

**Nuvite NuGear
Information Pack**



Available from Frasers Aerospace

1 St James Rd, Brentwood, Essex, CM14 4LH

www.frasersaerospace.com





NuGear SC



Nuvite
CHEMICAL COMPOUNDS
UNIVERSAL PHOTOXICS



Product Name: NuGear SC

Pack: 1, 5 & 55 gallons

Manufacturer: Nuvite Chemical PC22091

Approvals:

- ASTM F945
- AMS 1650
- Pratt & Whitney
- Rolls Royce
- General Electric
- Honeywell
- Embraer
- American Airlines

HS Commodity Code: 3405 30 0000

Product Description.

NuGear SC is a heavy-duty aqueous cleaning compound for aircraft engine and component degreasing operations. NuGear SC can be used for hand cleaning as well as in hot immersion tanks and spray cabinets. It has been specifically developed for superior wetting & penetration for engine shop operations, provides safe and effective cleaning at economical cost while conforming to stringent water, air and environmental regulations.

Core Benefits.

- Exceptional Cleaning Power Through Special Selection of Surfactants, Wetting and Emulsifying Agents
- Economical Heavy Duty Cleaning
- Safe to All Aircraft Components
- Formulated for use in Hot Immersion Tanks & Spray Cabinets
- Contains No Alkaline Salts
- Contains No Phosphates and is Completely Biodegradable
- Rinsing and not Affected By Hard Water
- Replenishable Concentrate Formula for Ongoing Bulk Use
- Conforms to Airframe OEM standards and specifications to include engine OEM manufacturers: Pratt & Whitney, Rolls Royce and General Electric for engine overhaul operations.

Directions for use.

Always refer to appropriate OEM Overhaul Standard Practices Manual for specific procedures for the use of NuGear SC.

For Normal Cleaning – Hand Cleaning Local Application:

Dilute 1:4 – 1:10 with water, depending upon condition. Apply to surface in shallow wash tank, or by mop or spray. Loosen surface material with non-metallic bristle brush, reapplying Nu- Gear SC solution continuously. Agitate to loosen soil followed by water rinse. Reapply if necessary. Wipe dry with terry towel.

Heavy-Duty Cleaning/Hot Immersion Tank/Spray Cabinet:

Use concentrate or a 1:4 dilution depending upon manufacturers Standard Practices Manual requirements. Allow to soak at 140 to 170oF (60 - 77oC). Effective concentration can be maintained with periodic addition of fresh NuGear SC.



Health & Safety

Users should follow good safety procedures, including wearing of gloves and goggles along with other standard safety procedures. Refer to Safety Data Sheet for further health and safety information.

Safety & storage.

Full guidance on the handling and disposal of this product is provided in a separate Safety Data Sheet (SDS). Only for professional users/specialists. Store in original closed containers away from extremes of temperature.



TASK 70-21-23-110-053

CLEANING METHOD NO. 23 HAND-WIPE DEGREASING

1. General.

- A. This procedure is for general hand-wipe cleaning of metallic parts, both titanium and non-titanium hardware. For hand-wipe cleaning of composite materials, refer to procedure TASK 70-46-01-350-030, Masking and Cleaning of Epoxy and Polyester Matrix Thermosetting Composite Materials.
- B. This procedure may be used as an alternate to TASK 70-21-01-110-001, Cleaning Method No. 1 - Solvent Degreasing, or TASK 70-21-22-110-042, Cleaning Method No. 22 - Light Duty Aqueous Cleaning, whenever localized hand-wipe cleaning would be an effective alternative to cleaning the entire part by one of the other methods.
- C. Cleaners should be applied to the wipe cloths from dispensers that prevent contamination of the working fluid.
- D. Some cleaners will require post-rinsing with water and others are very slow to dry. These conditions must be considered when using these products before Fluorescent Penetrant Inspection (FPI). Process known defect standards or parts with the selected cleaner if used prior to FPI to ensure that the process capability is maintained.

Subtask 70-21-23-110-531 .

2. Equipment.

- A. Proper Personal Protection Equipment shall be used and shall include, but not be limited to, protective gloves and eye wear. Specific equipment for safe handling will be described in the manufacturer's Material Safety Data Sheet for the specific cleaner.
- B. Hand-wipe cleaning shall be performed in an area with proper ventilation.
- C. Various types of bristle brushes for part configuration or cleaning pads C10-010 may be used in addition to the wiping cloths C10-182, clean, white, lint-free cotton cloths, or unsized cheesecloth.

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3. Materials.

NOTE: The following materials are required for the application of this process.

Solvents for Wipe Procedure - Table 1

Consumable Product	No.
Methyl-Ethyl-Ketone	C04-001
Stoddard	C04-002
Acetone	C04-003
Isopropyl Alcohol	C04-035
50/50 Toluene/Isopropyl Alcohol	C04-036/C04-035
Ardrox 1064-K	C04-160
Methyl-Propyl-Ketone	C04-196
MagChem Teksol	C04-197
Positron	C04-198
Selig CE-SX-94, GB-SX-94, L-SX-94	C04-199
Monsanto SkyKleen 1000 Aviation Solvent	C04-200
Turco 4460-BK	C04-201
Turco 6869	C04-202
Bioact 105 Precision Cleaner	C04-251
Supersolve AS	C04-256
MagChem Skysol	C04-260
Novec HFE-7100	C04-261
Vertrel XF	C04-262



Aqueous Cleaners for Spray or Wipe Procedure - Table 2

Consumable Product	No.	Concentration	Rinse Required?
Gas Path Cleaner Type IIA	C04-140	As Received	Yes
Gas Path Cleaner Type II	C04-140	20%	Yes
Turco 6780	C04-203	Full Strength	No
Ardrox Aviacenz 6077 Window Cleaner Plus	C04-204	Full Strength	No
MagChem Evasol	C04-205	Full Strength	No
Nuvite Nu-Gear-Sc	C04-206	20-25 v/v	Yes
Bio-T-Max	C04-207	Full Strength	Yes

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4. Procedure.

- A. Wipe the part with cloth saturated with one of the cleaners identified in Table 1. When using cleaners identified in Table 2, spray or wipe application may be used.

NOTE: Various types of bristle brushes suitable for the part configuration or cleaner pads C10-010 may be used in addition to the wiping cloths to enhance the cleaning process. When using brushes or cleaning pads, a final wipe of the part surface should be performed with a cloth C10-182 saturated with the cleaner being used.

- B. Flush the part completely with clean water when indicated in Table 2.
- C. Dry the part with one of the cloths specified Subtask 70-21-23-110-531, Equipment.
- D. Blow dry with clean, dry air.

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Subtask 70-21-23-110-534

5. Quality Assurance.

- A. Visually check the part for cleanliness.
- B. Repeat the process if necessary.

INTEROFFICE CORRESPONDENCE
AMERICAN AIRLINES

DATE: 10-9-91

TO: R. E. Gaston
DEPT: Pratt & Whitney
MAIL DROP/LOCATION: 219/TULE

FROM: Cynthia Boster
DEPT: Engineering Laboratory
MAIL DROP/LOCATION: 10/TULE

SUBJECT: Nuvite Nugear SC

American Airlines requests Pratt & Whitney approval of Nuvite Nugear SC for use under SPOP 1, SPOP 208 and SPOP 209.

American Airlines has used the original Nugear successfully for over 20 years as an all purpose aircraft/engine cleaner. It was purchased in bulk as well as in 55 gallon and 1 gallon containers. Last year, the minor amount of petroleum distillate Nugear contained became a disposal problem. Because American had received high quality product and service from Nuvite through the years, we asked Nuvite to reformulate Nugear. The resulting product, Nugear SC, has been well received at the Tulsa Maintenance Base. Nugear SC passes Boeing and Douglas requirements for use on airframe exteriors. Clifford Lester, president of Nuvite Chemical Corporation, is willing to submit Nugear SC to any testing required for Pratt & Whitney approval.

Please Contact Clifford Lester at 718-383-8351 for more information and samples of Nugear SC. We ask that the product be tested at 25% and 100% concentrations, and at a temperature of 140° F. The MSDS for Nugear SC is attached.

C. Boster

C. Boster

cc: Sue Barber - AA Purchasing
Clifford Lester - President, Nuvite ✓



SAFETY DATA SHEET: NU-GEAR-SC

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 APPLICABLE PART #: PC22091GL, PC22091QT, PC220955GL,
1.2 IDENTITY: NU-GEAR-SC
1.3 INTENDED USE: CLEANING COMPOUND
1.4 SUPPLIER: Universal Photonics, Inc. FOR INFORMATION CALL
85 Jetson Lane CUSTOMER SERVICE: (516) 935-4000
Central Islip, NY 11722 DATE PREPARED: February 13, 2019

1.5 EMERGENCY CONTACT: Verisk 3E™ - ACCT # 3665 Access Code: 333748
EMERGENCY TELEPHONE NUMBER: Domestic: 1-866-519-4752 International: +1-760-602-8700

SECTION 2: HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF SUBSTANCE: SKIN IRRITATION 2; EYE IRRITATION 2.

2.2 GHS LABEL ELEMENTS:



HAZARD PICTOGRAMS:

HAZARD SYMBOLS: GHS07

SIGNAL WORD: WARNING.

HAZARD STATEMENTS: H315: Causes skin irritation.
H319: Causes serious eye irritation.

PREVENTION PRECAUTIONARY STATEMENTS: P261: Avoid breathing dust/fumes/mist/vapors/spray.
P262: Do not get in eyes, on skin, or on clothing.
P264: Wash hands thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection.

Wear protective gloves. Wear eye protection to include splash goggles.
Wear protective clothing. Use with ventilation. Wash hands after handling.

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RESPONSE PRECAUTIONARY:
STATEMENTS:

P302 + P352: IF ON SKIN: Wash with plenty of water.

P305 + P351 + P338 + P315: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P301 + P331 + P315: IF SWALLOWED: DO NOT induce vomiting. Get immediate medical advice/attention.

In the event of skin, eye, respiratory contact or ingestion, seek medical attention immediately.

STORAGE PRECAUTIONARY
STATEMENTS:

P404: Store in a closed container.

DISPOSAL PRECAUTIONARY
STATEMENT:

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 HAZARDS NOT OTHERWISE
CLASSIFIED:

None known.

2.4 UNKNOWN ACUTE TOXICITY:

None known.

SECTION 3: COMPOSITION INFORMATION ON INGREDIENTS

3.1 INGREDIENTS:

COMPONENTS	IDENTIFIER	CLASSIFICATION	WEIGHT %
SODIUM XYLENE SULFONATE	(CAS #) 1300-72-7 (EC #) 215-090-9	SKIN IRRITATION 2: H315 EYE IRRITATION 2: H319	2 - 4
TRADE SECRET INFORMATION*	N/A	PROPRIETARY	< 98

NOTE: *Non-regulated components are proprietary, confidential, and trade secret.

SECTION 4: FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES:

SKIN: Remove soiled clothing and flush with soap and water.

EYES: Flush with water for 20 minutes and remove contact lenses if safe to do. Immediately seek medical attention.

INHALATION: Administer fresh air or oxygen.

INGESTION: DO NOT induce vomiting. Immediately seek medical attention. If vomiting does occur, keep head low so that vomit does not enter the lungs. Maintain an open airway.

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4.2 MOST IMPORTANT SYMPTOMS / EFFECTS, ACUTE AND DELAYED:

SKIN CONTACT:	Will cause dryness, irritation and defatting upon prolonged contact.
EYE CONTACT:	Will cause serious eye irritation upon direct contact.
INHALATION:	Breathing high concentrations of sprayed mists will irritate nose and throat.
INGESTION:	Will cause serious gastric disturbances.
ENVIRONMENT:	None known.
CHRONIC:	None known.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED, IF NECESSARY:

Immediately contact physician for further medical advice.

SECTION 5: FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

SUITABLE EXTINGUISHING MEDIA:	Water spray, alcohol resistant foam, dry chemical, CO ₂ .
UNSUITABLE EXTINGUISHING MEDIA:	None.

5.2 SPECIFIC HAZARDS ARISING FROM THE MIXTURE:

FIRE HAZARD:	None.
EXPLOSION HAZARD:	None.
REACTIVITY:	None.
EXPOSURE HAZARDS:	Oxides of carbon, oxides of nitrogen.
UNUSUAL FIRE/EXPLOSION HAZARD:	None known.

5.3 SPECIAL PROTECTIVE EQUIPMENT: Wear full protective safety equipment as standard practice. In the event of fire, wear self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

NON-EMERGENCY PERSONNEL:	Wear appropriate personal protective equipment (PPE). Avoid contact with skin and eyes. Do not walk through spilled material. Provide ventilation with sufficient face velocity to maintain PEL below standard. Supplement with appropriate organic vapor & dust respirator when ventilation is inadequate.
EMERGENCY RESPONDERS:	Take note of any special instructions in Section 8.

6.2 ENVIRONMENTAL PRECAUTIONS: Do not introduce material directly into natural waterways such as rivers, lakes, streams, etc. or drains and sewers.

SAFETY DATA SHEET: NU-GEAR-SC

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP:

- SMALL SPILL:** Stop leak if safe to do so. Use inert absorbent material and dispose in proper chemical waste container or to approved waste treatment areas.
- LARGE SPILL:** Stop leak if safe to do so. Approach release from upwind. Prevent entry into sewers or natural waterways. Contain and collect with inert absorbent material and place in container for disposal according to local regulations (See Section 13). Dispose via a licensed waste disposal contractor.

6.4 REFERENCE TO OTHER SECTIONS: See Section 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING: Minimize exposure to vapors or dusts. Use recognized standard safety practices to include adequate ventilation. Handle with care to avoid contact. Wash with soap & water after handling. Use recognized standard safety practices. Provide sufficient air exchange and exhaust in work areas. Eyewash station should be in close proximity to work

7.2 CONDITIONS FOR SAFE STORAGE: When not in use, keep closure on container tightly closed. Store indoors. Keep away from heat and freezing conditions.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 CONTROL PARAMETERS:

OCCUPATIONAL EXPOSURE LIMITS: **FOR INGREDIENTS:**

COMPONENTS	COMPONENT IDENTIFIERS	WORKPLACE EXPOSURE LIMIT (WEL)				SUPPLEMENTAL EXPOSURE LIMIT VALUES	BASIS
		LTEL		STEL			
		PPM	MG/M3	PPM	MG/M3		
SODIUM XYLENE SULFONATE	(CAS #) 1300-72-7 (EC #) 215-090-9	----	----	----	----	NO OCCUPATIONAL VALUES	-----

8.2 EXPOSURE CONTROLS:

CONTROL PARAMETERS: General ventilation with adequate face velocity to control worker exposure to airborne contaminants below PEL. Supplement with NIOSH approved organic vapor cartridge respirator. Insure that emergency eyewash stations are in the immediate vicinity of any potential exposure.

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

PERSONAL PROTECTIVE CONTROLS:

HYGIENE MEASURES: Wash hands, forearms and face thoroughly after handling product. Remove contaminated clothing and wash before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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SKIN PROTECTION: Chemical-resistant, impervious gloves are recommended if exposure is prolonged—neoprene type. Inspect gloves on a routine basis for retention of properties. Personal protective clothing for the body should be selected based upon the task being performed.

EYES: Avoid eye contact. Protective safety eyewear goggles are recommended to avoid exposure to liquid splashes, mists, and dusts or when working on overhead structures if direct contact is evident. Face shield is also recommended if splashing is evident.

RESPIRATORY: Should vapors exceed permissible exposure limit (PEL), wear NIOSH-approved dust and organic vapor respirator.

8.3 PERSONAL PROTECTIVE EQUIPMENT (PPE):



SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
COLOR	Yellow
ODOR:	Mild
ODOR THRESHOLD	Not determined
PH	11.8 – 12.4
SOLUBILITY:	Soluble in water
FLASH POINT:	212°F
LOWER FLAMMABLE LIMIT	None
UPPER FLAMMABLE LIMIT	None
AUTOIGNITION TEMPERATURE	Not applicable
DECOMPOSITION TEMPERATURE	Not applicable
FLAMMABILITY:	Not applicable
SPECIFIC GRAVITY:	1.01 at 25°C
BOILING POINT (°F):	212 °F
VAPOR PRESSURE:	18 at 20°C

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VAPOR DENSITY:	Greater than 1 (Air = 1)
MELTING POINT (°F):	Not applicable
FREEZING POINT	Not applicable
EVAPORATION RATE:	Less than 1 (Butyl Acetate = 1)
VISCOSITY:	Not applicable
PARTITION COEFFICIENT N-OCTANOL / WATER:	Not Determined

SECTION 10: STABILITY AND REACTIVITY

10.1 REACTIVITY:	None.
10.2 CHEMICAL STABILITY:	Stable.
10.3 HAZARDOUS REACTIONS:	None.
HAZARDOUS POLYMERIZATION:	None.
10.4 CONDITIONS TO AVOID:	None.
10.5 INCOMPATIBLE MATERIALS:	Strong acid, alkali, oxidizing agents, bases.
10.6 HAZARDOUS DECOMPOSITION OF PRODUCTS:	Oxides of carbon and nitrogen.

SECTION 11: TOXICOLOGICAL INFORMATION

NOTE: Primary route of entry is through skin, with secondary route through inhalation.

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS: FOR INGREDIENTS

11.2

SODIUM XYLENE SULFONATE (CAS #) 1300-72-7	
LD50 Oral Rat	> 1,000 mg/kg
LD50 Dermal Rabbit	> 2,000 mg/kg
LC50 Inhalation Rat	NO DATA

ACUTE TOXICITY: FOR PRODUCT

LD50:	Not determined.
SKIN:	Not determined.
INHALATION:	Not determined.
INGESTION:	Not determined.

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11.2 POTENTIAL ACUTE HEALTH EFFECTS:

SKIN: Irritation and drying during prolonged contact.
EYES: Will cause severe eye irritation upon direct contact.
RESPIRATORY: Will irritate nose and throat when breathing high concentrations.
INGESTION: Will cause serious gastric disturbances.

SYMPTOMS AFTER CONTACT:

SKIN: Irritation, dryness, redness.
EYES: Pain, watering, burning.
RESPIRATORY: Irritation, asthmatic systems, dizziness.
INGESTION: Stomach pain, gastric disturbances.

11.3 CHRONIC HEALTH EFFECTS: None known.

11.4 CARCINOGENICITY:

NTP: No component is present at levels greater than or equal to 0.1% is identified as a carcinogen by NTP.
IARC: No component is present at levels greater than or equal to 0.1% is identified as a carcinogen by IARC.
OSHA: No component is present at levels greater than or equal to 0.1% is identified as a carcinogen by OSHA.

SECTION 12: ECOLOGICAL INFORMATION

12.1 TOXICITY: INFORMATION FOR INGREDIENTS:

SODIUM XYLENE SULFONATE (CAS #) 1300-72-7	
LC50 Oncorhynchus mykiss	>1,000 mg/L, 96 Hr.
EC50 Pseudokirchnerella subcapitata	>230 mg/L, 48 Hr.
EC50 Daphnia magna	40.3 mg/L, 48 Hr.

12.2 PERSISTENCE AND DEGRADABILITY: Not determined.
12.3 BIOACCUMULATIVE POTENTIAL: Not determined.
12.4 MOBILITY IN SOIL: Not determined.
12.5 RESULTS OF PBT and vPvB ASSESSMENT: Not determined.
12.6 OTHER ADVERSE EFFECTS: No known or other significant effects or critical hazards.

SAFETY DATA SHEET: NU-GEAR-SC

SECTION 13: DISPOSAL INFORMATION

13.1 WASTE TREATMENT METHODS: For small spills, contain all residues with inert absorbent material and dispose in chemical recycle container. For large spills, stop leak if safe to do so. Approach release from upwind. Dyke or dam area and vacuum all wet areas for recycle by a licensed waste disposal contractor. Avoid contact with soil, waterways, drains, and sewers unless such drains and sewers are fully compliant with the requirements of all authorities for disposal. Consult all federal, state, and local regulatory authorities for proper disposal.

SECTION 14: TRANSPORTATION INFORMATION

REGULATORY INFORMATION	UN NUMBER	PROPER SHIPPING NAME	CLASSES	PACKING GROUP	LABEL	ADDITIONAL INFORMATION
DOT CLASSIFICATION	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NONE	NONE
TDG CLASSIFICATION	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NONE	NONE
ADR/RID CLASSIFICATION	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NONE	NONE
IMDG CLASSIFICATION	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NONE	NONE
IATA/IACO CLASSIFICATION	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NONE	NONE

SECTION 15: REGULATORY INFORMATION

15.1 U.S. FEDERAL REGULATIONS:

OSHA HAZARD COMMUNICATION STANDARD:

Non-regulated.

TSCA:

All ingredients are listed on the TSCA inventory.

SARA (302/304):

Non-regulated, no reportable or EHS quantities.

SARA (311/312):

Acute health hazard.

SARA TITLE III (313):

This product contains the following chemicals subject to the reporting requirements of Section 313: None

OTHER REGULATORY STANDARDS:

Non-regulated per 29 CFR 1900.1000 - 1500, 40 CFR PART 261.3, 302.4, 355, 370, 372.

15.2 STATE REGULATIONS:

CALIFORNIA PROPOSITION 65: This product contains the following chemicals known by the state of California to cause cancer, birth defects, or any other reproductive harm: NONE.

SAFETY DATA SHEET: NU-GEAR-SC

15.3 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS / LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE:

U.S. OSHA 29CFR 1910.1000 - 1500

REGULATION (EC) 1907/2006 – REACH (ANNEX X1V)
 EC REGULATIONS 1272/2008 – CLP
 EH40 / 2005 – WORKPLACE EXPOSURE LIMITS (WHERE APPLICABLE)
 CONTROL OF SUBSTANCE HAZARDOUS TO HEALTH – COSHH
 DANGEROUS SUBSTANCES AND EXPLOSIVE ATMOSPHERE REGULATIONS - DSEAR

REGULATION (EC) – REACH ANNEX (XIV) ARTICLE 59(10) AUTHORIZATIONS AND / OR RESTRICTIONS ON USE:
Contains the following REACH (SVHC) Candidate Substances: NONE.

REGULATION (EC) 2015/863 – RoHS
Contains the following RoHS Substances: NONE

NATIONAL REGULATIONS: Non-regulated per EINECS / ELINCS / DSL / NDSL / IECSC / ENS / ECL / PICCS.

SECTION 16: OTHER INFORMATION

HMIS RATING: Health 2, Flammability 0, Reactivity 0, Personal Protection C
 NFPA RATING: Health 2, Flammability 0, Reactivity 0



ACGIH: American Conference of Governmental Industrial Hygienists
 ADR/RID: International carriage of dangerous goods by road or rail
 CLP: Classification, Labeling and packaging
 DOT: Department of Transportation
 EC: Commission Regulation (European Union)
 GHS: Globally Harmonized System of Classification and Labeling of Chemicals
 HMIS: Hazardous Materials Identification System
 IARC: International Agency for Research on Cancer
 IATA/IACO: International Air Transport Association / International Civil Aviation Organization
 IMDG: International Maritime Dangerous Goods
 LTEL: Long Term Exposure Limit
 NTP: National Toxicology Program
 OSHA: Occupational Safety and Health Administration
 REACH: Registration, Evaluation, Authorization and Restriction (European Union)
 SARA: Superfund Amendments and Reauthorization Act
 STEL: Short Term Exposure Limit
 SVHC: Substances of Very High Concern (European Union)
 TDG: Transportation of dangerous goods -- Canada
 WEL: Workplace Exposure Limit



85 JETSON LANE, CENTRAL ISLIP, NEW YORK 11722
516.935.4000 FAX 516.935.4039

WWW.NUVITECHEMICAL.COM
WWW.UNIVERSALPHOTONICS.COM

SAFETY DATA SHEET: NU-GEAR-SC

DISCLAIMER

Information included herein was obtained from sources which Universal Photonics, Inc. believes are reliable and accurate as of the date hereof. HOWEVER, NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREIN AS TO THE INFORMATION PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS. The health and safety precautions contained herein may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. Given the variety of factors that can affect the use and application of a product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the product to determine whether it is fit for a particular purpose and suitable for user's method of use or application. Universal Photonics, Inc. ASSUMES NO LEGAL LIABILITY FOR ANY INJURY, ACCIDENT, LOSS, OR DAMAGE THROUGH THE USE OF THIS PRODUCT.

INTEROFFICE CORRESPONDENCE
AMERICAN AIRLINES

DATE: 10-9-91

TO: R. E. Gaston
DEPT: Pratt & Whitney
MAIL DROP/LOCATION: 219/TULE

FROM: Cynthia Boster
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Subtask 70-21-23-110-532

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Solvents for Wipe Procedure - Table 1

Consumable Product	No.
Methyl-Ethyl-Ketone	C04-001
Stoddard	C04-002
Acetone	C04-003
Isopropyl Alcohol	C04-035
50/50 Toluene/Isopropyl Alcohol	C04-036/C04-035
Ardrox 1064-K	C04-160
Methyl-Propyl-Ketone	C04-196
MagChem Teksol	C04-197
Positron	C04-198
Selig CE-SX-94, GB-SX-94, L-SX-94	C04-199
Monsanto SkyKleen 1000 Aviation Solvent	C04-200
Turco 4460-BK	C04-201
Turco 6869	C04-202
Bioact 105 Precision Cleaner	C04-251
Supersolve AS	C04-256
MagChem Skysol	C04-260
Novec HFE-7100	C04-261
Vertrel XF	C04-262



Aqueous Cleaners for Spray or Wipe Procedure - Table 2

Consumable Product	No.	Concentration	Rinse Required?
Gas Path Cleaner Type IIA	C04-140	As Received	Yes
Gas Path Cleaner Type II	C04-140	20%	Yes
Turco 6780	C04-203	Full Strength	No
Ardrox Aviacenz 6077 Window Cleaner Plus	C04-204	Full Strength	No
MagChem Evasol	C04-205	Full Strength	No
Nuvite Nu-Gear-Sc	C04-206	20-25 v/v	Yes
Bio-T-Max	C04-207	Full Strength	Yes

Subtask 70-21-23-110-533

4. Procedure.

- A. Wipe the part with cloth saturated with one of the cleaners identified in Table 1. When using cleaners identified in Table 2, spray or wipe application may be used.

NOTE: Various types of bristle brushes suitable for the part configuration or cleaner pads C10-010 may be used in addition to the wiping cloths to enhance the cleaning process. When using brushes or cleaning pads, a final wipe of the part surface should be performed with a cloth C10-182 saturated with the cleaner being used.

- B. Flush the part completely with clean water when indicated in Table 2.
- C. Dry the part with one of the cloths specified Subtask 70-21-23-110-531, Equipment.
- D. Blow dry with clean, dry air.

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Subtask 70-21-23-110-534

5. Quality Assurance.

- A. Visually check the part for cleanliness.
- B. Repeat the process if necessary.

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SPOP 209 - DEGREASING OF PARTS BY AQUEOUS CLEANING

- R NOTE: Use immersion cleaning or spray wash cleaning (Oper. No. 1 or 2) as an alternative to SPOP 3 for degreasing. Use aqueous wipe cleaning (Oper. No. 3 and 4) for local application.

The temperature of the aqueous cleaner solution must be controlled. Heating the solution over the recommended maximum temperature will result in a change to the chemistry and subsequently makes the solution ineffective.

Refer to Section 70-20-00 for more information on the control, equipment, and effectiveness of SPOP 209 aqueous degreasing.

<u>Oper. No.</u>	<u>Description/Operation</u>
1	<u>Immersion in Tanks:</u>
R	a. Put the part fully in a tank of one of the aqueous cleaner solutions that follow:
R	
R	
R	<u>NOTE:</u> SPS 106-1, 107-1, 113-1, and 145-1 are low foam solutions when used at the temperatures specified. Low foam solutions eliminate the problems with foam during agitation, rinsing, and waste treatment. P&W does not permit the addition of antifoam additives to the products that foam in this SPOP.
R	
R	● Use PS 374 at 130° - 140°F (54° - 60°C)
R	● Use SPS 104 at 120° - 160°F (49° - 71°C)
R	● Use SPS 105 at 140° - 180°F (60° - 82°C)
R	● Use SPS 106-1 at 130° - 140°F (54° - 60°F)
	● Use SPS 108 at 100° - 110°F (38° - 43°C)
	● Use SPS 113-1 at 155° - 165°F (68° - 74°C)
R	● Use SPS 145-1 at 120° - 160°F (49° - 71°C)
	● Use SPS 151 at 140° - 170°F (60° - 77°C).

WARNING: REFER TO THE MANUFACTURER'S MATERIAL SAFETY DATA SHEETS FOR CONSUMABLE MATERIAL'S INFORMATION SUCH AS: HAZARDOUS INGREDIENTS, PHYSICAL/CHEMICAL CHARACTERISTICS, FIRE, EXPLOSION, REACTIVITY, HEALTH HAZARD DATA, PRECAUTIONS FOR SAFE HANDLING, USE AND CONTROL MEASURES.

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SPOP 209 - DEGREASING OF PARTS BY AQUEOUS CLEANING (Continued)

Oper.
No.

Description/Operation

- b. Let the part soak for 5 - 30 minutes.
- c. Flush fully over aqueous cleaner tank with air-assisted pressure cold water spray.
- d. Put part fully in warm water at 90° - 100°F (32° - 38°C). If necessary, scrub part with a soft non-metallic bristle brush.
- e. Use an air-assisted pressure spray gun to flush part with cold, warm, or hot water.
- f. Put part fully in hot water at 150° - 200°F (66° - 93°C) until the temperature of the part is at the water temperature to flash dry.

2 Spray Wash Machine:

- a. Put parts into the spray wash machine so that the direct spray is able to touch most of the areas of each part.
- b. Spray wash the parts in a 5 - 30 minute wash cycle with one of the aqueous cleaner solutions that follow:

NOTE: These aqueous cleaner solutions are all low foam cleaners when used at the temperatures specified.

- R ● Use SPS 106-2 at 130° - 140°F (54° - 60°C)
- R ● Use SPS 107-2 at 140° - 160°F (60° - 71°C)
- R ● Use SPS 111 at 90° - 140°F (32° - 60°C)
- R ● Use SPS 113-2 at 155° - 165°F (68° - 74°C)
- R ● Use SPS 145-2 at 120° - 160°F (49° - 71°C).

- c. Flush fully with hot water at 90° - 200°F (32° - 93°C).
- d. If necessary, dry with air.

WARNING: REFER TO THE MANUFACTURER'S MATERIAL SAFETY DATA SHEETS FOR CONSUMABLE MATERIAL'S INFORMATION SUCH AS: HAZARDOUS INGREDIENTS, PHYSICAL/CHEMICAL CHARACTERISTICS, FIRE, EXPLOSION, REACTIVITY, HEALTH HAZARD DATA, PRECAUTIONS FOR SAFE HANDLING, USE AND CONTROL MEASURES.

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CLEANING PROCEDURES

SPOP 209 - DEGREASING OF PARTS BY AQUEOUS CLEANING (Continued)

<u>Oper. No.</u>	<u>Description/Operation</u>
3	<u>Aqueous Spray or Wipe:</u> a. Use aqueous cleaner solution (PS 374, SPS 104, 105, 106-1, 107-1, 107-2, 113-1, 145-1, 145-2, or 151). <u>NOTE:</u> Agitate the solution before use. ● Spray the part and scrub with a clean, white, lint-free unsized cloth, or a non-metallic brush or pad wet with the solution. ● Flush the part fully with cold or hot water. b. If necessary, air dry.
4	<u>Aqueous Spray or Wipe (Without Rinsing)</u> a. Spray or wipe the part with aqueous cleaner (SPMC 148, 149, or 155), used as received. If necessary, scrub with a soft non-metallic brush or pad. b. Wipe dry with a clean, white, lint-free, unsized cloth.

R
R

WARNING: REFER TO THE MANUFACTURER'S MATERIAL SAFETY DATA SHEETS FOR CONSUMABLE MATERIAL'S INFORMATION SUCH AS: HAZARDOUS INGREDIENTS, PHYSICAL/CHEMICAL CHARACTERISTICS, FIRE, EXPLOSION, REACTIVITY, HEALTH HAZARD DATA, PRECAUTIONS FOR SAFE HANDLING, USE AND CONTROL MEASURES.

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CONSUMABLE MATERIALS

	<u>SPECIFICATION</u>	<u>TRADE NAME</u>	<u>SOURCE CODE</u>	<u>USE CODE</u>
R	SPMC 142 Remover, Alkaline Rust (Liquid)	ELDORADO HTP-1150L	55208	C
R	SPMC 143 Alkaline Permanganate	ELDORADO HTP-1190	55208	C
	SPMC 144 Conditioner, Acid Scale	AC-111	55208	C
R	SPMC 145 Degreaser, Aqueous	ELDORADO ED-306LF	55208	C
	SPMC 146 Phosphoric Acid, Inhibited	AC-183	55208	C
	SPMC 147 Stripper, Electroless Nickel (Noncyanide)	SPMC 147-1: EN-86A + SPMC 147-2: EN-86B	02258 02258	P
	SPMC 148 Cleaner, Aqueous	TURCO T6780 Eco-Solv	0BYN5	C
R	SPMC 149 Cleaner, Aqueous	Aviacleaz Window Cleaner Plus	23373	C
	SPMC 150 Remover, Plater's Wax	TURCO 6802	0BYN5	P
	SPMC 151 Degreaser, Aqueous	Nu-Gear-SC	S0103	C

Master Consumable Materials List
Table 1 (Continued)