

INTER-OFFICE MEMO **TENNECO CHEMICALS, INC.**

TO P.R. Scarito AT Burlington DATE December 23, 1969
FROM H.B. Carr AT Burlington COPY TO D.H. Bartron
E.J. Hourihan
SUBJECT Raw Material Warehouse Area Requirements E.L. Kanyok
F.W. Kanzler
G.I. Rozand
M.W. Williams (2)

/File

Per our meeting on 9/22/69 the following warehouse areas will be required to meet acceptable raw material handling requirements:

1. Holding Area

A minimum of 300 ft.² is required for a holding area for noncritical temperature sensitive raw materials. This area requirement is based on Production usage rate and delivery schedules over the past year as shown in Table III.

2. Temperature Controlled Area

A minimum of 1000 ft.² is required for critical temperature sensitive raw materials. This storage area is to be maintained at a temperature range of 22-40°C (72°-104°F) for those raw materials listed in Table II. Table I lists storage precautions recognized by industry from which this recommended temperature range was obtained.

As we discussed, the Temperature Controlled Area should have sufficient aisle space to facilitate proper sampling and to assure that a first in-first out inventory control may be maintained.

A comprehensive review of all raw material handling and disposition procedures has been conducted by Quality Control. A joint report by F.W. Kanzler and E.L. Kanyok will be issued within the next week defining necessary revisions that will be made in these procedures. For these procedures to be effective, however, the necessary working tools must be available and in this case, it starts with the availability of proper storage areas for our raw materials.

H.B. Carr
H.B. Carr

Enclosures (3).

HBC/jt

		case		
Ionol	dark 22°C-40°C (72°-104°F)	high temperature (>40°C, >104°F) will cake	light will turn yellow to brown	6 months
Lupersol II	0°C (32°F)	if temperature >21°C (70°F) spontaneous combustion will occur	water will reduce activity	6 months
G.E. Antifoam	5°C-40°C (41°-104°F)	high temperature (>40°C) will cause vapor pressure build-up, must not be allowed to freeze, will not come back to original properties on thawing	none	6 months
Heptane	(Vendor's information pending.)			
Styrene	(Vendor's information pending.)			
Gelatin	10°C-40°C (50°-104°F)	shipped with 8.5-10% H ₂ O therefore, freezing temper- atures must be avoided	high humidity causes lumps	3-6 months
Ninol	(Vendor's information pending.)			
Epoxol	(Vendor's information pending.)			
Foamtrol	(Vendor's information pending.)			
Silicone Fluid L-522	ambient	none	water causes hydrolysis of the molecule	6 months
Tridecanol	(Vendor's information pending.)			
Octadecene-1	(Vendor's information pending.)			
Polyvinyl Alcohol	15°C-40°C (59°-104°F)	none	if humidity high pick up of mois- ture, if wet harder to dissolve	6 months
Sodium Bisulfite	5°C-40°C (41°-104°F)	60% relative humidity maximum allowable, if >60% loss of sulfur di- oxide 2-5%	light no effect.	6 months

Prepared by FWK, ELK
te: 12/23/69

COLORITE 016171

TABLE I

<u>Raw Materials</u>	<u>Storage Temperature Range</u>	<u>Precautions</u>	<u>Other Factors (air, humidity, light, etc.)</u>	<u>Storage Time</u>
Tributyl Phosphate	5°C-40°C (41°-104°F)	high temperatures cause hazardous vapor pressure build-up	none	6 months
Lauroyl Peroxide	ambient	peroxide safety rules	none	6 months
Colloids 581-B	5°C-40°C (41°-104°F)	gelation and potential loss of properties if temperature <2°C (36°F), slow rethaw, no loss of properties and efficiency, high temperature (>40°C, 104°F) will accelerate phase separation	H ₂ O changes phase separation properties	6 months' good reagitiation imperative
Sodium Hydroxide (Caustic Flakes)	ambient	tight container	if exposed to air will rapidly absorb CO ₂ and H ₂ O	if in tight container 6 months
Trisodium Phosphate	ambient	Polyethylene lined bag required, bottom layer on pallet will cake	low humidity required, decomposes in moist air	if lining intact 6 months
Sodium Carbonate	ambient	Polyethylene lined bag required, bottom layer on pallet will cake	low humidity required, decomposes in moist air	if lining intact 6 months
Lauryl Alcohol	24°C-40°C (75°-104°F)	high temperature causes off-color, degradation and vapor pressure build-up, if thawed slow o.k.	none unless radical	no restrictions if correct conditions
Tween 20	22°C-40°C (72°-104°F) (25°C 400 cps)	50°C critical upper limit, >50°C moisture absorption extremely rapid unless continuously blanketed with nitrogen	3% H ₂ O content, warm Tween will pick up water	6 months
T.A.I.C	23°C-40°C (73°-104°F)	if frozen, slow thawing below 40°C (104°F)	none	6 months
Methocell	ambient to 65°C (149°F)	>65°C (149°F) degradation	hygroscopic	5-6 months <u>or less</u>
Sodium Bicarbonate	ambient	Polyethylene lined bag required, bottom layer will cake	low humidity required, decomposes in moist air	if lining intact 6 months

TABLE I

I		II		III	
<u>22-40°C (72°-104°F)</u>		<u>Ambient (but <49°C, <120°F)</u>		<u>Refrigeration</u>	
	<u>sq. ft.</u>		<u>sq. ft.</u>	<u>-17°C max (0°F max)</u>	<u>0°C max (32°F max)</u>
Lauryl Alcohol	65	Sodium Hydroxide	TBD	2 EHP	Lup II
Tween 20	26	Trisodium Phosphate	26		
T.A.I.C.	26	Sodium Carbonate	65		
Ionol CP	13	Methocel	39		
Gelatin	286	Sodium Bicarbonate	13		
Elvanol 50/42	13	Tridecanol	13 or bulk		
Epoxol	13	Heptane	13		
Octadecene-1	26	Foamtrol	Eff.		
TBP	52	Silicone L-522	13		
Colloids 581-B	26	Sodium Bisulfite	13		
G.E. Antifoam AF60	13	2-Ethyl Hexanol	13		
Styrene	13	Lauroyl Peroxide	104		
Ninol	130				
Nacconol 90F	13				
Total	715	Total	312		

COLORITE 016173

Prepared by FWK, ELK

Date: 12/23/69

TABLE III
Raw Materials Received

Raw Material	Vendor	Quantity lbs./pkg.	Unit Size	Frequency	Area Req'd. sq. ft.	Production Usage per month
Tributyl Phosphate	FMC, Stauffer	7,000/M drum	55 gals	every 2 mos.	52'	3,318
Lauroyl Peroxide	Nuodex, Wallace & Tiernan, Biddle Sawyer	16,000/G drum	50 gals	once per mo.	104	13,925
Colloids 581-B	Colloids, Inc.	3,850/M drum	55 gals	every 3 mos.	26	1,540
Caustic Flakes	Lehigh Valley Chemical, Holly Chemical	-	-	-	-	-
Trisodium Phosphate	Holly Chemical	4,000/bag	50 lbs	every 4 mos.	26	1,020
Sodium Carbonate	Holly Chemical	10,000/bag	50 lbs	once per mo.	65	6,504
Lauryl Alcohol	Proctor & Gamble	9,000/M drum	55 gals	every 3 mos.	65	3,900
Tween 20	Atlas Chemical	3,000/M drum	55 gals	every 3 mos.	26	747
T.A.I.C.	Allied Chemical	2,000/M drum	55 gals	every 3 mos.	26	714
Methocel	McKesson & Robbins, Dow	6,000/bag	50 lbs	every 2 mos.	39	4,514
Sodium Bicarbonate	Kramer Chemical	2,000/bag	50 lbs	every 2 mos.	13	561
Ionol	Shell Chemical	1,000/M drum	55 gals	once per yr.	13	40
Lupersol II	Lucidol	3,000 plastic coated cartons	2,4,6,7 lbs	once per mo.	catalyst shed	1,662
G.E. Antifoam	General Electric	900/M drum	55 gals	every 4 mos	13	268
Heptane	American Mineral Spirits	-	-	-	-	-
Styrene	Monsanto	-	-	-	-	-
Gelatin Colic	Atlantic Gelatin	12,000/F drum	55 gals	every 2 mos.	156	7,100
Gelatin Rozic	Atlantic Gelatin	10,000/F drum	55 gals	every 2 mos.	130	5,890
Ninol	Stepan Chemical	1,800/M drum	55 gals	every 1 1/2 mos.	130	1,063
Epoxol	Swift & Company	-	-	-	-	-
Foamtrol	Betz Lab.	-	-	-	-	-
Silicone Fluid L-522	Union Carbide	440/M drum	55 gals	every 3 mos.	13	197
Tridecanol	Enjay, Gulf	30,000/M drum normally bulk	55 gals	every 2 mos.	normally bulk	17,694
Octadecene-1	Gulf	-	-	-	-	-
Polyvinyl Alcohol	E.I. DuPont de Nemours Co.	2,000/bag	50 lbs	every 4 mos.	13	653
Sodium Bisulfite	McKesson Chemical	-	-	-	-	550
Nacconol 90F	Allied Chemical	new raw material	-	-	-	-

910

Prepared by FWK, ELK
Date: 12/23/69