FORM U-1A MANUFACTURER'S DATA REPORT FOR PRESSURE VESSELS
(Alternative Form for Single Chamber, Completely Shop-Fabricated Vessels Only)
As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

1/8

1. Manufactured and certified by Tate Metalworks, Inc. 255 Happy Lane, Roebuck,SC 29376
(Name and address of manufacturer)

2. Manufactured for Cognis Corporation, 5051 Estecreek Drive, Cincinnati, OH 45232-1446
(Name and address of purchaser)

3. Location of installation Cognis Corporation, Charlotte Plant, 3300 Westinghouse, Charlotte, NC 28273
(Name and address)

4. Type: Horizontal (Horiz. or vert. tank) | 00032-01 (Mfgr's serial No.) | ----- (CRN) | 00032-01-00-1 (Drawing No.) | 402 (Nat'l. Bd. No.) | 2000 (Year built)

5. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction, and workmanship conform to ASME Rules, Section VIII, Division 1 1998 (Year)
to 1999 Addenda (Addenda (Date)) | ----- (Code Case Nos.) | ----- (Special Service per UG-120(d))

6. Shell: SA-240 316L (Matl. (Spec. No., Grade)) | 3/8" (Nom. Thk. (in.)) | None (Corr. Allow. (in.)) | 4'-6" (Diam. I.D. (ft. & in.)) | 7'-9" (Length (overall) (ft. & in.))

7. Seams: Single Butt (Long. (Welded, Dbl., Sngl., Lap, Butt)) | Spot (R.T. (Spot or Full)) | 85% (Eff. (%)) | ----- (H.T. Temp. (F)) | ----- (Time (hr)) | Single Butt (Girth (Welded,Dbl., Sngl., Lap. Butt)) | UW-11(a)5(b) (R.T. (Spot, Partial, or Full)) | 1 (One) (No. of Courses)

8. Heads: (a) Matl. SA-240 316L (Spec. No., Grade) (b) Matl. SA-240 316 (Spec. No., Grade)

	Location (Top, Bottom, Ends)	Minimum Thickness	Corrosion Allowance	Crown Radius	Knuckle Radius	Elliptical Ratio	Conical Apex Angle	Hemispherical Radius	Flat Diameter	Side to Pressure (Convex or Concave)
(a)	Top	0.32"	None	----	----	ASME 80/10	----	----	----	Concave
(b)	Bottom	0.32	None	----	----	ASME 80/10	----	----	----	Concave

If removable, bolts used (describe other fastenings) NONE (Matl., Spec. No., Gr., Size, No.)

9. MAWP: 150/FV psi at max. temp. 450 °F
Min. design metal temp. -20 °F at 150/FV psi. Hydro., pneu., or comb. test pressure Hydrostatic 213.5 psi.

10. Nozzles, inspection and safety valve openings:

Purpose (Inlet Outlet, Drain)	No.	Diam. or Size	Type	Matl.	Nom. Thk.	Reinforcement Matl.	How Attached	Location
Inlet	1	4"	SE/LJ	SA312Tp.316L	0.237"	SA-240 316L	UW16.1(l)	-----
Water Out	1	3"	SE/LJ	SA312Tp.316L	0.216"	-----	UW16.1(j)	-----
Solvent Out	1	4"	SE/LJ	SA312Tp.316L	0.237"	SA-240 316L	----	-----
Manway	1	18"	T-Bolt	SA312Tp.316L	0.375"	SA-240 316L	UW16.1(j)	Side

11. Supports: Skirt No (Yes or no) Lugs -- (No.) Legs -- (No.) Other Saddles (Describe) Attached Bottom Welded (Where and how)

12. Remarks: Manufacturer's Partial Data Reports properly identified and signed by Commissioned Inspectors have been furnished for the following items of the report: N/A
(Name of part, item number, Mfgr's. name and identifying stamp)

1) Exempt from impact test per UHA-51.

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to the ASME Code for Pressure Vessels, Section VIII, Division 1. "U" Certificate of Authorization No. 19906 expires 12/10, 2002
Date 9-28-00 Co. name Tate Metalworks, Inc. (Manufacturer) Signed Ray Ray (Representative)

CERTIFICATE OF SHOP INSPECTION

Vessel constructed by Tate Metalworks, Inc. at 255 Happy Lane, Roebuck,SC 29376
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of TN and employed by Commercial Union Insurance Company Boston, MA have inspected the component described in this Manufacturer's Data Report on 9-28, 00, and state that, to the best of my knowledge and belief, the Manufacturer has constructed this pressure vessel in accordance with ASME Code, Section VIII, Division 1. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.
Date 9/28, 2000 Signed [signature] (Authorized Inspector) Commissions NB-7463-B, TN-969 (Nat'l Board incl. endorsements State, Prov. and No.)

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Platcom 10-98E98

FORM U-4 MANUFACTURER'S DATA REPORT SUPPLEMENTARY SHEET

As Required by the Provisions of the ASME Code Rules, Section VIII, Division 1

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1. Manufactured and certified by Tate Metalworks, Inc. 255 Happy Lane, Roebuck,SC 29376
(Name and address of Manufacturer)

2. Manufactured for Cognis Corporation, 5051 Estecreek Drive, Cincinnati, OH 45232-1446
(Name and address of Purchaser)

3. Location of installation Cognis Corporation, Charlotte Plant, 3300 Westinghouse, Charlotte, NC 28273
(Name and address)

4. Type: Horizontal (Horiz., vert., or sphere) | Tank (Tank, separator, heat exh., etc.) | 00032-01 (Mfg's serial No.)

----- (CRN) | 00032-01-00-1 (Drawing No.) | 402 (Nat'l. Bd. No.) | 2000 (Year built)

. Nozzles, inspection, and safety valve openings:

Purpose (Inlet, Outlet, Drain, etc.)	No.	Diameter or Size	Flange Type	Material		Nozzle Thickness		Reinforcement Material	How Attached		Location (Insp. Open)
				Nozzle	Flange	Nom.	Corr.		Nozzle	Flange	
Cleanout w/B.F.	1	10"	CL 150 SE/LJ	SA312Tp.316L	SA182F 316L	0.365"	---	SA-240 316L	UW 16.1(l)	Fig.2-4(1)	-----
Vent	1	4"	CL 150 SE/LJ	SA312Tp.316L	SA182F 316L	0.237"	---	SA-240 304L	UW 16.1(j)	Fig.2-4(1)	-----
Relief	1	4"	CL 150 SE/LJ	SA312Tp.316L	SA182F 316L	0.237"	---	SA-240 304L	UW 16.1(j)	Fig.2-4(1)	-----
Drain	1	2"	CL 150 SE/LJ	SA312Tp.316L	SA182F 316L	0.154"	---	-----	UW 16.1(j)	Fig.2-4(1)	-----
Light	1	2"	Stud Pad	SA240 316L	-----	-----	---	-----	-----	-----	-----
Sight Glass	1	4"	Stud Pad	SA240 316L	-----	-----	---	-----	-----	-----	-----
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Data Report Item Number | Remarks

Certificate of Authorization: Type U No. 19906 Expires 12 / 10 , 2002

Date 9-28-00 Name Tate Metalworks, Inc. (manufacturer) Signed Raj Ray (representative)

Date 9/28/00 Name (Authorized Inspector) CU 262 Commission NB-7463-B, TN-969
(Nat'l. Board incl. endorsement, state, province and no.)

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