>Maximum</u> <u>acceptable dosage</u>
Quartz (SiO2)	Yes.	No.	No.	<u>acceptable dosage</u> Nevel
United States inventory (TSCA 8b)	All components are lis	ted or exempted.		
<u>Canada</u>				
WHMIS (Canada)	Class D-2A: Material of	causing other toxic e	effects (Very toxic).	
Canadian lists	Ontario Designated	e of the component e of the components Substances: None Substances: None	ts are listed.	listed.
Canada inventory	At least one compone NDSL.	nt is not listed in DS	L but all such compone	ents are listed in
This product has been clas Regulations and the MSDS				
<u>Mexico</u>				
Classification				

Information
Health 0 Flammability Special
This product is not classified according to EU legislation.
<ul> <li>Australia inventory (AICS): All components are listed or exempted.</li> <li>China inventory (IECSC): All components are listed or exempted.</li> <li>Japan inventory: Not determined.</li> <li>Korea inventory: All components are listed or exempted.</li> <li>New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.</li> <li>Philippines inventory (PICCS): All components are listed or exempted.</li> </ul>
Not listed
Not listed
Not listed

Label requirements

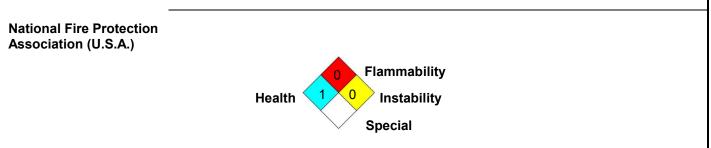
CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

Hazardous Material Information System (U.S.A.)

Health	1
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material. Suggested protective clothing might not be adequate. Consult a specialist before handling this product.



16. Other information			
Date of issue	07/01/2014.		
Version	1.01		

NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet (SDS) and was prepared pursuant to Government regulation(s) that identify specific types of information to be provided. This SDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. Additional information may be needed to evaluate other uses of the product, including use of the product in combination with any materials or in any processes other than those specifically referenced. Information provided herein with respect to any hazards that may be associated with the product is not meant to suggest that use of the product in a given application will necessarily result in any exposure or risk to workers or the general public. No responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product. Purchasers and users assume all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. Purchasers and users of the product specifically should advise all of their employees, agents, contractors and customers who will use the product of this (M)SDS.