

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1. Product identifier****Product Code(s)** TWK313501**Product name** Core**Synonyms** None**Pure substance/mixture** Mixture**1.2. Relevant identified uses of the substance or mixture and uses advised against****Recommended Use** ink**Uses advised against** No information available**1.3. Details of the supplier of the safety data sheet****Company Name**

Kao Collins Inc.

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For further information, please contact

1.4. Emergency telephone number**Emergency telephone number** Chemtrec 1-800-424-9300**Emergency Telephone** International Chemtrec: +1 703-527-3887**Section 2: HAZARD IDENTIFICATION****2.1. Classification of the substance or mixture**

Regulation (EC) No 1272/2008

Serious eye damage/eye irritation

Category 2 - (H319)

2.2. Label elements**Product identifier****Signal word**

Warning

Hazard statements

H319 - Causes serious eye irritation

Precautionary Statements - EU (§28, 1272/2008)

P264 - Wash face, hands and any exposed skin thoroughly after handling

P280 - Wear eye protection/ face protection

P337 + P313 - If eye irritation persists: Get medical advice/attention

2.3. Other hazards

May be harmful if swallowed. Causes mild skin irritation.

General Hazards

May cause skin and eye irritation.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Reg. No
Lactam	Listed	-	1 - 15	Eye Irrit. 2 (H319)	No data available
Alcohol	Listed	-	1 - 5	Acute Tox. 5 (H303) Skin Irrit. 2 (H315) Eye Irrit. 2B (H320) Acute Tox 5 (H333)	No data available
Triethanolamine	EEC No. Present	102-71-6	1 - 5	Eye Irrit. 2 (H319)	No data available
Modified Carbon Black	-	NOT AVAILABLE	0.1 - <2	no data available	No data available

Full text of H- and EUH-phrases: see section 16

NOTE

Remaining components are either not hazardous or below threshold limits.

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Immediate medical attention is not required.
Inhalation	Remove to fresh air. If symptoms persist, call a physician.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. Wash off immediately with soap and plenty of water.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
Ingestion	Do NOT induce vomiting. Drink plenty of water. Immediate medical attention is not required. Rinse mouth.
Self-protection of the first aider	Use personal protective equipment as required.

4.2. Most important symptoms and effects, both acute and delayed

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician May cause sensitization of susceptible persons. Use of epinephrine may be indicated.

Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Use. Carbon dioxide (CO₂). Dry chemical. Alcohol resistant foam.

Unsuitable extinguishing media

None

5.2. Special hazards arising from the substance or mixture

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes
Thermal decomposition can lead to release of irritating and toxic gases and vapors In the event of fire and/or explosion do not breathe fumes May cause sensitization in susceptible persons

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions

Use personal protective equipment as required. Avoid contact with skin and eyes.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system.
Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

6.3. Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

After cleaning, flush away traces with water. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Prevent product from entering drains.

6.4. Reference to other sections

See section 7 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling

Use personal protective equipment as required. Ensure adequate ventilation.

Hygiene Measures

Wash contaminated clothing before reuse. When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities

Storage

Keep out of the reach of children. Keep container tightly closed. Keep containers tightly closed in a cool, well-ventilated place.

7.3. Specific end use(s)

Risk Management Methods (RMM)

The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Chemical name	European Union	United Kingdom	France	Spain	Germany
Humectant		STEL: 30 mg/m ³ TWA: 10 mg/m ³	TWA: 10 mg/m ³	VLA-ED: 10 mg/m ³ VLA-ED	TWA: 200 mg/m ³
Triethanolamine 102-71-6				VLA-ED: 5 mg/m ³ VLA-ED	
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Humectant		TWA: 10 mg/m ³	MAC: 10 mg/m ³ MAC (mist)	TWA: 20 mg/m ³	
Triethanolamine 102-71-6		TWA: 5 mg/m ³	MAC: 5 mg/m ³ MAC	TWA: 5 ppm	TWA: 0.5 ppm TWA: 3.1 mg/m ³
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Humectant		STEL: 100 mg/m ³	NDS: 10 mg/m ³		TWA: 10 mg/m ³
Triethanolamine 102-71-6	STEL 1.6 ppm STEL (inhalable fraction); 10 mg/m ³ STEL (inhalable fraction) MAK: 0.8 ppm MAK (inhalable fraction); 5 mg/m ³ MAK (inhalable fraction)	STEL: 10 mg/m ³		TWA: 5 mg/m ³ STEL: 10 mg/m ³	TWA: 5 mg/m ³

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Measures Ensure adequate ventilation, especially in confined areas. Showers. Eyewash stations.

Personal Protective Equipment

Eye/Face Protection Tight sealing safety goggles.
Hand protection For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.
Skin and body protection Suitable protective clothing.
Respiratory protection None under normal use conditions.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	liquid	Odor	slight amine
Appearance	Black	Odor Threshold	No information available
Color	No information available		
Property	Values	Remarks • Method	
pH		No information available	
Melting point / freezing point		No information available	
Boiling point / boiling range		No information available	
Flash point	> 100 °C	Seta Closed Cup	
Evaporation rate		No information available	
Flammability (solid, gas)		No information available	
Flammability Limit in Air			
Upper flammability limit:		No information available	
Lower flammability limit:		No information available	
Vapor pressure		No information available	
Vapor density		No information available	
Relative density	1.0 - 1.2	No information available	
Water solubility		No information available	

Solubility(ies)	Soluble in water	No information available
Partition coefficient		No information available
Autoignition temperature	>200 °C	No information available
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity	< 15 cps	No information available
Explosive properties	No information available	
Oxidizing properties	No information available	

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC content	No information available
Liquid Density	No information available
Bulk density	No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

no data available.

10.2. Chemical stability

Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.

10.3. Possibility of hazardous reactions**Hazardous polymerization**

Hazardous polymerization does not occur.

Hazardous Reactions

None under normal processing.

10.4. Conditions to avoid**10.5. Incompatible materials**

Strong oxidizing agents.

10.6. Hazardous decomposition products

Carbon oxides.

Section 11: TOXICOLOGY INFORMATION

11.1. Information on toxicological effects**Acute toxicity****Product Information**

The product has not been tested.

Inhalation	May cause irritation of respiratory tract. Avoid breathing vapors or mists.
Eye contact	Causes serious eye irritation. Avoid contact with eyes.
IF ON SKIN	May cause irritation. May discolor the skin. Avoid contact with skin.
Ingestion	May be harmful if swallowed. Do NOT taste or swallow.

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 2,966.20 mg/kg
 ATEmix (dermal) 15,163.90 mg/kg
 ATEmix (inhalation-vapor) 625.00 mg/l

Unknown acute toxicity

- 1.3 % of the mixture consists of ingredient(s) of unknown toxicity.
- 1.3 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
- 1.3 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
- 1.3 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
- 1.3 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
- 1.3 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Lactam	= 328 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 80 ppm (Rat) 8 h
Triethanolamine	= 4190 mg/kg (Rat)	> 20000 mg/kg (Rabbit) > 16 mL/kg (Rat)	

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	Irritating to eyes.
Sensitization	No information available.
Mutagenic effects	No information available.
Carcinogenic effects	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Target organ effects	Eyes, kidney, blood, Skin.
Aspiration hazard	No information available.

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects

Not Established.

Contains 0 % of components with unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Toxicity to Fish	Crustacea
Lactam	250: 72 h Desmodesmus subspicatus mg/L EC50 84: 96 h Desmodesmus subspicatus mg/L EC50	4600 - 10000: 96 h Brachydanio rerio mg/L LC50 static	3.4: 96 h Daphnia magna mg/L LC50
Triethanolamine	216: 72 h Desmodesmus subspicatus mg/L EC50 169: 96 h Desmodesmus subspicatus mg/L EC50	10600 - 13000: 96 h Pimephales promelas mg/L LC50 flow-through 450 - 1000: 96 h Lepomis macrochirus mg/L LC50 static 1000: 96 h Pimephales promelas mg/L LC50 static	1386: 24 h Daphnia magna mg/L EC50

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

Chemical name	Partition coefficient
Lactam	-0.71
Triethanolamine	-2.53

12.4. Mobility in soil

Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues/unused products

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

Contaminated packaging

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

Other Information

According to the European Waste Catalog, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORT INFORMATION

IMDG/IMO

14.1 UN-No	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing group	Not regulated
14.5 Marine pollutant	Not applicable
14.6 Special Provisions	None
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	No information available

RID

14.1 UN-No	Not Regulated
14.2 Proper shipping name	Not Regulated
14.3 Hazard Class	Not Regulated
14.4 Packing group	Not Regulated
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	None

ADR

14.1 UN-No	Not Regulated
14.2 Proper shipping name	Not Regulated
14.3 Hazard Class	Not Regulated
14.4 Packing group	Not Regulated

14.5 Environmental hazard Not applicable
 14.6 Special Provisions None

IATA

14.1 UN-No Not Regulated
 14.2 Proper shipping name Not Regulated
 14.3 Hazard Class Not Regulated
 14.4 Packing group Not Regulated
 14.5 Environmental hazard Not applicable
 14.6 Special Provisions None

Section 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

International Inventories

Component	TSCA	DSL/NDSL	EINECS/ELI NCS	ENCS	IECSC	KECL	PICCS	AICS
Lactam (1 - 15)	X	X	X	X	X	X	X	X
Alcohol (1 - 5)	X	X	X	X	X	X	X	X
Triethanolamine 102-71-6 (1 - 5)	X	X	X	X	X	X	X	X

Legend Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

No information available

Section 16: OTHER INFORMATION

Full text of H-Statements referred to under section 3

H303 - May be harmful if swallowed
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H320 - Causes eye irritation
H333 - May be harmful if inhaled

Legend

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

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Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

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End of Safety Data Sheet