

Material Safety Data Sheet

NFPA	HMIS	WHMIS	TDG	DOT
<div><div><div>Flammability</div><div>Health</div><div>Special</div></div><div><div>0</div><div>1</div><div></div></div><div><div>Instability</div></div></div>	<div><div>Health</div><div>1</div></div> <div><div>Flammability</div><div>0</div></div> <div><div>Physical hazards</div><div>0</div></div> <div><div>Suggested PPE</div><div>E</div></div>			

1 . Product and Company Identification

Product name	SiFi 43-0-0 Straight Duration		
Synonym	TOW Southern Straight Duration	MSDS prepared by the Environment, Health & Safety Department on:	7/1/2014
Material uses	Fertilizer.	Version	1.01
Product Code		In case of emergency call Chemtrec day or night USA/Canada +1.800.424.9300 Outside USA/Canada +1.703.527.3887 (collect calls accepted)	
MSDS Number	8121010		
Manufacturer	Koch Agronomic Services, LLC 4111 E 37th St N Wichita, KS 67220		For more information on KAS or our products, please go to: http://www.kasturf.com or contact us at Toll-Free: 855.228.3378

2 . Hazards Identification

Physical state	Solid.
Odor	Odorless.
OSHA/HCS status	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Routes of entry	Inhalation. Ingestion. Dermal contact.
<u>Potential acute health effects</u>	
Inhalation	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.
Skin	No known significant effects or critical hazards.
Eyes	No known significant effects or critical hazards.
<u>Potential chronic health effects</u>	
Chronic effects	Contains material that may cause target organ damage, based on animal data.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.
Target organs	Contains material which may cause damage to the following organs: skin. Contains material which does not cause damage to the following organs: eye, lens or cornea.

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>	<u>CAS number</u>	<u>%</u>
urea	57-13-6	29.91 - 123.06

Canada

<u>Name</u>	<u>CAS number</u>	<u>%</u>
urea	57-13-6	29.91 - 123.06

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 Measures

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 unconscious 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.
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.
<u>Extinguishing media</u>	
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
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).
<u>Methods for cleaning up</u>	
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

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.

7 . Handling and Storage

8 . Exposure Controls / Personal Protection

United States

Ingredient	Exposure limits
urea	AIHA WEEL (United States, 5/2010). TWA: 10 mg/m ³ 8 hour(s).

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			Notations
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	
urea	US AIHA 5/2010	-	-	10	-	-	-	-	-	-	

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.

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)



8 . Exposure Controls / Personal Protection

Environmental exposure controls

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.
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 Oral	Rat - Male, Female	14300 mg/kg	-

Conclusion/Summary Very low toxicity to humans or animals.

Chronic toxicity

Conclusion/Summary Very low toxicity to humans or animals.

Product/ingredient name	Result	Species	Score	Exposure	Observation
urea	Skin - Edema	Rabbit	0	-	-
	Skin - Erythema/Eschar	Rabbit	0	-	-
	Eyes - Cornea opacity	Rabbit	0.9	-	-
	Eyes - Iris lesion	Rabbit	0.4	-	-

11 . Toxicological Information

Skin Not considered a sensitizer

Respiratory Not considered a sensitizer

Carcinogenicity

Conclusion/Summary Not classified as carcinogenic, teratogenic and mutagenic

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
urea	A5	4	-	-	-	-

Mutagenicity

Conclusion/Summary Not classified as carcinogenic, teratogenic and mutagenic

Teratogenicity

Conclusion/Summary Not classified as carcinogenic, teratogenic and mutagenic

Reproductive toxicity

Conclusion/Summary Not considered to be toxic to the reproductive system.

Canada

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
urea	LD50 Oral	Rat - Male, Female	14300 mg/kg	-

Conclusion/Summary Very low toxicity to humans or animals.

Chronic toxicity

Conclusion/Summary Very low toxicity to humans or animals.

Product/ingredient name	Result	Species	Score	Exposure	Observation
urea	Skin - Edema	Rabbit	0	-	-
	Skin - Erythema/Eschar	Rabbit	0	-	-
	Eyes - Cornea opacity	Rabbit	0.9	-	-
	Eyes - Iris lesion	Rabbit	0.4	-	-

Sensitizer

Conclusion/Summary Not available.

Skin Not considered a sensitizer

Respiratory Not considered a sensitizer

Carcinogenicity

Conclusion/Summary Not classified as carcinogenic, teratogenic and mutagenic

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
urea	A5	4	-	-	-	-

Mutagenicity

Conclusion/Summary Not classified as carcinogenic, teratogenic and mutagenic

Teratogenicity

11 . Toxicological Information

Conclusion/Summary Not classified as carcinogenic, teratogenic and mutagenic

Reproductive toxicity

Conclusion/Summary Not considered to be toxic to the reproductive system.

Mexico

Acute toxicity

Conclusion/Summary Very low toxicity to humans or animals.

Chronic toxicity

Conclusion/Summary Very low toxicity to humans or animals.

Sensitizer

Conclusion/Summary Not available.

Skin Not considered a sensitizer

Respiratory Not considered a sensitizer

Carcinogenicity

Conclusion/Summary Not classified as carcinogenic, teratogenic and mutagenic

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
urea	A5	4	-	-	-	-

Mutagenicity

Conclusion/Summary Not classified as carcinogenic, teratogenic and mutagenic

Teratogenicity

Conclusion/Summary Not classified as carcinogenic, teratogenic and mutagenic

Reproductive toxicity

Conclusion/Summary Not considered to be toxic to the reproductive system.

12 . Ecological Information

Environmental effects No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
urea	-	Acute LC50 22500 mg/l Fresh water	Fish - Tilapia mossambica	96 hours

Conclusion/Summary Very low toxicity to humans or animals.

Canada

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
urea	-	Acute LC50 22500 mg/l Fresh water	Fish - Tilapia mossambica	96 hours

12 . Ecological Information

Conclusion/Summary Very low toxicity to humans or animals.

Mexico

Conclusion/Summary Very low toxicity to humans or animals.

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 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.	-	-	-		-
PG* : Packing group						

15 . Regulatory Information

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.
TSCA 12(b) annual export notification: 1,3-Butanediol, polymer with α -butyl- ω -hydroxypoly[oxy(methyl-1,2-ethanediyl)] and 1,3-diisocyanatomethylbenzene

15 . Regulatory Information

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
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) Not listed

Clean Air Act Section 602 Class I Substances Not listed

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 Carcinogen Reporting: None of the components are listed.
Connecticut Hazardous Material Survey: None of the components are listed.
Florida substances: None of the components are listed.
Illinois Chemical Safety Act: None of the components are listed.
Illinois Toxic Substances Disclosure to Employee Act: None of the components are listed.
Louisiana Reporting: None of the components are listed.
Louisiana Spill: None of the components are listed.
Massachusetts Spill: None of the components are listed.
Massachusetts Substances: None of the components are listed.
Michigan Critical Material: None of the components are listed.
Minnesota Hazardous Substances: None of the components are listed.
New Jersey Hazardous Substances: None of the components are listed.
New Jersey Spill: None of the components are listed.
New Jersey Toxic Catastrophe Prevention Act: None of the components are listed.
New York Acutely Hazardous Substances: None of the components are listed.
New York Toxic Chemical Release Reporting: None of the components are listed.
Pennsylvania RTK Hazardous Substances: None of the components are listed.
Rhode Island Hazardous Substances: None of the components are listed.

United States inventory (TSCA 8b) All components are listed or exempted.

Canada

WHMIS (Canada) Not controlled under WHMIS (Canada).

Canadian lists
CEPA Toxic substances: None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: None of the components are listed.
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

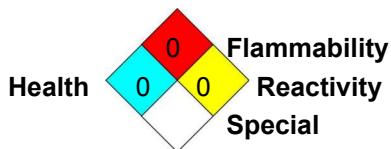
Canada inventory All components are listed or exempted.

15 . Regulatory Information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification



EU regulations

Risk phrases

This product is not classified according to EU legislation.

International regulations

International lists

Australia inventory (AICS): All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

Japan inventory: Not determined.

Korea inventory: All components are listed or exempted.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

Chemical Weapons Convention List Schedule I Chemicals

Not listed

Chemical Weapons Convention List Schedule II Chemicals

Not listed

Chemical Weapons Convention List Schedule III Chemicals

Not listed

16 . Other information

Label requirements

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

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

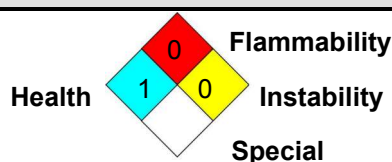
Health	1
Flammability	0
Physical hazards	0

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.

National Fire Protection Association (U.S.A.)

16 . Other information



Date of issue 7/1/2014

Version 1.01

▢ Indicates information that has changed from previously issued version.

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.