

SAFETY DATA SHEET

Randolph Y-9910 Universal Retarder

1 – IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY UNDERTAKING

PRODUCT NAME: **Randolph Y-9910 Universal Retarder**
 PRODUCT NUMBER: Y-9910
 SUPPLIER: Consolidated Aircraft Coatings
 P.O. Box 3129, Riverside, CA 92519, USA
 4343 Fort Drive, Riverside, CA 92509, USA
 (951) 684-4280
 (951) 809-7144
 (760) 782-1947
 EMERGENCY TELEPHONE: (800) 424-9300 (Chemtrec- US)
 (703) 527-3887 (International – Call Collect)

2 - HAZARDS IDENTIFICATION

Highly flammable. Irritating to eyes and skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of harm to the unborn child. Harmful: may cause lung damage if swallowed. Vapors may cause drowsiness and dizziness.

CLASSIFICATION (1999/45) Xi, XN, F, R10, R11, R20, R36, R66

This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

3 – COMPOSITION /INFORMATION ON INGREDIENTS

Name	EC No.	CAS No.	Content %	Classification (67/548/EEC)
Cyclohexanone	203-631-1	108-94-1	1-30%	XN, R10, R20
Methyl Isobutyl Ketone	203-550-1	108-10-1	20-50%	XN, F, R11, R36/37, R20, R66, S16, S29, S9
Diacetone Alcohol	204-626-7	123-42-2	5-35%	XI, R36, S24/25
Xylene	215-535-7	1330-20-7	10-40%	XN, R10, R36/38, S25

The Full Text for all R-Phrases and S-Phrases is displayed in Section 15

COMPOSITION COMMENTS

The data shown are in accordance with the latest EC Directives.

4- FIRST AID MEASURES

NOTICE:

Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

Irritating to the eyes, nose, and respiratory tract. Central nervous system effects including excitation, euphoria, contracted eye pupil dizziness, blurred vision, fatigue, nausea, vomiting, pain, stomach upset, headache, incoordination, loss of consciousness, respiratory arrest and sudden death could occur of long term and/or high concentration exposures vapors. Can cause anesthetic and/or narcotic effects.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

Eye contact causes severe irritation. May cause corneal opacity (clouding of the eye surface), burning sensation, tearing, and redness. Skin contact may cause slight to mild irritation. Prolonged or repeated contact may dry the skin and lead to irritation; i.e., dermatitis. May be harmful if absorbed through the skin. Can cause redness, itching, and burning sensation. Skin and eyes should be flushed with water for at least 15 minutes.

INGESTION HEALTH RISK AND SYMPTOMS OF EXPOSURE:

Irritating to the mouth, throat, and stomach. May cause nausea, vomiting, pain, and stomach upset; i.e., diarrhea. Can cause dizziness, faintness, headache, and in coordination. Preexisting eye, skin, heart, central nervous system and respiratory disorders may be aggravated by exposure to this product.

HEALTH HAZARDS (ACUTE AND CHRONIC): Overexposure may cause anesthesia, headache, nausea or dizziness. Breathing the vapors may irritate the nose and throat. Detectable amounts of chemicals or substances known to the state of California to cause cancer, birth defects, or other reproductive harm may be found in this product. Use care when handling chemical and petroleum products even though they are water reducible.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE TO THIS PRODUCT:

Nervous system. Lungs and respiratory system. Skin. Reproductive system and/or reproductive effects. Liver. Kidneys. Blood and/or blood-forming organs. Preexisting eye, skin, heart, central nervous system and respiratory disorders may be aggravated by exposure to this product.

EMERGENCY AND FIRST AID PROCEDURES:

Splash (Eye): Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

Splash (Skin): Immediately flush with water. Remove contaminated clothing and shoes. Get medical attention if irritation persists.

Professionally wash clothing and shoes before re-use.

Inhalation: Remove victim to fresh air and restore breathing if required. Call a physician if required. If breathing stops, give artificial respiration. Keep person warm.

Ingestion: Seek medical attention. Never give anything by mouth to an unconscious person. Immediately induce vomiting, as directed by medical personnel. If spontaneous vomiting occurs, keep head below hips to prevent aspiration of liquid into the lungs. Vapors may irritate the nose and throat.

5- FIRE FIGHTING PROCEDURES**EXTINGUISHING MEDIA:**

Small fires: Dry chemical, carbon dioxide, water spray or foam.

Large fires: Water spray, fog, or alcohol foam.

SPECIAL FIREFIGHTING PROCEDURES:

Fire fighters and others who may be exposed to the products of combustion should be equipped with NIOSH-approved positive-pressure self-contained breathing apparatus (SCBA) and full protective clothing. Do not use a direct stream of water. Product may float and can be reignited on the surface of the water. Decomposition products may form toxic materials.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

High temperatures can cause sealed containers to rupture due to a build up of internal pressure. Cool with water. Vapors can travel to a source of ignition (flame, electric motor, hot surface, cigarette, etc.) and flash back. During a fire, irritating and highly toxic gases may be generated during combustion or decomposition. Never use welding or cutting torch on or near drum (even empty) because residue or product can ignite explosively. Flammable material.

6-ACCIDENTAL RELEASE MEASURES**PERSONAL PRECAUTIONS:**

Wear protective clothing as described in Section 8.

ENVIRONMENTAL PRECAUTIONS:

Spillages or uncontrolled discharges into watercourses must immediately be alerted to Environmental Agency or other appropriate regulatory authority.

SPILL CLEANUP METHODS:

Keep combustibles away from spilled material. Extinguish all ignition sources. Avoid sparks, open flames, and smoking. Ventilate. Absorb in vermiculite, dry sand, or earth and place into containers for disposal.

7-HANDLING AND STORAGE**USAGE PRECAUTIONS:**

Keep away from heat, sparks and open flames. Avoid spilling, skin and eyes contact. Use with adequate ventilation and avoid excessive exposure to solvent vapors. Use approved respirator if air contamination exceeds the accepted level.

STORAGE PRECAUTIONS:

FLAMMABLE/Combustible. Keep away from oxidizers, open flames and other ignition sources. Keep unused contents in original container and tightly closed lids. Store in a cool, dry and well-ventilated place and at an ambient Temperature not to exceeding above 120° F.

STORAGE CLASS:

FLAMMABLE liquid storage.

8-EXPOSURE CONTROL/PERSONAL PROTECTION

Name	Workplace Exposure Limits	Remarks
Cyclohexanone	ACGIH: 20 ppm TWA; 50 ppm STEL; Skin - potential significant contribution to overall exposure by the cutaneous route NIOSH: 25 ppm TWA; 100 mg/m ³ TWA 700 ppm IDLH; OSHA-Final PELs: 50 ppm TWA; 200 mg/m ³ TWA	Consult local authorities for acceptable exposure limits
Methyl Isobutyl Ketone	ACGIH: 50 ppm TWA; 75 ppm STEL NIOSH: 50 ppm TWA; 205 mg/m ³ TWA 500 ppm IDLH; OSHA-Final PELs: 100 ppm TWA;	Same As Above

	410 mg/m ³ TWA	
Diacetone Alcohol	ACGIH: 50 ppm TWA NIOSH: 50 ppm TWA; 240 mg/m ³ TWA 1800 ppm IDLH; OSHA-Final PELs: 50 ppm TWA; 240 mg/m ³ TWA	Same As Above
Xylene	ACGIH: 100 ppm TWA; 150 ppm STEL NIOSH: None listed OSHA-Final PELs: 100 ppm TWA; 435 mg/m ³ TWA	Same As Above



PROTECTIVE EQUIPMENTS:

PROCESS CONDITIONS:

ENGINEERING MEASURES:

RESPIRATORY EQUIPMENT:

HANDPROTECTION:

EYE PROTECTION:

OTHER PROTECTION:

HYGIENE MEASURES:

Provide eyewash station.

Provide adequate ventilation. Fully equipped spray booth is recommended to ensure the workers legal exposure limits are not exceeded.

Wear respirator with appropriate cartridge for organic solvents and chemicals.

Wear approved gloves such as Neoprene, Nitrile or Rubber types.

Wear splash-proof goggles.

Wear appropriate clothing to prevent any possible skin contact.

DO NOT SMOKE IN THE WORK AREA. Wash at the end of each work shift and before eating, drinking or smoking. Promptly remove contaminated clothing.

9- PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Liquid
COLOR:	Clear
ODOR:	Ketone characteristics
BOILING POINT:	175-345° F
RELATIVE DENSITY:	0.885 g/mL
VAPOR DENSITY:	Heavier than air
FLASH POINT:	62° F (17° C) (Closed Cup)
FLAMMABILITY LIMITS:	LOWER: N/A UPPER: N/A
SOLUBILITY VALUE (g/100g H ₂ O @ 20°C):	Insoluble
VOLATILE ORGANIC COMPOUND (VOC):	883 g/L

10- STABILITY AND REACTIVITY

STABILITY:

Stable under normal conditions of use.

CONDITIONS TO AVOID:

High temperatures.

INCOMPATIBILITY (MATERIALS TO AVOID):

Oxidizers. Acids. Peroxides.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:

Smoke, soot, and toxic/irritating fumes; i.e., carbon dioxide, carbon monoxide, etc. Formaldehyde and/or other aldehydes. Hydrogen chloride.

HAZARDOUS POLYMERIZATION:

N/A

11-TOXICOLOGICAL INFORMATION

Cyclohexanone (CAS#108-94-1) : LD50/LC50: Draize test, rabbit, eye: 20 mg Severe; Draize test, rabbit, eye: 250 ug/24H Severe; Inhalation, mouse: LC50 = 2375 mg/m³; Inhalation, rat: LC50 = 8000 ppm/4H; Inhalation, rat: LC50 = 19000 mg/m³; Oral, mouse: LD50 = 1400 mg/kg; Oral, rat: LD50 = 1620 uL/kg; Oral, rat: LD50 = 1800 mg/kg; Skin, rabbit: LD50 = 1 mL/kg;<BR. **Carcinogenicity:** ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans **Epidemiology:** No data available. **Teratogenicity:** Animal studies have only shown harmful effects in the offspring of animals exposed to doses which also produced significant maternal toxicity. **Reproductive Effects:** See actual entry in RTECS for complete information. **Neurotoxicity:** No data available. **Mutagenicity:** See actual entry in RTECS for complete information.

Methyl Isobutyl Ketone (CAS#108-10-1):LD50/rat/oral = 2080mg/kg; Carcinogenicity: Not listed by NTP or IARC.

Diacetone alcohol (CAS# 123-42-2) : Routes of Entry: Eye contact. Inhalation. Ingestion. **Toxicity to Animals:** Acute oral toxicity (LD50): 3959 mg/kg [Mouse]. Acute dermal toxicity (LD50): 13500 mg/kg [Rabbit]. **Chronic Effects on Humans:** The substance is toxic to lungs, mucous membranes. **Other Toxic Effects on Humans:** Very hazardous in case of ingestion. Hazardous in case of skin contact (irritant), of inhalation.

Slightly hazardous in case of skin contact (permeator). **Special Remarks on Toxicity to Animals:** Not available. **Special Remarks on Chronic Effects on Humans:** Not available. **Special Remarks on other Toxic Effects on Humans:** Not available.

Xylene (Mixed Isomers) (CAS#1330-20-7): LD50/LC50: Draize test, rabbit, eye: 87 mg Mild; Draize test, rabbit, eye: 5 mg/24H Severe; Draize test, rabbit, skin: 100% Moderate; Draize test, rabbit, skin: 500 mg/24H Moderate; Inhalation, rat: LC50 = 5000 ppm/4H; Oral, mouse: LD50 = 2119 mg/kg; Oral, rat: LD50 = 4300 mg/kg; Skin, rabbit: LD50 = >1700 mg/kg; Carcinogenicity: Not listed by ACGIH, IARC, NTP, or CA Prop 65. Epidemiology: 175 workers were exposed to 21 ppm of xylene for 7 years. Subjective symptoms such as anxiety, forgetfulness, inability to concentrate and dizziness were reported. Xylenes accounted for >70% of the total exposure. Liver & kidney effects were not reported. Teratogenicity: No increased incidence of birth defects was reported in a study of lab workers exposed to xylene during early pregnancy. Exposure to other solvents and chemicals also occurred. An increased incidence of spontaneous abortions was reported. Animal information suggests that xylene is not teratogenic or embryotoxic at exposure levels that are not harmful to the mother. Reproductive Effects: An increase in menstrual disorders has been reported in women exposed to organic solvents such as benzene, toluene, and xylenes. It is not possible to attribute these effects to xylenes in particular. Mutagenicity: Xylene does not appear to be a mutagen. Neurotoxicity: Xylene may be ototoxic (damages hearing or enhances sensitivity to noise) in chronic occupational exposures, probably from a neurotoxic mechanism.

12- ECOLOGICAL INFORMATION

Cyclohexanone (CAS#108-94-1) : Ecotoxicity: Fish: Rainbow trout: LC50 = 90.0 mg/L; 96 Hr.; 320.0 mg/L CaCO3Fish: Rainbow trout: LC50 = 44.0 mg/L; 96 Hr.; 20.0 mg/L CaCO3Fish: Fathead Minnow: LC50 = 527.0 mg/L; 96 Hr.; Flow-through, 24-26 degrees C,pH7.5Water flea Daphnia: EC50 = 820.0 mg/L; 48 Hr.; Unspecified Algae: EC50 = 20.0 mg/L; 96 Hr.; Unspecified Bacteria: Phytobacterium phosphoreum: EC50 = 18.7 mg/L; 5 minutes; Microtox Test No data available. **Environmental:** This chemical is expected to rapidly volatilize based on its low melting and boiling point. Cyclohexanone is estimated to be highly mobile in soil. In view of its moderate vapor pressure and low adsorption to soil, it would be expected to volatilize from surface soil. Although data are lacking, it may also undergo direct photolysis on the soil surface. Cyclohexanone is readily biodegradable according to aerobic screening tests and therefore would be expected to biodegrade in soil. **Physical:** No information found. **Other:** The bioconcentration factor (BCF) for cyclohexanone can be estimated to be 2.4 based on the log Kow of 0.81 and a recommended regression equation. This BCF indicates that cyclohexanone will not bioconcentrate in aquatic organisms

Methyl Isobutyl Ketone (CAS#108-10-1): Ecotoxicity: Not expected to be toxic to terrestrial life; Environmental: substance evaporates and biodegrades when released to soil, water and air.

Diacetone Alcohol (CAS#123-42-2): Ecotoxicity: Not available. **BOD5 and COD:** Not available. **Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic. **Special Remarks on the Products of Biodegradation:** Not available.

Xylene (Mixed Isomers) (CAS# 1330-20-7): Ecotoxicity: Fish: Rainbow trout: LC50 = 13.5 mg/L; 96 Hr; Unspecified Fish: Goldfish: LD50 = 13 mg/L; 24 Hr; Unspecified Fish: Fathead Minnow: LC50 = 46 mg/L; 1 Hr; Static bioassay Acute and long-term toxicity to fish and invertebrates: LD50 for goldfish is 13 mg/L/24 Hr.Cas#1330-20-7:LC50(96Hr.) rainbow trout = 8.05 mg/L, Static condition;LC50(96Hr.) fathead minnow = 16.1 mg/L, flow-through conditions; LC50(96Hr.) bluegill = 16.1 mg/L, flow-through;EC50 (48 Hr.) water flea = 3.82 mg/L, flow-through conditions;EC50(24 Hr.) photobacterium phosphoreum = 0.0084 mg/L, Microtox test.

Environmental: In air, xylenes degrade by reacting with photo chemically produced hydroxyl radicals. In soil it will volatilize and leach into groundwater. Little bioconcentration is expected.

Physical: ATMOSPHERIC FATE: According to a model of gas/particle partitioning of semi volatile organic compounds in the atmosphere, xylene, which has an experimental vapor pressure of 7.99 mm Hg at 25 deg C, will exist solely as a vapor in the ambient atmosphere. Vapor-phase xylene is degraded in the atmosphere by reaction with photo chemically-produced hydroxyl radicals; the atmospheric lifetime of xylene is about 14-26 hours. Ambient levels of xylene are detected in the atmosphere due to large emissions of this compound.

13 – DISPOSAL CONSIDERATIONS

Hazardous wastes should be sent to a RCRA approved incinerator or disposed of in a RCRA approved waste facility. Dispose of container and unused contents in accordance with federal, state and local requirements.

14 – TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: PAINT RELATED MATERIAL
PRIMARY HAZARD CLASS/DIVISION: 3
UN/UA NUMBER: UN1263
PACKING GROUP: II

IMO PROPER SHIPPING NAME: PAINT RELATED MATERIAL
IMO UN CLASS: 3
IMO UN NUMBER: 1263
IMO PACKING GROUP: II
IMO LABEL: FLAMMABLE LIQUID
IMO VESSEL STOWAGE: B

Air shipping this product is not advised and if done must be handled by a certified carrier according to IATA rules.



GHS LABEL:

DANGER

HIGHLY FLAMMABLE LIQUID AND VAPOR. VAPOR HARMFUL. CAUSES SERIOUS EYE IRRITATION. CAUSES SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. HARMFUL OR FATAL IF SWALLOWED AND ENTERS AIRWAYS.

Refer to MSDS for additional information on safe handling / use. - Keep out of reach of children. For Industrial Use Only.

Contains: Cyclohexanone, Methyl Isobutyl Ketone, DiAcetone Alcohol, and Xylene. This product contains one or more chemicals known to the State of California to cause cancer, birth defects, and/or other reproductive harm.

Hazards: H225: Highly flammable liquid and vapour. H319: Causes serious eye irritation. H336: May cause drowsiness or dizziness. H302+H312+H332: Harmful if swallowed, in contact with skin or if inhaled. H351: Suspected of causing cancer.

Precautionary Statement(s): P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P280: Wear protective gloves/protective clothing/eye protection/face protection. P261: Avoid breathing dust/fume/gas/mist/vapours/spray. P271: Use only outdoors or in a well-ventilated area. P240: Ground/bond container and receiving equipment.

First Aid: Inhalation - Move person to fresh air. If symptoms occur obtain medical attention. **Skin Contact** - Wash affected skin with soap and water. If symptoms occur obtain medical attention. **Eye Contact** - If substance has got into the eyes, immediately wash out with plenty of water for at least 15 minutes. If symptoms occur obtain medical attention. **Ingestion** - Do not induce vomiting. Drink one glass of water. If symptoms occur obtain medical attention.

15 – REGULATORY INFORMATION

Hazards: H225: Highly flammable liquid and vapour. H319: Causes serious eye irritation. H336: May cause drowsiness or dizziness. H302+H312+H332: Harmful if swallowed, in contact with skin or if inhaled. H351: Suspected of causing cancer.

Precautionary Statement(s): P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P280: Wear protective gloves/protective clothing/eye protection/face protection. P261: Avoid breathing dust/fume/gas/mist/vapours/spray. P271: Use only outdoors or in a well-ventilated area. P240: Ground/bond container and receiving equipment.

CODES:



XN and XI



F

- XN and XI=harmful
- F=highly flammable

R-Phrases:

R10: Flammable
R11: Highly flammable
R20: Harmful by inhalation
R36: Irritating to eyes
R36/37: Irritating to eyes and respiratory system
R36/38: Irritating to eyes and skin
R66: Repeated exposure may cause skin dryness or cracking

S-Phrases:

S9: Keep container in a well-ventilated place
S16: Keep away from sources of ignition - No smoking
S24/25: Avoid contact with skin and eyes
S25: Avoid contact with eyes
S29: Do not empty into drains

16- DISCLAIMER

Above information is based on data supplied to us and is believed to be correct. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar and since the data made available subsequent to the date hereof may suggest modifications of the information, we do not assume responsibility for the results of its use. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose. It is the user's obligation to determine the safe use of it.