

**From:** [Air.Pollution Control](#)  
**To:** [APC Permitting](#)  
**Subject:** FW: Denso Manufacturing Athens TN - Construction Permit Application  
**Date:** Wednesday, November 1, 2023 1:59:40 PM  
**Attachments:** [image001.png](#)  
[Denso Manufacturing Athens TN - Construction Permit Notification - ECU Zonal.pdf](#)

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**From:** Stacey Melton <stacey.melton@na.denso.com>  
**Sent:** Wednesday, November 1, 2023 11:35 AM  
**To:** Air.Pollution Control <Air.Pollution.Control@tn.gov>  
**Cc:** Julie Verissimo <Julie.Verissimo@tn.gov>; John Fuss <John.Fuss@tn.gov>; Eddie Franks <eddie.franks@na.denso.com>; Scott Powell <scott.powell@na.denso.com>  
**Subject:** [EXTERNAL] Denso Manufacturing Athens TN - Construction Permit Application

**\*\*\* This is an EXTERNAL email. Please exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email - STS-Security. \*\*\***

Attached is a Construction Application for a new source installation for Denso Manufacturing Athens TN., Emission Source Reference No. 54-0158.

A paper check for the application fee will be sent through certified mail.

Please let me know should you need any additional information.

Thank you,



**Stacey Melton**  
Advanced Specialist – Safety, Health, and  
Environment  
DENSO Manufacturing Athens Tennessee, Inc.

**Email** [stacey.melton@na.denso.com](mailto:stacey.melton@na.denso.com)  
**Front Desk:** 423-746-0000

This communication and any attachments is meant only for the intended recipient(s) and may contain confidential and/or legally privileged information. If you are not an intended recipient, any review, use, dissemination, distribution or copying is strictly prohibited. Please notify us immediately by return e-mail and delete the message, including any duplicates, from your system. Thank you for

your cooperation.

**Construction Permit Notification (For Non-Title V Sources)**

TO: The Technical Secretary  
Tennessee Air Pollution Control Division  
William R. Snodgrass Tennessee Tower  
312 Rosa L. Parks Ave. 15<sup>th</sup> Floor  
Nashville, TN 37243

DENSO Manufacturing Athens Tennessee, Inc. (DMAT), located at 2400 Denso Drive, Athens, TN, is submitting this Construction permit request pursuant to TACPR 1200-03-09-.01(1)(b). DMAT is planning to begin installation of new Zonal ECU process no sooner than March 2024, with production to begin on or about August 2024.

**Description of Changes:**

1. Add a new Zonal ECU production processes that will consist of the following categories of processes:
  - a. Manual Sealer Application Lines(3 Total Lines)
  - b. Automated Sealer Application Lines(6 Total Lines)
2. Air emissions will be VOC.
3. VOC emissions be sent to VOC abatement systems.
4. All permit terms and conditions are still applicable.

This source is not subject to requirements of paragraphs 1200-3-9-.02(11), 1200-3-9-.01(4) or 1200-3-9-.01(5). These changes do not result in emissions exceeding the allowable under the existing operating permit. The changes will not result in the emission of any air contaminant (to which an emission standard applies) not previously emitted. Supporting material consisting of emissions calculations, SDSs, and flow diagrams have been included with this submittal. If you have any questions or require further information please contact Eddie Franks at (423) 746-0000 ext. 7521 e-mail [eddie.franks@na.denso.com](mailto:eddie.franks@na.denso.com) or Stacey Melton at (423) 746-0000 ext. 7521 e-mail [stacey.melton@na.denso.com](mailto:stacey.melton@na.denso.com)

Sincerely,



Eddie Franks

Manager, Safety Health and Environment





DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
 DIVISION OF AIR POLLUTION CONTROL  
 William R. Snodgrass Tennessee Tower  
 312 Rosa L. Parks Avenue, 15<sup>th</sup> Floor, Nashville, TN 37243  
 Telephone: (615) 532-0554, Email: Air.Pollution.Control@TN.gov

APC 100

### NON-TITLE V PERMIT APPLICATION FACILITY IDENTIFICATION

Type or print and submit. Attach appropriate source description forms.				
<b>SITE INFORMATION</b>				
<b>1. Organization's legal name and SOS control number</b> [as registered with the TN Secretary of State (SOS)] Denso Manufacturing Athens, TN, Inc. SOS Control # 439375				
<b>2. Site name</b> (if different from legal name)				
<b>3. Is a construction permit application fee being submitted?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (see instructions for appropriate fee to submit)				
<b>4. Site address</b> (St./Rd./Hwy.) 2400 Denso Drive				<b>County name</b> McMinn
City Athens		Zip code 37303		<b>5. NAICS or SIC code</b> 336320
<b>6. Site location</b> (in lat. /long.)	Latitude 35-28-37		Longitude 84-3-41	
<b>CONTACT INFORMATION (RESPONSIBLE PERSON)</b>				
<b>7. Responsible person/Authorized contact</b> Eddie Franks			Phone number with area code 423-746-0000 ext 7542	
<b>Mailing address</b> (St./Rd./Hwy.) 2400 Denso Drive			Fax number with area code	
City AThens	State TN	Zip code 37303	Email address eddie.franks@na.denso.com	
<b>CONTACT INFORMATION (TECHNICAL)</b>				
<b>8. Principal technical contact</b> Stacey Melton			Phone number with area code 423-746-0000 ext 7521	
<b>Mailing address</b> (St./Rd./Hwy.) 2400 Denso Drive			Fax number with area code	
City Athens	State TN	Zip code 37303	Email address stacey.melton@na.denso.com	
<b>CONTACT INFORMATION (BILLING)</b>				
<b>9. Billing contact</b> Stacey Melton			Phone number with area code 423-746-0000 ext 7521	
<b>Mailing address</b> (St./Rd./Hwy.) 2400 Denso Drive			Fax number with area code	
City Athens	State TN	Zip code 37303	Email address stacey.melton@na.denso.com	

**AIR CONTAMINANT SOURCE(S) INFORMATION**

**10. Description of air contaminant source(s) and Unique Source ID(s).** List, identify, and briefly describe process emission sources, fuel burning installations, and incinerators that are contained in this application and include a Unique Source ID for each source. The Unique Source ID is a name/number/letter, which uniquely identifies the air contaminant source(s), like Boiler #1, Paint Line #1, Engine #1, etc. (see instructions for more details)

This application is for the addition of the Zonal ECU (Electronic Control Unit) cleanroom in Plant 701 and will be a new source for Plant 701 and the DMAT campus. The cleanroom process will consist of manual sealant, manual service, manual sealer coat, auto sealant, auto sealant coat lines. Total of 9 lines.

**11. Is the air contaminant source(s) in a nonattainment area? If "Yes", then minor source BACT must be addressed.** Yes No

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☒

<b>12. Normal operation:</b>	Hours/Day 24	Days/Week 5	Weeks/Year 52	Days/Year 260
<b>13. Percent annual throughput</b>	Dec. – Feb. 25%	March – May 25%	June – August 25%	Sept. – Nov. 25%

**TYPE OF PERMIT REQUESTED (check appropriate box)**

14. Operating permit <input type="checkbox"/>	Date construction started	Date completed	Date of ownership change (if applicable)
	Last permit number(s)		Emission Source Reference Number(s)
Construction permit <input checked="" type="checkbox"/>	Last permit number(s) New Construction		Emission Source Reference Number(s)

If you chose Construction permit above, then choose either New Construction, Modification, or Location Transfer

New Construction <input checked="" type="checkbox"/>	Starting date March 2024	Completion date Aug 2025
Modification <input type="checkbox"/>	Date modification started or will start	Date completed or will complete
Location Transfer <input type="checkbox"/>	Transfer date	Address of last location

**15. Describe changes that have been made to this equipment or operation(s) since the last construction or operating permit application:**

New Source- New Construction

**16. Comments**

This will be a staggered start with Manual lines arriving onsite March 2024 with mass production July 2024. Auto lines arriving August 2024 with mass production August 2025. All lines will exhaust to the North TO#1 and South #2 TO units. TO units utilize natural gas fuel source.

Source 54-0158-30: Four Heater Assembly Operations (1#, #2, #3, #4).

Source 54-0158-38 Monolithic Carrier production: consisting of mixing/extruding process with baghouse as control: kiln #1 with thermal oxidizers as control: kiln #2 with thermal oxidizer as control.

Source 54-0158-29: Fuel systems calibration and valve assembly rooms.

Source 54-0158-44: Fuel systems fabrication.

Source 46: Fuel Systems Production Process

**SIGNATURE**

Based upon information and belief formed after a reasonable inquiry, I, as the responsible person of the above mentioned facility, certify that the information contained in this application is accurate and true to the best of my knowledge. As specified in TCA Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

**17. Signature** (application must be signed before it will be processed)

**Date**

**Signer's name** (type or print)

**Title**

**Phone number with area code**







DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
 DIVISION OF AIR POLLUTION CONTROL  
 William R. Snodgrass Tennessee Tower  
 312 Rosa L. Parks Avenue, 15<sup>th</sup> Floor, Nashville, TN 37243  
 Telephone: (615) 532-0554, Email: Air.Pollution.Control@TN.gov

APC 102

**NON-TITLE V PERMIT APPLICATION  
 PROCESS OR FUEL BURNING SOURCE DESCRIPTION**

Type or print. Submit with the APC 100.			
<b>GENERAL IDENTIFICATION AND DESCRIPTION</b>			
<b>1. Organization's legal name and SOS control number</b> [as registered with the TN Secretary of State (SOS)] Denso Manufacturing Athens TN, Inc.		<b>2. Emission Source Reference Number</b> 54-0158	
<b>3. Is this air contaminant source subject to an NSPS or NESHAP rule?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, list rule citation, including Part, Subpart, and applicable Sections:			
<b>4. Unique Source ID</b> (see instructions) Zonal ECU Sealer Coating		<b>5. Unique Emission Point ID</b> (see instructions) Zonal ECU North TO#1 & South TO#2	
<b>6. Description of air contaminant source</b> Zonal ECU Sealer coating process that consists of incoming electrical boards being coated and outside covers assembled. Sealer Coating machine is the source of VOC material along with alcohol for cleaning purposes.			
<b>7. Type of air contaminant source</b> (Check only one option to the right)			
Process Emission Source: For each process emission source, submit a separate application. (Check at right and complete lines 8, 9, and 14)			<input checked="" type="checkbox"/>
Process Emission Source with in process fuel: Products of combustion contact materials heated. For each process emission source, submit a separate application. (Check at right and complete lines 8 through 14)			<input type="checkbox"/>
Non-Process fuel burning source: Products of combustion do not contact materials heated. Complete this form for each boiler or fuel burner and complete a Non-Title V Emission Point Description Form (APC 101) for each stack. (Check at right and complete lines 10 through 14)			<input type="checkbox"/>
<b>PROCESS EMISSION SOURCE DESCRIPTION AND DATA</b>			
<b>8. Type of operation:</b> Continuous <input checked="" type="checkbox"/> Batch <input type="checkbox"/>		Normal batch time	Normal batches/day
<b>9. Process material inputs and In-process solid fuels</b>	Diagram reference	Input rates (pounds/hour)	
		Design	Actual
A. Isopropyl Alcohol		.18	.10
B. MB-21		5.76	3.31
C. Humiseal		8.24	4.74
D.			
E.			
F.			
G.			
Totals			

\* A simple process flow diagram must be attached.

DESCRIPTION OF BOILER, BURNER, ENGINE, OR OTHER FUEL BURNING SOURCE							
<b>10. Boiler or burner data:</b> (Complete lines 10 through 14 using a separate form for each boiler, burner, etc.)							
Serial Number				Type of firing***			
Rated horsepower		Rated input capacity (10 <sup>6</sup> BTU/Hr.)		Other rating (specify capacity and units)			
Date constructed		Date manufactured		Date of last modification (explain in comments below)			
** Source with a common stack will have the same stack number. *** Cyclone, spreader (with or without reinjection), pulverized (wet or dry bottom, with or without reinjection), other stoker (specify type, hand fired, automatic, or other type (describe below in comments)).							
FUEL USED IN BOILER, BURNER, ENGINE, OR OTHER FUEL BURNING SOURCE							
<b>11. Fuel data:</b> (Complete for a process emission source with in process fuel or a non-process fuel burning source)							
Primary fuel type (specify)				Standby fuel type(s) (specify)			
Fuels used	Annual usage	Hourly usage		% Sulfur	% Ash	BTU value of fuel	(For APC use only) SCC code
		Design	Average				
Natural gas:	10 <sup>6</sup> Cu. Ft.	Cu. Ft.	Cu. Ft.	//////// ////////	//// ////	1,000	
#2 Fuel oil:	10 <sup>3</sup> Gal.	Gal.	Gal.		//// ////		
#5 Fuel oil:	10 <sup>3</sup> Gal.	Gal.	Gal.		//// ////		
#6 Fuel oil:	10 <sup>3</sup> Gal.	Gal.	Gal.		//// ////		
Coal:	Tons	Lbs.	Lbs.				
Wood:	Tons	Lbs.	Lbs.	//////// ////////	//// ////		
Liquid propane:	10 <sup>3</sup> Gal.	Gal.	Gal.	//////// ////////	//// ////	85,000	
Other (specify type & units):							
<b>12. If Wood is used as a fuel, specify types and estimate percent by weight of bark</b>							
<b>13. If Wood is used with other fuels, specify percent by weight of wood charged to the burner.</b>							

**14. Comments**

ECU Zonal includes all manual and automated sealer coating equipment.

**SIGNATURE**

If this form is being submitted at the same time as an APC 100 form, then a signature is not required on this form. Date this form regardless of whether a signature is provided. If this form is NOT being submitted at the same time as an APC 100 form, then a signature is required.

Based upon information and belief formed after a reasonable inquiry, I, as the responsible person of the above mentioned facility, certify that the information contained in this application is accurate and true to the best of my knowledge. As specified in TCA Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

**15. Signature****Date****Signer's name** (type or print)**Title****Phone number with area code**





DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
 DIVISION OF AIR POLLUTION CONTROL  
 William R. Snodgrass Tennessee Tower  
 312 Rosa L. Parks Avenue, 15<sup>th</sup> Floor, Nashville, TN 37243  
 Telephone: (615) 532-0554, Email: Air.Pollution.Control@TN.gov

APC 101

### NON-TITLE V PERMIT APPLICATION EMISSION POINT DESCRIPTION

Type or print and submit for each stack or air contaminant source. Submit with the APC 100.												
<b>GENERAL IDENTIFICATION AND DESCRIPTION</b>												
<b>1. Organization's legal name and SOS control number</b> [as registered with the TN Secretary of State (SOS)] Denso Manufacturing Athens Tennessee Inc.												
<b>2. Unique Source ID</b> (name/number/letter which uniquely identifies this air contaminant source, like Boiler #1) Zonal ECU Phase 1												
<b>3. Unique Emission Point ID</b> (name/number/letter which uniquely identifies this emission point, like Stack #1) 54-0158                      Zonal ECU North TO#1 & South TO#2												
<b>4. Brief description of air contaminant source</b> (Attach a diagram if appropriate): Zonal ECU (Electronic Control Unit) cleanroom process will consist of manual sealant, manual service, manual sealer coat, auto sealant, auto sealant coat lines. VOC will be exhausted through the TO#1 & TO#2 See attached Diagram.												
<b>5. Emission point location</b>	Latitude 35:28:98	Longitude 84:38:40	<b>6. Distance to nearest property line (Ft.)</b> 500									
<b>STACK AND EMISSION DATA</b>												
<b>7. Stack or emission point data:</b> →	Height above grade (Ft.) 45	Diameter (Ft.) 3	Temperature (°F) 140	% of time over 125°F 100%	Direction of exit (Up, down or horizontal) Up							
Data at exit conditions: →	Flow (actual Ft. <sup>3</sup> /Min.) 14087	Velocity (Ft. /Sec.) 33.2	Moisture (Grains/Ft. <sup>3</sup> )		Moisture (Percent) 1.98							
Data at standard conditions: →	Flow (Dry std. Ft. <sup>3</sup> /Min.)	Velocity (Ft. /Sec.)	Moisture (Grains/Ft. <sup>3</sup> )		Moisture (Percent)							
<b>8. Monitoring device and recording instrument (check all that apply):</b> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Opacity monitor <input type="checkbox"/></td> <td style="text-align: center;">SO<sub>2</sub> monitor <input type="checkbox"/></td> <td style="text-align: center;">NO<sub>x</sub> monitor <input type="checkbox"/></td> <td style="text-align: center;">Strip chart <input type="checkbox"/></td> <td style="text-align: center;">Electronic data logger <input checked="" type="checkbox"/></td> <td style="text-align: center;">Other (specify in comments) <input type="checkbox"/></td> <td style="text-align: center;">No monitor (none) <input type="checkbox"/></td> </tr> </table>						Opacity monitor <input type="checkbox"/>	SO <sub>2</sub> monitor <input type="checkbox"/>	NO <sub>x</sub> monitor <input type="checkbox"/>	Strip chart <input type="checkbox"/>	Electronic data logger <input checked="" type="checkbox"/>	Other (specify in comments) <input type="checkbox"/>	No monitor (none) <input type="checkbox"/>
Opacity monitor <input type="checkbox"/>	SO <sub>2</sub> monitor <input type="checkbox"/>	NO <sub>x</sub> monitor <input type="checkbox"/>	Strip chart <input type="checkbox"/>	Electronic data logger <input checked="" type="checkbox"/>	Other (specify in comments) <input type="checkbox"/>	No monitor (none) <input type="checkbox"/>						
<b>9. Control device.</b> Description of proposed monitoring, recordkeeping, and reporting to assure compliance with emission limits. Include operating parameters of control device (flow rate, temperature, pressure drop, etc.). The North TO#1 & South TO#2 Thermal oxidizers are continuously monitored and recorded by an automated monitoring device. The device is maintained by DMAT's Facilities Maintenance Dept. Any deviations in the operating temperature are reported to Safety, Health, and Environmental Dept.												

**10. Air contaminants.** Emission estimates for each air contaminant emitted from this point should be based on stack sampling results or engineering calculations. Calculations should be attached on a separate sheet. (see instructions for more details)

Air contaminants	Average Emissions (Lbs./Hr.)	Maximum Emissions (Lbs./Hr.)	Concentration	Average Emissions (Ton/Yr.)	Potential Emissions (Ton/Yr.)	Emissions Estimation Method Code *	Control Devices *	Control Efficiency %
Particulate matter (PM)			**					
Sulfur dioxide (SO <sub>2</sub> )			***					
Carbon monoxide (CO)			PPM					
Volatile organic compounds (VOC)	8.16	14.1	PPM	3.23	32.08	2	999	89.9
Nitrogen oxides (NO <sub>x</sub> )			PPM					
Hydrogen fluoride (HF)								
Hydrogen chloride (HCl)								
Lead (Pb)								
Greenhouse gases (CO <sub>2</sub> equivalents)								
Hazardous air pollutant (specify)								
Hazardous air pollutant (specify)								
Hazardous air pollutant (specify)								
Hazardous air pollutant (specify)								
Hazardous air pollutant (specify)								
Other (specify)								
Other (specify)								
Other (specify)								
Other (specify)								

**11. Comments**

The TO Units have minimum operating temperatures of 1448 (TO#1) and 1439(TO#2).

**SIGNATURE**

If this form is being submitted at the same time as an APC 100 form, then a signature is not required on this form. Date this form regardless of whether a signature is provided. If this form is NOT being submitted at the same time as an APC 100 form, then a signature is required.

Based upon information and belief formed after a reasonable inquiry, I, as the responsible person of the above mentioned facility, certify that the information contained in this application is accurate and true to the best of my knowledge. As specified in TCA Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

**12. Signature****Date****Signer's name** (type or print)**Title****Phone number with area code**

\* Refer to the tables in the instructions for estimation method and control device codes.

\*\* Exit gas particulate matter concentration units: Process – Grains/Dry Standard Ft<sup>3</sup> (70°F), Wood fired boilers - Grains/Dry Standard Ft<sup>3</sup> (70°F), all other boilers – Lbs. /Million BTU heat input.

\*\*\* Exit gas sulfur dioxide concentrations units: Process – PPM by volume, dry bases, and boilers – Lbs. /Million BTU heat input





### EHV2 ECU VOC and HAP CALCULATIONS

	Usage at 5040 hours	Usage (Ggal/Yr)			hrs/Yr			Usage (gal/hr)
		72			5,040			0.01429
<u>IPA</u>	Usage at 8760 hours	Usage (gal/hr)	hr/Yr	=	Annual Use (gal/Yr)			
		0.0143	8,760		125.14			
	VOC PTE from IPA	Annual Use (gal/Yr)	VOC lb/gal	lb/ton	=	VOC ton/Yr		
		125.14	6.59	2000		0.412		
<u>MB-21</u>	Usage at 5040 hours	Usage (G/Yr)			hrs/Yr			Usage (gal/hr)
		2,244			5,040			0.44524
	Usage at 8760 hours	Usage (gal/hr)	hr/Yr	=	Annual Use (gal/Yr)			
		0.4452	8,760		3900.29			
	VOC PTE from MB21	Annual Use (gal/Yr)	VOC lb/gal	lb/ton	=	VOC ton/Yr		
		3,900.29	6.68	2000		13.027		
<u>Humiseal</u>	Usage at 5040 hours	Usage (Ggal/Yr)			hrs/Yr			Usage (gal/hr)
		3,864			5,040			0.767
	Usage at 8760 hours	Usage (gal/hr)	hr/Year	=	Annual Use (gal/Yr)			
		0.7667	8,760		6716.00			
	VOC PTE from Humiseal	Annual Use (gal/Yr)	VOC lb/gal	lb / ton	=	VOC ton/Yr		
		6,716.00	5.55	2000		18.637		

### SUMMARY TABLE OF EMISSIONS

Line Name	VOC (ton/yr)				HAP (ton/yr)
	IPA	MB-21	Humiseal	TOTAL	
EHV2 ECU	0.412	13.027	18.637	32.076	0.000
	TOTAL VOC PTE (ton/yr)	0.412	13.0270	18.637	32.076
	TOTAL PTE (lb/hr)	1.8061	57.0581	81.6296	140.494
	Avg (lb/hr)	1.0391	32.8279	46.9650	80.8320
Without Control Efficiency	TOTAL VOC PTE (ton/yr)	0.412	13.0270	18.637	32.076
	TOTAL PTE (lb/hr)	1.8061	57.0581	81.6296	140.494
	Avg (lb/hr)	1.0391	32.8279	46.9650	80.8320
With Control Efficiency 89.9%	TOTAL VOC PTE (ton/yr)	0.041646917	1.315722	1.8823269	3.2396962
	TOTAL PTE (lb/hr)	0.182413497	5.762864	8.24459182	14.18986936
	Avg (lb/hr)	0.104950231	3.31562	4.74346379	8.164034424





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APC 101

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<b>2. Unique Source ID</b> (name/number/letter which uniquely identifies this air contaminant source, like Boiler #1) Zonal ECU Phase 1					
<b>3. Unique Emission Point ID</b> (name/number/letter which uniquely identifies this emission point, like Stack #1) 54-0158                      Zonal ECU North TO#1 & South TO#2					
<b>4. Brief description of air contaminant source</b> (Attach a diagram if appropriate): Zonal ECU (Electronic Control Unit) cleanroom process will consist of manual sealant, manual service, manual sealer coat, auto sealant, auto sealant coat lines. VOC will be exhausted through the TO#1 & TO#2 See attached Diagram.					
<b>5. Emission point location</b>	Latitude 35:28:98	Longitude 84:38:40	<b>6. Distance to nearest property line (Ft.)</b> 500		
<b>STACK AND EMISSION DATA</b>					
<b>7. Stack or emission point data:</b> →	Height above grade (Ft.) 45	Diameter (Ft.) 3	Temperature (°F) 140	% of time over 125°F 100%	Direction of exit (Up, down or horizontal) Up
Data at exit conditions: →	Flow (actual Ft. <sup>3</sup> /Min.) 14087	Velocity (Ft. /Sec.) 33.2	Moisture (Grains/Ft. <sup>3</sup> )		Moisture (Percent) 1.98
Data at standard conditions: →	Flow (Dry std. Ft. <sup>3</sup> /Min.)	Velocity (Ft. /Sec.)	Moisture (Grains/Ft. <sup>3</sup> )		Moisture (Percent)
<b>8. Monitoring device and recording instrument (check all that apply):</b>					
Opacity monitor <input type="checkbox"/>	SO <sub>2</sub> monitor <input type="checkbox"/>	NO <sub>x</sub> monitor <input type="checkbox"/>	Strip chart <input type="checkbox"/>	Electronic data logger <input checked="" type="checkbox"/>	Other (specify in comments) <input type="checkbox"/>
No monitor (none) <input type="checkbox"/>					
<b>9. Control device.</b> Description of proposed monitoring, recordkeeping, and reporting to assure compliance with emission limits. Include operating parameters of control device (flow rate, temperature, pressure drop, etc.). The North TO#1 & South TO#2 Thermal oxidizers are continuously monitored and recorded by an automated monitoring device. The device is maintained by DMAT's Facilities Maintenance Dept. Any deviations in the operating temperature are reported to Safety, Health, and Environmental Dept.					

**10. Air contaminants.** Emission estimates for each air contaminant emitted from this point should be based on stack sampling results or engineering calculations. Calculations should be attached on a separate sheet. (see instructions for more details)

Air contaminants	Average Emissions (Lbs./Hr.)	Maximum Emissions (Lbs./Hr.)	Concentration	Average Emissions (Ton/Yr.)	Potential Emissions (Ton/Yr.)	Emissions Estimation Method Code *	Control Devices *	Control Efficiency %
Particulate matter (PM)			**					
Sulfur dioxide (SO <sub>2</sub> )			***					
Carbon monoxide (CO)			PPM					
Volatile organic compounds (VOC)	8.16	14.1	PPM	3.23	32.08	2	999	89.9
Nitrogen oxides (NO <sub>x</sub> )			PPM					
Hydrogen fluoride (HF)								
Hydrogen chloride (HCl)								
Lead (Pb)								
Greenhouse gases (CO <sub>2</sub> equivalents)								
Hazardous air pollutant (specify)								
Hazardous air pollutant (specify)								
Hazardous air pollutant (specify)								
Hazardous air pollutant (specify)								
Hazardous air pollutant (specify)								
Other (specify)								
Other (specify)								
Other (specify)								
Other (specify)								

**11. Comments**

The TO Units have minimum operating temperatures of 1448 (TO#1) and 1439(TO#2).

**SIGNATURE**

If this form is being submitted at the same time as an APC 100 form, then a signature is not required on this form. Date this form regardless of whether a signature is provided. If this form is NOT being submitted at the same time as an APC 100 form, then a signature is required.

Based upon information and belief formed after a reasonable inquiry, I, as the responsible person of the above mentioned facility, certify that the information contained in this application is accurate and true to the best of my knowledge. As specified in TCA Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

**12. Signature****Date****Signer's name** (type or print)**Title****Phone number with area code**

\* Refer to the tables in the instructions for estimation method and control device codes.

\*\* Exit gas particulate matter concentration units: Process – Grains/Dry Standard Ft<sup>3</sup> (70°F), Wood fired boilers - Grains/Dry Standard Ft<sup>3</sup> (70°F), all other boilers – Lbs. /Million BTU heat input.

\*\*\* Exit gas sulfur dioxide concentrations units: Process – PPM by volume, dry bases, and boilers – Lbs. /Million BTU heat input



Prepared on 2001/9/1  
 Revision date 2010/11/3  
 Revision date 2011/2/2  
 Revision date 2011/9/13  
 Revision date 2014/12/26

## SAFETY DATA SHEET

### 1 Chemical Substance and Company Information

Product Name :Boutekizaisenyou Thinner MB21 (防滴材専用シンナーMB21)  
 Product Code :  
 Supplier :Nikkatsu Synthetic Industry Co, Ltd.  
 Address :Ohshima-69 Kitasaki-chou Ohbu-city Aichi-pref Japan  
 TEL :+81-0562-46-5147  
 FAX :+81-0562-46-1780  
 Mail Address :tech@nikkatsugousei.jp  
 Recommend and Limit of the use Paint Dilute Material

### 2 Hazard Toxic Summary

GHS classification	
Flammable liquid	:Category 2
Acute toxicity oral	:Category 4
Skin dermal	:Out of category
Inhalation : Gas	:Out of classification subject
Inhalation : Vapor	:Category 4
Inhalation: Dust, mist	:Category 3
Skin irritation corrosion	:Out of category
Serious eye damage irritation	:Category 2
Respiratory organ sensitization characteristics solid/liquid	:Cannot classification
Gas	:Cannot classification
Skin sensitization characteristics	:Out of category
Germ cell mutagenicity	:Cannot classification
Carcinogenicity	:Cannot classification
Toxic to reproduction	:Cannot classification
For the nursing or additional division about the influence through the nursing	:Cannot classification
Specific target organ systemic toxicity (single exposure)	:Category 2
Specific target organ systemic toxicity (repeated exposure)	:Out of category
Aspiration hazard	:Category 1
Aquatic toxicity (acute)	:Category 2
Aquatic toxicity (chronic)	:Category 2
The ozone layer hazard	:Cannot classification

Symbol(s)



Signal words

Danger

GHS hazard statements

Harmful if swallowed  
 Harmful if inhaled  
 Toxic if inhaled  
 Serious causes eye irritation  
 May be obstacle of the internal organs(central nervous system, respiratory organ)  
 May be sleepiness , giddiness  
 May be fatal if swallowed and enters airways  
 Toxic to aquatic life with long lasting effects

## Statements

## 【Safety measure】

Keep container tightly closed  
 Keep away from heat/sparks/open flames/hot surfaces. No smoking  
 Use explosion-proof electrical/ventilating/lighting equipment  
 Wear protective gloves/protective clothing/eye protection/face protection  
 After handling, do enough wash your hands and gargling  
 When fire happened extinguish use foam or powder extinguisher  
 Avoid release to the environment  
 Don't use except originally purpose, thinner play, dirt take out etc

## 【First aid procedure】

Move victim immediately to the place where fresh air is available.  
 Obtain medical attention promptly.  
 Get medical attention promptly.  
 Flush eyes immediately with flowing clean water for at least 15 minutes.  
 In pain persists, get medical attention by oculist.  
 Wash affected skin with flowing water or lukewarm water, then wash off  
 contaminant thoroughly with soap.  
 Remove contaminated clothing and shoes immediately.

## 【Storage】

Store the product in well-ventilated, dark and cool place.  
 Keep the product away from ignition and heat sources.

## 【Waste】

Contents/container waste for the metropolitan and  
 prefectural/cities, towns and villages.

## 3 Composition •Ingredient Information

Distinction of Chemical matter •Mixture

:Mixture

Ingredient and amount of a content

Matter Name	CAS No	Amount of content(wt%)
n-Butyl acetate	123-86-4	30~40
Methylcyclohexane	108-87-2	60~70

## 4 First Aid Measure

Eye contact

Flush eyes immediately with flowing clean water for at least 15 minutes.  
 At washing eyes, make water reach every corner of eyes balls and inside  
 of eyelids by holding eyelids with fingers.  
 In pain persists, get medical attention by oculist.

Skin contact

Remove contaminated clothing and shoes immediately.  
 Wash affected skin with flowing water or lukewarm water, then wash off  
 contaminant thoroughly with soap.  
 In pain persists, get medical attention.

Inhalation

Move victim immediately to the place where fresh air is available.  
 In case of no or very poor breathing, secure breathing trachea by  
 loosening clothing and give artificial respiration.  
 Wrap victim with blanket and keep victim at rest and warm.  
 Obtain medical attention promptly.

Ingestion

Because the product is volatile, it is dangerous to induce vomiting.  
 Get medical attention promptly.  
 If victim is unconscious, do not give anything orally.

## 5 Fire Fighting Measure

Effective fire extinguishing

Powder, carbon dioxide, foam and dried sand.

Fire fighting method

Remove flammables from surroundings.  
 Container exposed high temperature cool sprinkle water.  
 Fire fighting operation wear proper protector, from windward.  
 Specific fire extinguisher use for fire fighting operation. Don't use water.



## 6 Measure in case of Leak

When leak operation , wear proper protector.  
 Near ignition , high temperature matterial , fammables move another place.  
 In case of small leaks , absorb with sand or soil and recover in case with lids.  
 In case of large leaks , dam leaks with sand or soil, and after absorb leaks.  
 Side ditch , sewerage e.t.c stop flow out , get back sealed container.

## 7 Precautions for Handling and Storage

## Handling

Absolutely no ignition sources such as fire, static electricity and shock  
 spark around the place where this product is handled.  
 Leak , over flow , scatter prevent and don't scatter vapor.  
 When operation wear prevent electrification clothes , shoes.  
 Handling machine , equipment install , use prevent burst machine.  
 Sealed place operation set up limited exhaust device , wear proper protector.

## Storage

Store the product in well-ventilated, dark and cool place.  
 Keep the product away from ignition and heat sources.  
 Used container store safty place.

## 8 Measure to Avoid Exposure and Protection

Matter name	Management concentration (ppm)	ACGHI (TLV)
n-Buthyl acetate	150	150
Methylcyclohexane	-	400

## Equipment

Handling machine , equipment install , use prevent burst machine.  
 When indoor operation sealed vapor occur , form limited exhaust device.  
 Near ignition , high temperature matterial , don't put operation place.  
 Operation place form safety shower , wash hands , wash eyes , clear the place.

## Respiratory organ protector

Wear gas mask for organic gas , send air mask.

## Eye protector

Wear protector glasses , facial protector.

## Skin protector

Wear glooves material for thinner don't penetrate.

## Other protector

Wear turn on the electricity shoes , when static electricity painting operation.  
 Wear apron and perfect protect clothes as operation.

## 9 Physical and Chemical Property

Physical state , form , color	:Colorless liquid
Odour	:Thinner smell
PH	:Neutrality
Boiling point , initial boiling point and boiling range	:97~123°C
Flash point	:-4°C(seal type)
Burst range	:Lower limit 1.1 vol% upper limit 15 vol%
Vapor pressure	:5332Pa(22°C)
Vapor density(air = 1)	:No data
Specific gravity (density)	:0.800(20°C)
Solubility	:No data
Octanol / water distribution coefficient	:No data
Auto ignition temperature	:No data
Decomposition temperature	:No data
Odour threshold	:No data
Evaporation rate(nBuAc = 1)	:No data
Flammability	:No data
Viscosity	:No data

## 10 Stability and Reactivity

## Stability

If come in contact air or water gradually resolve , result acetic acid and normal butanol.

## Possibility of hazardous reactions

Static electricity may result by mobility or stir e.t.c..  
 React with strong oxidising agents , result fire and burst.

## Conditions to avoid

High temperature

## Incompatible materials hazardous

Strong oxidising agents, strong alkalizing agents, strong oxidising.

## Decomposition products

When burn , result toxic gas (carbon monoxide , carbon dioxide).

## 11 Toxicological Information

Acute toxicity oral	n-Buthyl acetate Out of category	Methylcyclohexane Category 4
Dermal	Out of category	Out of category
Inhalation (vapor)	Category 3	Out of category
Inhalation (dust , myst)	Category 3	Cannot classification
Skin corrosion/irritation	Out of category	Category 3
Eye damage/irritation	Category 2B	Category 2B
Respiratory sensitization	Cannot classification	Cannot classification
Skin sensitization	Out of category	Cannot classification
Germ cell mutagenicity	Cannot classification	Cannot classification
Carcinogenicity	Cannot classification	Cannot classification
Reproductive toxicity	Cannot classification	Cannot classification
Specific target organ toxicity (single exposure)	Category 2B	Category 3
Specific target organ toxicity (repeated exposure)	Out of category	Out of category
Aspiration hazard	Cannot classification	Cannot classification

## 12 Ecological Information

Aquatic acute toxicity	n-Buthyl acetate Category 3	Methylcyclohexane Category 2
Aquatic chronic toxicity	Cannot classification	Category 2
The ozone layer hazard	Cannot classification	Cannot classification

## 13 Disposal Considerations

Remainder waste	About disposal obey reration laws and regurations and local government regurations. Industory waste disposal dealer approved metroporitan and prefectual governments e.t.c. or in case of local public body approve , approval dealer commit enough informed hazardous and harmful.
Pollution container and wrapping	Container recycle cleaned or obey reration laws and regurations and local public body regurations proper disposal. In case of disposal empty container remove perfect contents.

## 14 Precaution for Transportation

Common	Follow the general precautions in regard to highly flammable and hazard liquids described in "Precautions for Handling and Storage". Avoid violent handling of containers which cause overturn, fall, shock or drag. Shift prevent certain.
Ground transportation	In case of fire service law and industrial safety health law and poison and toxic control law come under , obey carry method determined each law.
Sea/aviation transportation	Obey determined ships safety law and aviation law.
UN No.	1263
Marine pollutant	Yes

## 15 Relevant Regulations

Industry safety and health law	Hazard substance (Flammable material), Organic solvent Class2, Indication required
Fire service law	Class 4, No.1 Petroleum group (Non water-soluble liquid) (200L)
Ships safety law	Middle flash point flammable liquid.
Port reguration law	Middle flash point flammable liquid.
PRTR law	Not come under
Marine pollutant & marine disasters prevention law	Harmful liquid (Y)

Quotation book	Material safety data sheet guide book" Mixture(Paint)" japan paint industry association MSDS material data base japan paint industry association
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Caution	Becuse hazard and toxic evaluation may be not enough , be careful for treatment.
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END

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# HUMISEAL® DIV. OF CHASE CORP. MATERIAL SAFETY DATA SHEET

Product: HUMISEAL 1B66NLD-D

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURED BY: HUMISEAL DIVISION OF CHASE CORP.  
128 FIRST STREET  
PITTSBURGH, PA 15238

GENERAL INFORMATION: 866-932-0800

EMERGENCY, CHEMTREC: 800-424-9300, Only in the event of chemical emergencies involving a spill, leak, fire, exposure or any accident involving chemicals.

REVISION DATE: 12/03/03

PREPARED BY: JIM LAWRENCE

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS NUMBER	IDENTIFICATION	APP. % BY WGT.
PROP.	ACRYLIC POLYMER	PROP.
108-87-2	METHYLCYCLOHEXANE	40
123-86-4	N-BUTYL ACETATE	40
PROP.	OPTICAL BRIGHTENER	PROP.
PROP.	DEFOAMER	PROP.

## 3. HAZARDOUS IDENTIFICATION

HAZARDOUS POLYMERIZATION: Will Not Occur

ROUTES OF EXPOSURE: Inhalation, Skin, Eyes and Ingestion.

### IMMEDIATE EFFECTS:

INHALATION: Causes Irritation of nasal passages and throat. Causes stupor (central nervous system depression).

SKIN CONTACT: Can cause moderate skin injury (reddening and swelling). Repeated or prolonged contact can cause drying of skin and dermatitis.

EYE CONTACT: Liquid and vapors are irritating to eyes. Can cause severe injury.

INGESTION: Can cause mental sluggishness.

### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Significant exposure to these chemicals may adversely affect people with chronic disease of the respiratory system, skin, central nervous system and/or eyes.

## 4. FIRST AID MEASURES

GENERAL ADVICE: Consult Physician Immediately.

INHALATION: Remove victim to fresh air and provide oxygen if breathing is difficult.

SKIN CONTACT: Flush with water while removing contaminated clothing. Wash skin with soap and water.

EYE CONTACT: Remove contact lenses. Flush eye thoroughly with running water. If irritation persists, see a Physician

INGESTION: Do not induce vomiting. If vomiting occurs spontaneously keep head below hips to prevent aspiration into lungs, which may be fatal. Contact Physician Immediately.

# HUMISEAL® DIV. OF CHASE CORP.

## MATERIAL SAFETY DATA SHEET

### 5. FIRE FIGHTING MEASURES

**SUITABLE EXTINGUISHING MEDIA:** Foam, Carbon Dioxide or dry chemical. Use self-contained breathing apparatus if applicable.

### 6. ACCIDENTAL RELEASE MEASURES

**PRECAUTIONS FOR PERSONNEL:** Wear protective clothing. Use self-contained breathing apparatus if required.

**ENVIRONMENTAL PRECAUTIONS:** Avoid discharge to drains, sewers and natural water supply.

**PROCESS FOR CLEANING:** Absorb with inert material. Remove sources of ignition. Scoop material with non-sparking tools.

### 7. HANDLING AND STORAGE

**HANDLING:** Ventilate work area sufficiently. Keep containers closed. Avoid contact with eyes, skin and clothing.

**STORAGE:** Store between -15°C and +35°C for solvent based coatings and thinners. Do not allow water based coatings or thinners to freeze. Allow all coatings/thinners to reach process temperature before using (wait 24 hrs. or more to allow temperature equalization if necessary). Ground all metal containers. 55-gallon drums may be stored on their sides in a cradle designed for this purpose.

### 8. EXPOSURE RESTRICTIONS AND PERSONAL PROTECTION

**MATERIALS WITH LIMITS THAT REQUIRE SUPERVISION:**

CAS NUMBER	IDENTIFICATION	APP. % BY WGT.	NIOSH REL	VALUE	UNIT
08-87-2	METHYLCYCLOHEXANE	40	TWA	500/2000	ppm/(mg/m <sup>3</sup> )
123-86-4	N-BUTYL ACETATE	40	TWA	150/710	

**ADDITIONAL ADVICE:** Use personal protective equipment, i.e., suitable work clothing, eye goggles and protective gloves. If spraying utilize protective facemask.

### 9. PHYSICAL PROPERTIES

**ODOR:** AROMATIC

CHANGE OF STATE	VALUE/AREA	UNIT	METHOD
FREEZING POINT:	N/A	°C	
BOILING POINT:	100	°C	
FLASH POINT:	-6(22)	°C (°F)	TCC
IGNITION TEMPERATURE:			
SPECIFIC GRAVITY:	.899	H <sub>2</sub> O = 1	
% VOLATILE BY VOLUME:	70-80	%	
SOLUBILITY IN WATER:	NEGLIGIBLE		
PH VALUE:			
VISCOSITY:		CPS	
FLAMMABLE LIMITS:	LEL 1.2 UEL 7.7		
EVAPORATION RATE:	>1	BUAC = 1	

### 10. STABILITY AND REACTIVITY

**STABILITY:** Stable

**CONDITIONS TO AVOID:** Freezing, Sparks and Open Flame.

**MATERIALS TO AVOID:** Contact with strong oxidizing, acidic or alkaline agents.

**DECOMPOSITION PRODUCTS:** Carbon Monoxide, Carbon Dioxide and Oxides of Nitrogen.

**EYES:** Splashes or spray vapors may cause irritation.

**SKIN:** Substance may be an irritant for sensitive skin.

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**HUMISEAL® DIV. OF CHASE CORP.**  
**MATERIAL SAFETY DATA SHEET**

INHALATION: May cause mild nausea/dizziness in some people when used in confined/unventilated areas. Move patient to fresh air. Give nothing by mouth.  
CONSUMPTION: If accidentally swallowed may cause discomfort and requires plenty of water or milk to dilute. Do not induce vomiting. Seek medical assistance.

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**11. TOXICOLOGICAL INFORMATION**

ACUTE ORAL LD: (mg/kg) : LD (50) (RATS) : 5g/kg  
ACUTE DERMAL: 50 (mg/kg) : LD (50) (RABBITS) : >2000 mg/kg  
ACUTE INHALATION:  
OTHER:

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**12. ECOLOGICAL INFORMATION**

VOLATILE ORGANIC COMPOUNDS: 665 Grams Per Liter (g/l). Pounds Per Gallon (lb/g).

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**13. DISPOSAL CONSIDERATIONS**

DISPOSAL METHOD: Disposal should be made in accordance with Federal, State and Local regulations.

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**14. TRANSPORT INFORMATION**

SHIPPING CLASS: UN1263 PAINT FLAMMABLE LIQUID

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**15. REGULATORY INFORMATION**

SARA SECTION 302:  
SARA (311,312) HAZARD CLASS:  
SARA (313) CHEMICALS: TOLUENE  
CERCLA: TOLUENE;1000 LBS  
CPSC CLASSIFICATION:  
HMIS: FLAMMABILITY: 3 REACTIVITY: 0 HEALTH: 2  
NFPA: FLAMMABILITY: 3 REACTIVITY: 0 HEALTH: 2

**CALIFORNIA PROPOSITION 65:**

- ☒ A. This product contains a chemical known to the State of CA to cause birth defects or other reproductive harm.  
☐ B. This product contains a chemical known to the State of CA to cause cancer.  
☐ C. This product contains a chemical known to the State of CA to cause cancer and birth defects or other reproductive harm.

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**16. OTHER INFORMATION**

THIS DATA IS OFFERED IN GOOD FAITH AS TYPICAL VALUES AND ARE NOT A PRODUCT SPECIFICATION. NO WARRANTY, EITHER EXPRESSED OR IMPLIED IS MADE. THE STATED RECOMMENDED HANDLING PROCEDURES ARE BELIEVED TO BE GENERALLY APPLICABLE. HOWEVER, EACH USER SHOULD REVIEW THESE RECOMMENDATIONS IN THE SPECIFIC CONTEXT OF THE INTENDED USE.

C = Ceiling Limit, NEGL = Negligible, N/A = Not Applicable, N/E = Not Established, PROP. = Proprietary.

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**Safety Data Sheet**  
**Isopropyl Alcohol, 70%**

**SECTION I - IDENTIFICATION**



**Research  
Solutions**

Research Solutions Group, Inc.  
402 Industrial Park Drive  
Pelham, AL 35124  
(205) 663-6350  
Chemtrec :..... (800) 424-9300

**Product Number** 11175  
**Product Name** Isopropyl Alcohol, 70%  
**Chemical Family** Solvent Blend  
**CAS Number** Multiple  
**Date Prepared** 2/19/1994  
**Revision Date** 10/26/2021  
**Recommended Use** Industrial Use Only

**SECTION II - HAZARDOUS IDENTIFICATION**

**GHS CLASSIFICATION:**

**Classification**

Flammable Liquids	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Specific target organ toxicity, single exposure, Narcotic	Category 3

**DANGER!**

**GHS LABEL:**



**Hazard Statements**

H225	Highly flammable liquid and vapor
H319	Causes serious eye irritation
H336	May cause dizziness or drowsiness

**Safety Data Sheet**  
**Isopropyl Alcohol, 70%**

**Precautionary Statements**

P210	Keep away from heat, hot surfaces, sparks, open flames, and other ignition, sources. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment, etc.
P242	Use only non-sparking tools.
P243	Take precautionary measures to prevent static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands and exposed body parts thoroughly after handling.
P271	Use only outdoors or in a well-ventilated are.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+361+353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+340	IF INHALED: Remove victim to fresh air and keep 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 so - continue rinsing.
P312	Call a POISON CENTER or a doctor/physician if you feel unwell.
P337+313	If eye irritation persists get medical advice/attention.
P370+378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403+233	Store in a well ventilated place. Keep container tightly closed.
P403+235	Store in a well ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container to an approved waste disposal facility.

**SECTION III - COMPOSITION/INFORMATION ON INGREDIENTS**

The precise composition of this product is proprietary information. In the event of a medical emergency, a complete disclosure will be provided to medical personnel.

Component Name	CAS #	Component%	OSHA PEL	ACGIH TLV
Isopropyl Alcohol	67-63-0	70%	400 ppm	200ppm (TWA)
Water	7732-18-5	30%	Not Established	Not Established

**SECTION IV - FIRST AID MEASURES**

**Contact with eyes:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for 15 minutes. Seek immediately medical attention.



**Safety Data Sheet**  
**Isopropyl Alcohol, 70%**

**Skin contact:** Wash exposed areas with water and mild soap. Remove contaminated clothing immediately and launder before reuse. If irritations persist, seek immediate medical attention.

**Inhalation:** Remove victim to fresh air. Administer oxygen or artificial respiration if breathing is affected or stopped. Seek immediate medical attention.

**Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**SECTION V - FIREFIGHTING MEASURES**

**Suitable Extinguishing Media:** Water fog, alcohol-resistant foam, Carbon dioxide (CO<sub>2</sub>), dry chemical.

**Special Fire Fighting Procedures** Use self-contained breathing apparatus and full bunker gear in fire areas. Evacuate all unprotected personnel from area. Keep containers cool with water fog to minimize swelling taking care not to spread flames with water used for cooling.

**Unusual Fire Fighting Hazards:** Product is flammable and may be ignited by heat, sparks, flames or other sources of ignition (e.g., static electricity, pilot lights or mechanical/electrical equipment). Vapors are heavier than air and may accumulate in low areas. Vapors may travel considerable distance to a source of ignition where they can ignite, flashback or explode. May create vapor/air explosion hazard indoors, outdoors or in sewers. If container is not properly cooled, it can explode in the heat of a fire.

**SECTION VI - ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** Keep all sources of ignition and hot metal surfaces away from spill or release.

Evacuate all unprotected personnel from the area.

**Environmental Precautions:** Contain spill if it can be done with minimal risk. Prevent liquid from entering drains, sewers or waterways. Notify proper authorities.

**Methods for Cleaning Up:** Use foam on spills to minimize vapors.  
Using only non-sparking tools and explosion proof equipment, collect spill on absorbent material and put into approved container.

**SECTION VII - HANDLING AND STORAGE**

**Handling and Storage:**

- NFPA Class I storage.
- Vent container carefully before opening.
- Bond and ground all equipment when transferring from one vessel to another. The use of explosion-proof equipment is recommended.
- "Empty" containers retain residue and/or vapor and may be dangerous. Do not cut, weld, braze solder, drill, grind or expose such containers to heat, flames, sparks, or other ignition sources.
- Keep containers tightly closed when not in use.

## Safety Data Sheet

### Isopropyl Alcohol, 70%

- Avoid prolonged breathing of mist or vapor. Wash thoroughly after handling.

#### SECTION VIII - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

##### EXPOSURE LIMITS:

Component Name	CAS #	OSHA PEL	ACGIH TLV
Isopropyl Alcohol	67-63-0	400 ppm	200ppm (TWA)
Water	7732-18-5	Not Established	Not Established

**Engineering Controls:** Adequate local or mechanical to reduce vapor or mist to below the PEL or TLV.

**Monitoring:** Wash hands prior to eating, drinking or using the restroom.  
Follow accepted work practices for handling a flammable material. Do not eat, drink or smoke in areas where this chemical is used or stored. Have eye wash stations and safety showers readily available.

##### Personal Protective Equipment (PPE)

**Eye Protection:** Goggles or approved OSHA device with side shields; do not wear contact lenses when handling this product.

**Skin Protection:** Impervious solvent resistant gloves.  
Impervious apron and work boots recommend where splashing may occur.

**Respiratory Protection:** Use the proper respirator in areas where the chemical exposure is unknown or above the OSHA PEL or ACGIH TLV.

#### SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, Colorless Liquid
Odor	Strong Alcohol Odor
pH@25°C	No data available
Melting/Freezing Point	No data available
Flashpoint	55°F. TCC
Specific Gravity	0.787
Solubility	Complete
Auto-Ignition Temperature	No data available
Decomposition Temperature	No data available
VOC Content	65% (4.6#/gal)
Odor Threshold	No data available
Boiling Range	180°F
Evaporation Point	2.8 (Butyl Acetate=1)
Flammable Limits - Upper	8.2%
Flammable Limits - Lower	1.3%
Vapor Pressure	27.5 mmHg @ 20°C
Vapor Density (Air=1)	1.4 (Air=1)
Viscosity	No data available

**Safety Data Sheet**  
**Isopropyl Alcohol, 70%**

**SECTION X - STABILITY AND REACTIVITY**

**Stability:** Stable, under normal conditions of storage and handling.

**Conditions to Avoid:** Extreme heat and ignition sources.

**Hazardous Decomposition/Byproducts:** CO, CO<sub>2</sub>, and various hydrocarbons under combustion conditions.

**Hazardous Polymerization:** Will not occur.

**Polymerization Conditions to Avoid:** None

**Incompatibilities:** Strong Oxidizers and Alkali Metals

**SECTION XI - TOXICOLOGICAL INFORMATION**

**Likely Route of Exposure:** Contact and inhalation; ingestion possible.

**Inhalation:** May cause irritation to the upper respiratory tract and CNS depression.

**Eye Contact:** Causes eye irritation including stinging, watering and redness which may result in corneal injury.

**Skin Contact:** Contact may cause mild skin irritation including redness, burning and drying/cracking of the skin.  
No harmful effects from skin adsorption are expected.

**Ingestion:** Aspiration hazard. Can enter the lungs during swallowing or vomiting and cause chemical pneumonia and edema.

**Acute Toxicity Value:** See Health Hazards below.

**Chronic (Long Term) Effects:** See Health Hazards above.

**Toxicity:**

Component Name	LD50	LC50
Isopropyl Alcohol	Oral - Rat - 5,045 mg/kg - Dermal - Rabbit - 12,800 mg/kg	Inhalation - Rat - 8 h - 16000 ppm
Water	Not Established	Not Established

**Safety Data Sheet**  
**Isopropyl Alcohol, 70%**

<b>Reproductive Effects</b>	Not Applicable
<b>Teratogenicity</b>	Not Applicable
<b>Mutagenicity</b>	Not Applicable
<b>Embryotoxicity</b>	Not Applicable
<b>Sensitization to Product</b>	Not Applicable
<b>Synergistic Products</b>	Not Applicable
<b>Carcinogenicity</b>	Not Listed as a Carcinogen

**SECTION XII - ECOLOGICAL INFORMATION**

**Ecotoxicity:** Information not available.

**Mobility:** Information not available.

**Degradability:** Information not available.

**BioAccumulation:** Information not available.

**SECTION XIII - WASTE DISPOSAL CONSIDERATIONS**

Follow Federal, State and local regulations.

**SECTION XIV - TRANSPORT INFORMATION**

**DOT SHIPPING INFORMATION**

**Proper Shipping Name:** Isopropyl Alcohol

**Contains:**

**Hazard Class and Label:** 3

**Identification Number:** UN 1219

**Packaging Group:** II

**Other Shipping Info:**

**Safety Data Sheet**  
**Isopropyl Alcohol, 70%**

**SECTION XV - REGULATORY INFORMATION**

**TSCA STATUS:**..... The components of this product are listed on the TSCA Inventory

**SARA TITLE III SECTION 302/304 EXTREMELY HAZARDOUS SUBSTANCE:**

No chemicals in this material are subject to the reporting requirements.

**SARA TITLE III SECTION 311/312 HAZARD CATEGORIZATION:**

Acute	Chronic	Fire	Pressure	Reactive
X		X		

**SARA TITLE III SECTION 313 SUPPLIER INFORMATION:**

No chemicals in this material are subject to the reporting requirements.

**CERCLA SECTION 102(a) HAZARDOUS SUBSTANCE:**

No chemicals in this material are subject to the reporting requirements.

**CALIFORNIA PROPOSITION 65:**

No chemicals in this material are subject to the reporting requirements.

**SECTION XVI - OTHER INFORMATION**

**HMIS Health:** ..... 1

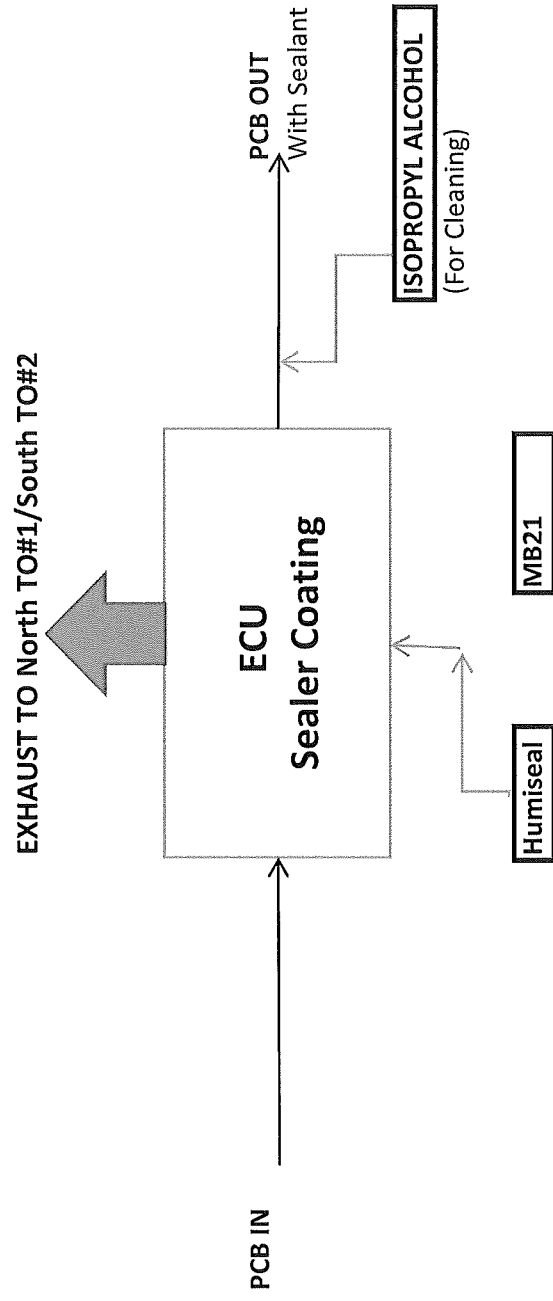
**HMIS Flammability:** ..... 3

**HMIS Reactivity:** ..... 0

**Additional:**



## ECU Sealer Coating







SEALER COAT MACHINE LOCATIONS

