

# Technical Data Sheet

## Coventry™ 12820 Precision Cleaning Solvent

TDS # 12820

### PRODUCT DESCRIPTION

Coventry™ 12820 Solvent is a proprietary azeotropic blend designed specifically for effective cleaning and validation of NASA Propulsion Oxygen Systems Hardware. This unique formulation is non-combustible and exhibits good material compatibility, oxygen system compatibility and high cleaning effectiveness. The Coventry 12820 is an ideal AK-225 replacement in systems where high cleaning efficiency and high non-volatile residue removal are required.

- Cleaning solvent for critical cleaning applications
- Meets SAE ARP1176
- Evaluated and tested in NASA/TP-2015-218207
- Non combustible
- No Ozone Depleting Chemicals, low Global Warming Potential
- Azeotropic composition provides excellent composition stability
- Designed for use in oxygen system cleaning
- Removes particulates and debris
- Removes fluorocarbon greases and oils used to lubricate fittings
- Low Toxicity
- Fast Drying
- Very Low Non-Volatile Residue
- Maximum Performance and Safety

### TYPICAL APPLICATIONS

Coventry™ 12820 is used to replace CFCs, HCFCs, and flammable solvents as a cleaning solvent for applications where metal and oxygen compatibility is a priority.

### TYPICAL PHYSICAL PROPERTIES

<b>Boiling Point</b>	82.4°F/28°C
<b>Flash Point (TCC)</b>	None
<b>Solubility in Water @ 77°F/1 atm</b>	<1% by weight
<b>Specific Gravity (water = 1 @ 77°F)</b>	1.40
<b>Evaporation Rate (butyl acetate=1)</b>	>1
<b>Appearance</b>	Clear, colorless liquid
<b>Vapor Density (air=1)</b>	3.3
<b>Vapor Pressure</b>	88.7 mm Hg
<b>Odor</b>	Ethereal
<b>Surface Tension (dynes/cm @ 25°C)</b>	14.0
<b>Moisture Content (ASTM D-3401)</b>	<100 ppm by weight
<b>NVR (ASTM-D-2109)</b>	<5 ppm by weight
<b>Largest Soluble Hydrocarbon</b>	12 carbon
<b>Particulate Matter</b>	<ol style="list-style-type: none"><li>1) Number of particles greater than 50 microns – 0 per 100 mL.</li><li>2) Number of particles 25-50 microns - 8 per 100 mL max.</li><li>3) Number of particles 15-25 microns - 17 per 100 mL max.</li></ol>

<b>Shelflife</b>	2 years from DOM unopened
<b>VOC* Content:</b>	
CARB	100%
SCAQMD	1400 g/L
Federal	22%

used as a flush cleaner at room temperature for oils and grease, and can also be used in a vapor degreaser for precision cleaning applications. Coventry™ 12820 should be used in a well-ventilated area.

## AVAILABILITY

12820 1 Gal. Liquid

## TECHNICAL & APPLICATION ASSISTANCE

Coventry provides a technical service hotline to answer you technical and application related questions. The toll free number is: **1-800-TECH-401 (1-800-832-4401)**.

## NOTE:

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## COVENTRY CLEANROOM PRODUCTS

8125 COBB CENTER DRIVE

KENNESAW, GA 30152

1-770-424-4888 REV. A (01/16)

## COMPATIBILITY

Coventry™ 12820 is compatible with most metals and plastics. As with any solvent, compatibility with substrate should be determined on a non-critical area prior to use. Although the solvent contains HFEs, the material compatibility of trans 1,2 dichloroethylene can be used as a general compatibility guideline. HFE's may cause swelling in some fluorinated polymers. Long term compatibility with materials used during manufacturing must be evaluated as there is potential for plasticizers to be leached from plastic funnels, syringes, housings, bottles, etc.

<u>Material</u>	<u>Compatibility</u>
Metals	Satisfactory
Polyethylene	Fair
Polypropylene	Fair
Polycarbonate	Satisfactory
Nylon	Satisfactory
Epoxy	Satisfactory
FEP Copolymer*	Satisfactory
PCTFE*	Satisfactory
Aromatic Polyimide*	Satisfactory
FFKM*	Fair
FKM V0747-75*	Fair
Buna N*	Fair
PTFE*	Satisfactory
PTFE with silica fiber*	Satisfactory
PEEK*	Satisfactory

\*Results interpreted from NASA/TP-2015-218207 – “Replacement of Hydrochlorofluorocarbon-225 - Solvent for Cleaning and Verification Sampling of NASA Propulsion Oxygen Systems Hardware, Ground Support Equipment, and Associated Test Systems”, published April 2015.

## DIRECTIONS FOR USE:

Allow the product to achieve room temperature before using. Use only in cleanroom controlled environment. 12820 is used for cleaning, verification and validation of liquid oxygen lines. 12820 can be

## DISTRIBUTED BY:

