

Safety Data Sheet  
K-Flow 2020-SI

Revision Date:  
04/16/2025

## Section 1. Identification

### Product identifier

**Product Identity** K-Flow 2020-SI  
**Other means of identification** Not Applicable

### Relevant identified uses of the substance or mixture and uses advised against

See Technical Data Sheet.

### Details of the supplier of the safety data sheet

**Company Name** KAIROS ENERGY SERVICES  
8115 Loop 540  
Beasley, Texas, 77417  
USA

**Emergency**  
**24-hour Emergency Telephone No.** InfoTrac  
US: 1-800-535-5053  
International: 352-323-3500

**Customer Service:**

## Section 2. Hazard(s) identification

### Classification of the substance or mixture under OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7)

Acute toxicity(oral), category 4;H302	Harmful if swallowed.
Acute toxicity(inhalation), category 4;H332	Harmful if inhaled.
Skin corrosion/irritation category 1B;H314	Causes severe skin burns and eye damage.
Serious eye damage / eye irritation, category 1;H318	Causes serious eye damage.
Skin sensitizer category 1;H317	May cause an allergic skin reaction.
Reproductive toxicity, category 1B;H360FD	May damage fertility. May damage the unborn child.

Specific target organ toxicity, Single exposure category 1;H370  
Specific target organ toxicity, Single exposure category 3;H335

Causes damage to organs. Specific Target Organs: (central nervous system, eyes)  
May cause respiratory irritation.

### Label elements



### Danger

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H360FD\* May damage fertility. May damage the unborn child.

H370 Causes damage to organs.

### [Prevention]

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P233 Keep container tightly closed.

P260 Do not breathe dust, fume, mist, vapors or spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves, protective clothing, eye protection, face protection.

### [Response]

P301+312 IF SWALLOWED: Call a POISON CENTER, doctor or physician if you feel unwell.

P302+312 IF ON SKIN: Call a POISON CENTER or doctor , physician if you feel unwell  
 P303+361+353 IF ON SKIN (or hair): Remove, take off immediately all contaminated clothing. Rinse skin with water, shower.  
 P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P308+313 IF exposed or concerned: Get medical advice or attention.  
 P310 Immediately call a POISON CENTER, doctor or physician.  
 P312 Call a POISON CENTER, doctor or physician if you feel unwell.  
 P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
 P333+313 If skin irritation or a rash occurs: Get medical advice or attention.  
 P362+364 Take off contaminated clothing and wash it before reuse.  
 P363 Wash contaminated clothing before reuse.

**[Storage]**

P403+233 Store in a well ventilated place. Keep container tightly closed.  
 P405 Store locked up.

**[Disposal]**

P501 Dispose of contents or container in accordance with local and national regulations.

**Other hazards**

This product contains no PBT/vPvB/vPvM chemicals.  
 This product contains no endocrine disrupting chemicals.

Does not contain component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS) per US or Canadian regulations.

### Section 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7).

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivatives, hydroxides, inner salts CAS Number: 61789-40-0 Synonyms: PROPANAMINIUM, 3-AMINO-N-(CARBOXYMETHYL)-N,N-DIMET	45 - 70	Skin corrosion/irritation category 2;H315 Serious eye damage / eye irritation, category 2;H319	No data available
Methanol CAS Number: 67-56-1 Synonyms: METHYL ALCOHOL, methanol (as methanol)	10 - 30	Flammable Liquid, category 2;H225 Acute toxicity(inhalation), category 3;H331 Acute toxicity(oral), category 3;H301 Acute toxicity(dermal), category 3;H311 Specific target organ toxicity, Single exposure category 1;H370 C ≥ 10 % Specific target organ toxicity, Single exposure category 2;H371 3 % ≤ C < 10 %	No data available
2-(2-Aminoethylamino)ethanol (AEEA) CAS Number: 111-41-1 Synonyms: Aminoethylethanolamine	7 - 13	Reproductive toxicity, category 1B;H360Fd Skin corrosion/irritation category 1B;H314 Skin sensitizer category 1;H317	No data available

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
		Specific target organ toxicity, Single exposure category 3;H335 > 5%	
Amorphous Silica CAS Number: 7631-86-9 Synonyms: Silica dioxide	0.5 - 1.5	Not Classified	No data available

The actual concentration or concentration range is withheld as a trade secret.

\*PBT/vPvB - PBT, vPvM or vPvB-substance.

The full texts of the phrases are shown in Section 16.

## Section 4. First aid measures

### Description of first aid measures

**General** In all cases of doubt, or when symptoms persist, seek medical attention.  
Never give anything by mouth to an unconscious person.

**Inhalation** Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

**Eyes** Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

**Skin** Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

**Ingestion** If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

### Most important symptoms and effects, both acute and delayed

**Overview** No specific symptom data available.  
No chronic toxicity or long term toxicity information available. Treat symptomatically. See section 2 for further details.

**Inhalation** Harmful if inhaled. May cause respiratory irritation. Causes damage to organs.

**Eyes** Causes serious eye damage.

**Skin** May cause an allergic skin reaction. Causes severe skin burns and eye damage.

**Ingestion** Harmful if swallowed.

## Section 5. Fire-fighting measures

### Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO<sub>2</sub>, powder, water spray.  
Unsuitable extinguishing media: Do not use; water jet.

### Special hazards arising from the substance or mixture

Hazardous decomposition: No hazardous decomposition data available.  
Keep container tightly closed.  
Do not breathe dust, fume, mist, vapors or spray.

### Advice for fire-fighters

As with all fires, wear positive pressure, self-contained breathing apparatus, (SCBA) with a full face piece and protective clothing. Persons without respiratory protection should leave area. Wear SCBA during clean-up immediately after fire. No smoking.

**ERG Guide No.**

131

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).  
Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

### Environmental precautions

Do not allow spills to enter drains or waterways.

### Methods and material for containment and cleaning up

Ventilate the area and avoid breathing vapors. Take the personal protective measures listed in section 8.  
Contain and absorb spillage with non-combustible materials e.g. sand, earth, and vermiculite. Place in closed containers outside buildings and dispose of according to the Waste Regulations.

### Section 7. Handling and storage

**Precautions for safe handling**

Handle containers carefully to prevent damage and spillage.  
See section 2 for further details. - [Prevention]

**Conditions for safe storage, including any incompatibilities**

Incompatible materials: No available information  
See section 2 for further details. - [Storage]

**Specific end use(s)**

No available information

### Section 8. Exposure controls / personal protection

**Control parameters**

**Exposure Limits**

CAS No.	Ingredient	Source	Value
67-56-1	Methanol	OSHA	200 ppm, 260 mg/m <sup>3</sup>
		ACGIH	200 ppm 250 ppm
		NIOSH	TWA 200 ppm (260 mg/m <sup>3</sup> ) STEL: 250 ppm (325 mg/m <sup>3</sup> ) [skin]
111-41-1	2-(2-Aminoethylamino)ethanol (AEEA)	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
7631-86-9	Amorphous Silica	OSHA	TWA 20 mppcf (80 mg/m <sup>3</sup> /%SiO <sub>2</sub> )
		ACGIH	No Established Limit
		NIOSH	TWA 6 mg/m <sup>3</sup>
61789-40-0	1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivatives, hydroxides, inner salts	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit

**Exposure controls**

**Respiratory** If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.

**Eyes** Wear safety glasses with side shields to protect the eyes. An eye wash station is suggested as a good workplace practice.

**Skin** Avoid skin contact. Wear PVC or rubber gloves to keep skin contact to a minimum. Refer to the manufacturer's recommendations regarding the suitability of any gloves used.

**Engineering Controls** Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

**Other Work Practices** Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details.

## Section 9. Physical and chemical properties

### Information on basic physical and chemical properties

<b>Physical State</b>	Liquid
<b>Color</b>	No available information
<b>Odor</b>	No available information
<b>Melting point / freezing point</b>	No available information
<b>Initial boiling point and boiling range</b>	No available information
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Upper/lower flammability or explosive limits</b>	<b>Lower Explosive Limit:</b> No available information <b>Upper Explosive Limit:</b> No available information
<b>Flash Point</b>	°F °C, Test method: (Open/Close cup)
<b>Auto-ignition temperature</b>	No available information
<b>Decomposition temperature</b>	No available information
<b>pH</b>	5.0-7.5
<b>Viscosity (cSt)</b>	No available information
<b>Solubility in Water</b>	No available information
<b>Partition coefficient n-octanol/water (Log Kow)</b>	No available information
<b>Vapor pressure (Pa)</b>	No available information
<b>Relative Density</b>	8.58 lbs/gal
<b>Specific Gravity</b>	1.0297 @20C
<b>Vapor Density</b>	No available information
<b>Evaporation rate (Ether = 1)</b>	No available information
<b>Oxidising properties</b>	No available information
<b>Explosive properties</b>	No available information

#### Other information

No other relevant information.

## Section 10. Stability and reactivity

**Reactivity**

Hazardous Polymerization will not occur.

**Chemical stability**

Stable under normal circumstances.

**Possibility of hazardous reactions**

No available information

**Conditions to avoid**

Avoid high temperatures and contact with incompatible material

**Incompatible materials**

No available information

**Hazardous decomposition products**

No hazardous decomposition data available.

## Section 11. Toxicological information

**Acute toxicity**

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivatives, hydroxides, inner salts - (61789-40-0)	No data available.	No data available.	No data available.	No data available.	No data available.
Methanol - (67-56-1)	101.10, Rat - Category: 3	301.00, Rabbit - Category: 3	2.10, Rat - Category: 3	No data available.	No data available.
2-(2-Aminoethylamino)ethanol (AEEA) - (111-41-1)	2,150.00, Rat - Category: 5	>2,000.00, Rabbit - Category: 5	No data available.	No data available.	No data available.
Amorphous Silica - (7631-86-9)	> 5,000.00, Rat - Category: NA	> 5,000.00, Rabbit - Category: NA	No data available.	No data available.	No data available.

**Carcinogen Data**

CAS No.	Ingredient	Source	Value
67-56-1	Methanol	OSHA	Regulated Carcinogen: No;
		NTP	Known: No; Suspected: No;
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
		ACGIH	No Established Limit
111-41-1	2-(2-Aminoethylamino)ethanol (AEEA)	OSHA	Regulated Carcinogen: No;
		NTP	Known: No; Suspected: No;
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
		ACGIH	No Established Limit
7631-86-9	Amorphous Silica	OSHA	Regulated Carcinogen: No;
		NTP	Known: No; Suspected: No;
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: Yes; Group 4: No;
		ACGIH	No Established Limit
61789-40-0	1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivatives, hydroxides, inner salts	OSHA	Regulated Carcinogen: No;
		NTP	Known: No; Suspected: No;
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
		ACGIH	No Established Limit

Classification	Category	Hazard Description
Acute toxicity (oral)	4	Harmful if swallowed.
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	4	Harmful if inhaled.
Skin corrosion/irritation	1B	Causes severe skin burns and eye damage.
Serious eye damage/irritation	1	Causes serious eye damage.
Respiratory sensitization	---	Not Applicable
Skin sensitization	1	May cause an allergic skin reaction.
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	1B	May damage fertility. May damage the unborn child.
STOT-single exposure	1	Causes damage to organs.
STOT-single exposure	3	May cause respiratory irritation.
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

**Possible routes of entry:**No available information

**Symptoms and effects, both acute and delayed:**

No specific symptom data available.

No chronic toxicity or long term toxicity information available. Treat symptomatically.

**Eyes** Causes serious eye damage.

**Skin** May be harmful in contact with skin. May cause an allergic skin reaction. Causes severe skin burns and eye damage.

**Ingestion** Harmful if swallowed.

## Section 12. Ecological information

**Toxicity**

No additional information provided for this product. See Section 3 for chemical specific data.

**Aquatic Ecotoxicity**

Ingredient	96 hr LC50 fish, mg/L	48 hr EC50 crustacea, mg/L	ErC50 algae, mg/L
1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivatives, hydroxides, inner salts - (61789-40-0)	No data available.	No data available.	No data available.
Methanol - (67-56-1)	15,400.00, Lepomis macrochirus	> 10,000.00, Daphnia magna	22,000.00, Pseudokirchneriella subcapitata
2-(2-Aminoethylamino)ethanol (AEEA) - (111-41-1)	640.00, Fish	190.00, Daphnia magna	920.00, Algae
Amorphous Silica - (7631-86-9)	1,033.02, Fishes species	512.08, Daphnid species	> 10,000.00, Desmodesmus subspicatus

**Persistence and degradability**

There is no data available on the preparation itself.

**Bioaccumulative potential**

No available information

**Mobility in soil**

No available information

**Results of PBT and vPvB assessment**

This product contains no PBT/vPvB/vPvM chemicals.

**Other adverse effects**

No available information

## Section 13. Disposal considerations

**Waste treatment methods**

Observe all federal, provincial and local regulations when disposing of this substance.

### Section 14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
<b>UN number</b>	UN1230	UN1230	UN1230
<b>UN proper shipping name</b>	Methanol	Methanol	Methanol
<b>Transport hazard class(es)</b>	<b>Class:3</b> <b>Sub Class:6.1</b>	<b>Class:3</b> <b>Sub Class:6.1</b>	<b>Class:3</b> <b>Sub Class:6.1</b>
<b>Packing group</b>	II	II	II

#### Environmental hazards

Marine Pollutant: No;

#### Special precautions for user

No available information

### Section 15. Regulatory information

**Regulatory Overview** The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Classification of the substance or mixture under OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7)

#### Toxic Substance Control Act (TSCA)

CAS Number	Ingredient	Toxic Substance Control Act (TSCA)	Comments	Status
0061789-40-0	1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivatives, hydroxides, inner salts	Yes	UVCB	ACTIVE
0000111-41-1	2-(2-Aminoethylamino)ethanol (AEEA)	Yes		ACTIVE
0007631-86-9	Amorphous Silica	Yes		ACTIVE
0000107-21-1	Ethane-1,2-diol	Yes		ACTIVE
0000067-56-1	Methanol	Yes		ACTIVE

#### EPCRA 302 Extremely Hazardous:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

#### EPCRA 313 Toxic Chemicals:

Methanol

**Proposition 65 - Carcinogens (>0.0%):**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 - Developmental Toxins (>0.0%):**

Ethane-1,2-diol

Methanol

**Proposition 65 - Female Repro Toxins (>0.0%):**

Ethane-1,2-diol

**Proposition 65 - Male Repro Toxins (>0.0%):**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Proposition 65 Label Warning:**



WARNING: This product can expose you to chemicals including [Ethane-1,2-diol, Methanol], which are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## Section 16. Other information

**Revision Date**

04/16/2025

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H225 Highly flammable liquid and vapor.

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H335 May cause respiratory irritation.

H360 May damage fertility or the unborn child.

H370 Causes damage to organs.

H371 May cause damage to organs.

**Disclaimer:**

The information and recommendations set forth herein are presented in good faith and believed correct as of the date the SDS was created. It is compiled from various sources and it is not necessarily all inclusive nor fully adequate in every circumstance. In addition, these suggestions should not be confused with nor followed in violation of applicable laws, regulations, rules or insurance requirements applicable. This SDS is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. This shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**End of Document**