SAFETY DATA SHEET



Dyna-Plex 21C Syn-Tek 505

Section 1. Identification

GHS product identifier

: Dyna-Plex 21C Syn-Tek 505

Other means of identification

. Not available.

Product type

: Liquid.

Identified uses

Not available.

Supplier's details : Miller Industrial Fluids, A PetroChoice Company

1751 W. Raymond Street Indianapolis, IN 46221 Tel.: (317) 634-7300 Fax: (317) 636-6761

Email: customerservice@millerif.com

Web: www.petrochoice.com

Emergency telephone number (with hours of operation) : CHEMTREC, U.S.: 1-800-424-9300 International: +1-703-527-3887

(24/7)

Emergency phone: (317) 634-7300, After Hours: (CHEMTREC)

Emergency email: customerservice@millerif.com

Hours of operation: 8am - 5pm

Section 2. Hazards identification

OSHA/HCS status

: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

: SKIN CORROSION/IRRITATION - Category 1B SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1

GHS label elements

Hazard pictograms





Signal word

: Danger

Hazard statements

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

Precautionary statements

General

: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention

: Wear protective gloves. Wear eye or face protection. Wear protective clothing. Avoid breathing vapor. Wash hands thoroughly after handling. Contaminated work clothing

should not be allowed out of the workplace.

Section 2. Hazards identification

Response

: 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 contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician. If eye irritation persists: Get medical attention.

Storage

: Store locked up.

Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified

: None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

CAS number/other identifiers

CAS number : Not applicable.

Product code : Not available.

Ingredient name	%	CAS number
Poloxalene	5 - 10	9003-11-6
2-Aminoethanol	1 - 5	141-43-5
Octanoic acid	1 - 5	124-07-2
Dodecanedioic acid	1 - 5	693-23-2
Undecanedioic acid	1 - 5	1852-04-6
Ethanolamine and triethanolamine borate	1 - 5	68512-53-8
2,2',2"-(Hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol	1 - 5	4719-04-4
Poly[oxy-1,2-ethanediyl(dimethyliminio)-1,2-ethanediyl(dimethyliminio)-1,2-ethanediyl chloride (1:	0.1 - 1	31512-74-0
[2)]		

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact

: Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician.

Inhalation

: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately.

Skin contact

: Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.



Section 4. First aid measures

Ingestion

: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory

system. Exposure to decomposition products may cause a health hazard. Serious

effects may be delayed following exposure.

Skin contact: Causes severe burns. May cause an allergic skin reaction.

Ingestion: May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:

pain watering redness

Inhalation : No known significant effects or critical hazards.

Skin contact: Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

Ingestion: Adverse symptoms may include the following:

stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

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.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is

suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water

before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing

media

: In case of fire, use water spray (fog), foam, dry chemical or CO2.

Unsuitable extinguishing

media

: None known.



Section 5. Fire-fighting measures

Specific hazards arising from the chemical

: No specific fire or explosion hazard.

Hazardous thermal decomposition products

 Decomposition products may include the following materials: carbon dioxide carbon monoxide

nitrogen oxides

Special protective actions for fire-fighters

: No special measures are required.

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.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: 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. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders:

: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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.



Section 7. Handling and storage

Advice on general occupational hygiene

: 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. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

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. Store locked up. 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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
2-Aminoethanol	ACGIH TLV (United States, 6/2013).
	STEL: 15 mg/m³ 15 minutes.
	STEL: 6 ppm 15 minutes.
	TWA: 7.5 mg/m³ 8 hours.
	TWA: 3 ppm 8 hours.
	NIOSH REL (United States, 10/2013).
	STEL: 15 mg/m³ 15 minutes.
	STEL: 6 ppm 15 minutes.
	TWA: 8 mg/m³ 10 hours.
	TWA: 3 ppm 10 hours.
	OSHA PEL (United States, 2/2013).
	TWA: 6 mg/m³ 8 hours.
	TWA: 3 ppm 8 hours.

Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/ or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection : Recommended: Oil impervious gloves.Body protection : Recommended: Oil impermeable apron.



Section 8. Exposure controls/personal protection

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: Use a properly fitted, air-purifying or supplied air 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.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.
Color : Yellow.
Odor : Mild.

Odor threshold Not available. pН 9.5 to 10.5 : 0°C (32°F) **Melting point Boiling point** : 100°C (212°F) Flash point : Not applicable. : Not available. **Evaporation rate** : Not applicable. Flammability (solid, gas) Lower and upper explosive : Not applicable.

(flammable) limits

Vapor pressure: Not available.Vapor density: Not available.

Relative density : 1.02

Solubility : Easily soluble in the following materials: cold water and hot water.

Partition coefficient: n-

octanol/water

: Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Section 10. Stability and reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability: The product is stable.

Possibility of hazardous

reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials, acids and

alkalis.

Section 10. Stability and reactivity

Hazardous decomposition products

: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-Aminoethanol Octanoic acid	LD50 Oral LD50 Dermal LD50 Oral	Rat Rabbit Rat	1720 mg/kg >5000 mg/kg 1283 mg/kg	-
Dodecanedioic acid 2,2',2"-(Hexahydro-1,3,5-triazine-1,3, 5-triyl)triethanol	LD50 Oral LD50 Oral	Rat Rat	>6000 mg/kg >763 mg/kg	- -
Poly[oxy-1,2-ethanediyl (dimethyliminio)-1,2-ethanediyl (dimethyliminio)-1,2-ethanediyl chloride (1:2)]	LD50 Oral	Rat	1850 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-Aminoethanol	Eyes - Severe irritant	Rabbit	-	250 μg	-
	Skin - Moderate irritant	Rabbit	-	505 mg	-
Octanoic acid	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
Dodecanedioic acid	Eyes - Mild irritant	Rabbit	-	0.1 mL	-
Diethanolamine	Eyes - Severe irritant	Rabbit	-	24 hours 750 μg	-
	Eyes - Severe irritant	Rabbit	-	5500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	50 mg	-

Sensitization

There is no data available.

Carcinogenicity

Classification

Product/ingredient name	OSHA	IARC	NTP	ACGIH	EPA	NIOSH
2,2',2"-Nitrilotriethanol	-	3	-	-	-	-

Specific target organ toxicity (single exposure)

Name		Route of exposure	Target organs
2-Aminoethanol	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure

: Dermal contact. Eye contact. Ingestion.

Potential acute health effects

Eye contact Inhalation

: Causes serious eye damage.

: May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.



Section 11. Toxicological information

Skin contact : Causes severe burns. May cause an allergic skin reaction.

Ingestion : May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:

> watering redness

Inhalation : No known significant effects or critical hazards. **Skin contact** Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

: Adverse symptoms may include the following: Ingestion

stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate

effects

: No known significant effects or critical hazards.

Potential delayed effects

: No known significant effects or critical hazards.

Long term exposure

Potential immediate

: No known significant effects or critical hazards.

effects

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to

very low levels.

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.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	21552.3 mg/kg
Dermal	27989.8 mg/kg
Inhalation (vapors)	279.9 mg/L

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
2-Aminoethanol	Acute EC50 80000 μg/L Fresh water	Algae - Isochrysis galbana	96 hours
	Acute LC50 >100000 µg/L Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 170000 µg/L Fresh water	Fish - Carassius auratus	96 hours
Octanoic acid	Acute IC50 144 mg/L	Algae - Magna	72 hours
	Acute LC50 110 mg/L	Fish - Brachydanio rerio	96 hours
2,2',2"-(Hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol	Acute EC50 26.1 ppm Fresh water	Daphnia - Daphnia magna	48 hours
,,	Acute LC50 39 ppm Fresh water	Fish - Lepomis macrochirus	96 hours
Poly[oxy-1,2-ethanediyl (dimethyliminio)-1,2-ethanediyl (dimethyliminio)-1,2-ethanediyl chloride (1:2)]	Acute EC50 266 ppb Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 218 μg/L Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 47 ppb Fresh water Chronic NOEC 12 ppb Marine water	Fish - Oncorhynchus mykiss Daphnia - Daphnia magna	96 hours 21 days

Persistence and degradability

Product/ingredient name	Test	Result		Dose		Inoculum
Octanoic acid	-	70 % - 28 days	3	-		-
Product/ingredient name	Aquatic half-life	Aquatic half-life		·	Biodeg	radability
Octanoic acid			-		Readily	

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
2-Aminoethanol Octanoic acid	-1.31 3.05	- 238 to 288	low low
Dodecanedioic acid	3.2	3.162	low
2,2',2"-(Hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol	-2	-	low

Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. 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 empty 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.



Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Additional information	-	-	-

AERG: Not applicable.

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according : Not available.

to Annex II of MARPOL 73/78 and the IBC Code

Section 15. Regulatory information

U.S. Federal regulations

: TSCA 4(a) final test rules: 2,2',2"-(Hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol

TSCA 8(a) CDR Exempt/Partial exemption: Not determined Commerce control list precursor: 2,2',2"-Nitrilotriethanol

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

Clean Water Act (CWA) 311: Propylene oxide; Sodium hydroxide

Clean Air Act Section 112

(b) Hazardous Air **Pollutants (HAPs)** : Not listed

Clean Air Act Section 602

: Not listed

Class I Substances

: Not listed

Clean Air Act Section 602 Class II Substances

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals)

: Not listed

SARA 302/304

Composition/information on ingredients



Section 15. Regulatory information

	SARA 302 TPQ SARA 304 RQ		SARA 302 TPQ		RQ	
Name	%	EHS	(lbs)	(gallons)	(lbs)	(gallons)
Propylene oxide	0 - 0.1	Yes.	10000	1444.3	100	14.4
Ethylene oxide	0 - 0.1	Yes.	-	-	-	-

SARA 304 RQ : 13888888.9 lbs / 630555.6 kg [163309 gal / 618191.7 L]

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
2-Aminoethanol	1 - 5	No.	No.	No.	Yes.	No.
Octanoic acid	1 - 5	No.	No.	No.	Yes.	No.
Dodecanedioic acid	1 - 5	No.	No.	No.	Yes.	No.
Undecanedioic acid	1 - 5	No.	No.	No.	Yes.	No.
Ethanolamine and triethanolamine borate	1 - 5	No.	No.	No.	Yes.	No.
2,2',2"-(Hexahydro-1,3,5-triazine-1,3,5-triyl) triethanol	1 - 5	No.	No.	No.	Yes.	No.

State regulations

Massachusetts : The following components are listed: 2-Aminoethanol; 2,2',2"-Nitrilotriethanol

New York: None of the components are listed.

New Jersey : The following components are listed: 2-Aminoethanol; 2,2',2"-Nitrilotriethanol Pennsylvania : The following components are listed: 2-Aminoethanol; 2,2',2"-Nitrilotriethanol

California Prop. 65

WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer. **WARNING:** This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive		Maximum acceptable dosage level
Propylene oxide 1,4-Dioxane Ethylene oxide	Yes.		No. Yes. Yes.	No. No. Yes.

Section 16. Other information

History

Date of issue mm/dd/yyyy : 02/15/2015

Version : 1

Revised Section(s) : Not applicable.

Prepared by : KMK Regulatory Services Inc.

Key to abbreviations : ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient



Section 16. Other information

MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

