according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 2015/830 and US OSHA HCS 2015

Section 1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product Code: TA20-A
Product Name: Tiolon A-20 Aerosol

1.2 Relevant identified uses of the substance or mixture and uses advised against:
Relevant identified uses: Air Dry, PTFE, Aerosol, Solid Film Lubricant

1.3 Details of the Supplier of the Safety Data Sheet:
Company Name: TIODIZE CO, INC.
5858 ENGINEER DRIVE
HUNTINGTON BEACH, CA 92649 United States of America
Web site address: tiodize.com
Email address: tiodize@tiodize.com
Information: 1-813-248-0585 International

1.4 Emergency telephone number:
Emergency Contact: 1-800-255-3924 (U.S. & Canada)

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture:
Flammable Gases, Category 1
Gas Under Pressure, Compressed gas
Flammable Liquids, Category 2
Simple Asphyxiant
Skin Corrosion/Irritation, Category 2
Serious Eye Damage/Eye Irritation, Category 2
Specific Target Organ Toxicity (single exposure), Category 3

2.2 Label Elements:

GHS Signal Word: **Danger**

GHS Hazard Phrases:
H220 - Extremely flammable gas.
H225 - Highly flammable liquid and vapor.
H280 - Containers gas under pressure; may explode if heated.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.
HUS1 - May displace oxygen and cause rapid suffocation.

GHS Precautionary Phrases:
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting/.../ equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.

P264 - Wash hands thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P235 - Keep cool.

GHS Response Phrases:

P302+352 - IF ON SKIN: Wash with plenty of soap and water.
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 victim to fresh air and keep at rest in a position 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.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P321 - Specific treatment see ... on this label.
P332+313 - If skin irritation occurs, get medical advice/attention.
P337+313 - If eye irritation persists, get medical advice/attention.
P362+364 - Take off contaminated clothing and wash it before reuse.
P370+378 - In case of fire, use ... to extinguish.
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 - Eliminate all ignition sources if safe to do so.

GHS Storage and Disposal Phrases:

P403+233 - Store container tightly closed in well-ventilated place.
P405 - Store locked up.
P410+403 - Protect from sunlight and store in well-ventilated place.
P501 - Dispose of contents/container to ...

2.3 Adverse Human Health No data available.

Effects and Symptoms:

Section 3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
9002-84-0	Polytetrafluoroethylene (PTFE) na	3.0 -8.0 %	NA NA	Eye Damage 2A: H319
NA	Organic Resin (Not Hazardous)	5.0 -10.0 %	NA NA	No data available.
74-98-6	Propane 01-2119486944-21	6.0 -12.0 %	200-827-9 601-003-00-5	Comp. Gas: H280 Flam. Gas 1: H220
75-28-5	Isobutane (2-Methylpropane) 01-2119485395-27	10.0 -15.0 %	200-857-2 601-004-01-8	Flam. Gas 1: H220 H280
67-64-1	Acetone (2-Propanone) 01-2119471330-49	40.0 -55.0 %	200-662-2 606-001-00-8	Flam. Liq. 2: H225 Eye Damage 2: H319 STOT (SE) 3: H336 EUH066
98-56-6	P-chlorobenzotriflouride 01-2119857280-40	10.0 -15.0 %	202-681-1 NA	Flam. Liq. 3: H226 Skin Corr. 2: H315 Eye Damage 2: H319 STOT (SE) 3: H335
67-63-0	Isopropyl alcohol 01-2119457558-25	10.0 -15.0 %	200-661-7 603-117-00-0	Flam. Liq. 2: H225 Eye Damage 2: H319 STOT (SE) 3: H335 H336

Section 4. First Aid Measures

4.1 Description of First Aid Measures: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give alcohol to drink.

In Case of Inhalation: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention.

In Case of Skin Contact: Immediately wash skin with plenty of soap and water while removing contaiminated clothing and shoes. GET MEDICAL ATTENTION. Contaminated clothing should be discarded in a manner which limits further exposure.

In Case of Eye Contact: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

In Case of Ingestion: If swallowed, do not induce vomiting unless directed by medical personnel, keep warm, quiet and get medical attention.

Section 5. Fire Fighting Measures

5.1 Suitable Extinguishing Media: ATL Foam Alcohol, Carbon Dioxide, Dry Chemical.

Unsuitable Extinguishing Media: Water.

5.2 Flammable Properties and Hazards: Keep away from heat, hot surfaces, sparks, open flams and other ignition source. No smoking. Do not scatter spilled material with high pressure water streams.

No data available.

Flash Pt: -104.40 C Method Used: Pensky-Marten Closed Cup

Explosive Limits: LEL: 2.6% UEL: 12.8%

Autoignition Pt: No data.

5.3 Fire Fighting Instructions: Proper eye and skin protection should be used. Water is unsuitable, use extinguishing media.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Protective Equipment and Emergency Procedures: Where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.

6.2 Environmental Precautions: Should not be released into the environment. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system.

6.3 Methods and Material For Containment and Cleaning Up: For small spills, vacuum into waste containers or absorb with dry sand or absorbent cloth. For large spills immediately evacuate the area and shut off potential ignition sources. Only personnel equipped with proper respiratory and skin/eye protection should be permitted in the area. Dike the area to contain the spill. Take precautions as necessary to prevent contamination of ground or surface waters. Recover with a wet vacuum or absorb spilled material in sawdust or vermiculite and sweep into closed containers for disposal. After all visible traces have been removed, thoroughly wet vacuum area again. DO NOT FLUSH INTO SEWER.

Section 7. Handling and Storage

7.1 Precautions To Be Taken in Handling: Keep away from open flame or other ignition sources. Maintain adequate ventilation and keep from children. Note that some vapors are heavier than air and can displace air in low areas or confined spaces such as pits or tanks. Do not enter those areas where large quantities of vapors are suspected or collecting until exchanging the air or using special breathing apparatus with an observer present for possible assistance.

7.2 Precautions To Be Taken in Storing: Do not store above 120ºF.
Store in a cool, dry well ventilated place, away from incompatible materials. Store in a closed/sealed container

Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:

CAS #	Chemical Name	Jurisdiction	Recommended Exposure Limits	Notations
74-98-6	Propane	ACGIH TLV	TLV: (2500 ppm)	
		OSHA PELs	PEL: 1000 ppm	
67-64-1	Acetone (2-Propanone)	ACGIH TLV	TLV: 250 ppm STEL: 500 ppm	
		Europe	TWA: 1210 mg/m3 (500 ppm)	
		France VL	TWA: 1210 mg/m3 (500 ppm) STEL: 2420 mg/m3 (1000 ppm)	
		OSHA PELs	PEL: 1000 ppm	
		Britain EH40	TWA: 1210 mg/m3 (500 ppm) STEL: 3620 mg/m3 (1500 ppm)	
67-63-0	Isopropyl alcohol	ACGIH TLV	TLV: 200 ppm STEL: 400 ppm	
		France VL	STEL: 980 mg/m3 (400 ppm)	
		OSHA PELs	PEL: 400 ppm	
		Britain EH40	TWA: 999 mg/m3 (400 ppm) STEL: 1250 mg/m3 (500 ppm)	

8.2 Exposure Controls:

8.2.1 Engineering Controls (Ventilation etc.): No data available.

8.2.2 Personal protection equipment:

Eye Protection: Goggles.

Protective Gloves: Rubber gloves.

Other Protective Clothing: Safety shower and eye-wash fountain in manufacturing areas. Personal protective clothing and use of equipment must be in accordance with 29CFR 1910.132 and 29CFR 1910.133.

Respiratory Equipment (Specify Type): A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Work/Hygienic/Maintenance Practices: Do not smoke, eat or drink while using this product. Wash hands with soap and water before smoking, eating, drinking or using toilet facilities. Launder contaminated clothing before reuse.

8.2.3 Environmental Exposure Controls: Ventilation is normally required when handling or using this product to keep exposure to airborne contaminants below the exposure limit.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Physical States:	[X] Gas [X] Liquid [ ] Solid
Appearance and Odor:	Appearance: Milky. Liquid. Odor: acetone-like.
pH:	No data.
Melting Point:	No data.
Boiling Point:	-42.1 C (-43.80 F)
Flash Pt:	-104.40 C Method Used: Pensky-Marten Closed Cup
Evaporation Rate:	14.4 (BuAC=1)
Flammability (solid, gas):	No data available.
Explosive Limits:	LEL: 2.6% UEL: 12.8%
Vapor Pressure (vs. Air or mm Hg):	46 PSI at 20.0 C
Vapor Density (vs. Air = 1):	2.00
Specific Gravity (Water = 1):	0.792
Solubility in Water:	No data.
Octanol/Water Partition Coefficient:	No data.
Autoignition Pt:	No data.
Decomposition Temperature:	No data.
Viscosity:	No data.

9.2 Other Information

Percent Volatile:	No data.
VOC / Volume:	370.0000 G/L

Section 10. Stability and Reactivity

10.1	**Reactivity:**	Not reactive.
10.2	**Stability:**	Unstable [ ] Stable [X]
10.3	**Conditions To Avoid - Hazardous Reactions:**	No data available.
	Possibility of Hazardous Reactions:	Will occur [ ] Will not occur [X]
10.4	**Conditions To Avoid - Instability:**	Sources of ignition such as sparks, hot spots, welding, flames, and cigarettes.
10.5	**Incompatibility - Materials To Avoid:**	Reactive Metals.
10.6	**Hazardous Decomposition or Byproducts:**	Halogenated organic gases.

Section 11. Toxicological Information

11.1 Information on Toxicological Effects:

Long-term exposure or high concentrations of vapor may result in central nervous system depression and narcosis.

CAS# 9002-84-0: Tumorigenic Effects:, TDLo, Implant, Rat, 80.00 MG/KG. Results: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Tumorigenic:Tumors at site of application. ; Cancer Research, Public Ledger Building, Suit 816, 6th & Chestnut Sts., Philadelphia, PA 19106, Vol/p/yr: 15,333, 1955

Tumorigenic Effects:, TDLo, Implant, Mouse, 1140. MG/KG. Results: Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Tumorigenic:Tumors at site of application. ; Tumori., Casa Editrice Ambrosiana, Via G. Frua 6, 20146, Milan Italy, Vol/p/yr: 62,565, 1976

CAS# 75-28-5: Acute toxicity, LC50, Inhalation, Rat, 57.00 PPH, 15 M. Results: Behavioral: Tremor. Behavioral: Convulsions or effect on seizure threshold. Lungs, Thorax, or Respiration:Respiratory depression. ; Human Toxicology., Macmillan Press Ltd, Houndmills, Basingstoke, Hampshire RG21 2XS UK, Vol/p/yr: 1,239, 1982

Acute toxicity, LC50, Inhalation, Rat, 658000. mg/m3. Results: Specific Developmental Abnormalities: Urogenital system. ; Toksikologicheskii Vestnik., Vol/p/yr: (3),38, 2000

CAS# 67-64-1: Acute toxicity, LC50, Inhalation, Rat, 50100. MG/M3, 8 H. Results: Kidney, Ureter, Bladder: Changes in liver weight. Kidney, Ureter, Bladder:Urine volume increased. Biochemical:Enzyme inhibition, induction, or change in blood or tissue levels: Transaminases. ; American Industrial Hygiene Association Journal., AIHA, 475 Wolf Ledges Pkwy., Akron, OH 44311, Vol/p/yr: 20,364, 1959

Acute toxicity, LD50, Intraperitoneal, Mouse, 1297. MG/KG. Results: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). ; Shell Chemical Company. Unpublished Report., Vol/p/yr: -,1, 1961

CAS# 98-56-6: Acute toxicity, LC50, Inhalation, Mouse, 20.00 GM/M3; Gigiena Truda i Professional'nye Zabolevaniya.(Labor Hygiene and Occupational Disease), V/O Mezhdunarodnaya Kniga, Moscow 113095 Russia, Vol/p/yr: 28(5),49, 1984

CAS# 67-63-0: Other Studies:, TDLo, Oral, Rat, 7.000 ML/KG, 7 D. Results: Liver: Other changes. Biochemical: Effect on specific coenzyme: B vitamins including folate. ; Journal of Drug Research., National Organization for Drug Research and Control, POB 29, Cairo Egypt, Vol/p/yr: 10(1-2),25, 1978

Acute toxicity, LD50, Oral, Rat, 5045. MG/KG. Results: Behavioral: Altered sleep time (including change in righting reflex). Behavioral: Somnolence (general depressed activity). ; Gigiena i Sanitariya, Mezhdunarodnaya Kniga, ul. B. Yakimanka, 39, 113095, Moscow 113095 Russia, Vol/p/yr: 43(1),8, 1978

Irritation or Corrosion: Skin and eye irritation, drowsiness, lack of coordination.

Chronic Toxicological Effects: Moderately toxic, may cause nausea and/or diarrhea.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Section 12. Ecological Information

12.1 Toxicity:

CAS# 67-64-1: LC50, Diatom (Nitzschia linearis), 11493. - 11727. UG/L, 5 D, Mortality; The Relative Sensitivity of Diatoms, Snails, and Fish to Twenty Common Constituents of Industrial Wastes, Patrick, R., J.,Jr. Cairns, and A. Scheier, 1968

LC50, Harlequinfish, Red Rasbora (Rasbora heteromorpha), 4000000. UG/L, 48 H, Mortality, Water temperature: 20.00 C C, pH: 7.20, Hardness: 20.00 MG/L; Survival of Fish in 164 Herbicides, Insecticides, Fungicides, Wetting Agents and Miscellaneous Substances, Alabaster, J.S., 1969

LC50, Western Mosquitofish (Gambusia affinis), adult(s), 13500000. UG/L, 24 H, Mortality, Water temperature: 23.00 C - 27.00 C C, pH: 8.50; Toxicity to Gambusia affinis of Certain Pure Chemicals in Turbid Waters, Wallen, I.E., W.C. Greer, and R. Lasater, 1957

LC50, Asiatic Clam (Corbicula manilensis), 20000. MG/L, 96 H, Mortality, Water temperature: 16.00 C C, Hardness: 26.00 MG/L; Toxicity of Fishery Chemicals to the Asiatic Clam, Corbicula manilensis, Chandler, J.H.,Jr., and L.L. Marking, 1979

CAS# 67-63-0: LC50, Common Shrimp, Sand Shrimp (Crangon crangon), 1400000. UG/L, 48 H, Mortality; Toxicity of Oil-Sinking Agents, Blackman, R.A.A., 1974

LC50, Goldfish (Carassius auratus), 5000000. UG/L, 24 H, Mortality, Water temperature: 20.00 C C, pH: 7.00; The Acute Toxicity of Some Petrochemicals to Goldfish, Bridie, A.L., C.J.M. Wolff, and M. Winter, 1979

LC50, Yellow Fever Mosquito (Aedes aegypti), larva(e), 3.200 % V/V, 4 H, Mortality, Water temperature: 22.00 C - 24.00 C C; Relative Toxicity of Organic Solvents to Aedes aegypti Larvae, Kramer, V.C., D.J. Schnell, and K.W. Nickerson, 1983

LC50, Nematode (Caenorhabditis elegans), larva(e), 6.550 % V/V, 24 H, Mortality; Toxicity of Short-Chain Alcohols to the Nematode Caenorhabditis elegans: A Comparison of Endpoints, Thompson, G., and D.I. De Pomerai, 2005

LC50, Carp (Leuciscus idus ssp. melanotus), 9280. MG/L, 48 H, Mortality; Results of the Investigation of 200 Chemical Compounds for Acute Fish Toxicity with the Golden Orfe Test (Ergebnisse der Untersuchung von 200 Chemischen Verbindungen auf Akute Fischtoxizitat mit dem Goldorfentest), Juhnke, I., and D. Luedemann, 1978

12.2 Persistence and Degradability: No data available.

12.3 Bioaccumulative Potential: No data available.

12.4 Mobility in Soil: No data available.

12.5 Results of PBT and vPvB assessment: No data available.

12.6 Other adverse effects: No data available.

Section 13. Disposal Considerations

13.1 Waste Disposal Method: Do not discharge into drains or the environment. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Do not landfill. Incinerate under surveillance with energy recovery. May be discharged to company wastewater treatment plant.

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: ORM-D.

DOT Hazard Class: FLAMMABLE GAS

UN/NA Number:

14.1 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name:

UN Number:

Hazard Class: FLAMMABLE GAS

14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Aerosols Flamable.

UN Number: **Packing Group:**

Hazard Class: FLAMMABLE GAS

Section 15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
9002-84-0	Polytetrafluoroethylene (PTFE)	No	No	No
NA	Organic Resin (Not Hazardous)	No	No	No
74-98-6	Propane	No	No	No
75-28-5	Isobutane (2-Methylpropane)	No	No	No
67-64-1	Acetone (2-Propanone)	No	Yes 5000 LB	No
98-56-6	P-chlorobenzotriflouride	No	No	No
67-63-0	Isopropyl alcohol	No	No	Yes

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

[ ] Yes [X] No Explosive
[X] Yes [ ] No Flammable (gases, aerosols, liquid, or solid)
[ ] Yes [X] No Oxidizer (liquid, solid or gas)
[ ] Yes [X] No Self-reactive
[ ] Yes [X] No Pyrophoric (liquid or solid)
[ ] Yes [X] No Pyrophoric gas
[ ] Yes [X] No Self-heating
[ ] Yes [X] No Organic peroxide
[ ] Yes [X] No Corrosive to metal
[X] Yes [ ] No Gas under pressure (compressed gas)
[ ] Yes [X] No Acute toxicity (any route of exposure)
[X] Yes [ ] No Skin Corrosion or Irritation
[X] Yes [ ] No Serious eye damage or eye irritation
[ ] Yes [X] No Respiratory or Skin Sensitization
[ ] Yes [X] No Germ cell mutagenicity
[ ] Yes [X] No Carcinogenicity
[ ] Yes [X] No Reproductive toxicity
[X] Yes [ ] No Specific target organ toxicity (single or repeated exposure)
[ ] Yes [X] No Aspiration Hazard
[X] Yes [ ] No Simple Asphyxiant

[ ] Yes [X] No	In contact with water emits flammable gas	[ ] Yes [X] No	(Health) Hazard Not Otherwise Classified (HNOC)
[ ] Yes [X] No	Combustible Dust		
[ ] Yes [X] No	(Physical) Hazard Not Otherwise Classified (HNOC)		

Section 16. Other Information

Revision Date: 04/01/2019

Additional Information About This Product: No data available.

Company Policy or Disclaimer: The information contained herein is furnished without expressed warranty of any kind. Data contained herein has been assembled by the manufacturer based on its own studies and is believed to be correct as of the data issued. However, there is no warranty implied as to the accuracy, completeness, or Adequacy of the information obtained.

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Tiodize Co, inc. at 714/898-4377.