CPC Composites

Chemical Resistance Guide

Product Range of Unsaturated Polyester Resins

Syntal 9094 Orthophthalic, low-medium reactivity, unsaturated polyester resin. It is suitable for hand lay-up and spray-up production methods with quick and easy fiber wet out and low volumetric shrinkage.

Syntal 9094 HDT High quality orthophthalic based, medium-high reactivity, UPR for GRP parts production. Ideal for hygienic food contact surfaces. It is suitable for hand lamination, spray-up, and pultrusion production methods with its high HDT values and excellent mechanical properties.

Syntal 9092 Isophthalic based, medium-high reactivity, unsaturated polyester resin. Ideal for hygienic food contact surfaces. It is suitable for hand lay-up, spray-up, and pultrusion production methods with its high chemical resistance and hydrolitic stability as well as excellent mechanical properties.

Syntal 9092 HDT Isophthalic based, high reactivity, unsaturated polyester resin which has good chemical resistance and high HDT values.

Syntal 90350 Isophthalic acid/NPG based, highly reactive and high molecular weighted unsaturated polyester resin. Ideal for hygienic food contact surfaces. It is both chemical and UV resistant and has excellent mechanical properties as well as good adhesion qualities.

VE/ Vinyl Ester Resins

Syntal VE 101 Bisphenol-A epoxy based, medium-high reactivity, low viscosity vinyl ester resin. Ideal for hygienic food contact surfaces. They have hydrolitic stability and provide additional resistance to a wide spectrum of acids, alkalines, bleaches and solvents in many chemical applications.

Syntal VE 102 Bisphenol-A epoxy based, medium-high reactivity vinyl ester resin. It offers hydrolitic stability and provide additional resistance to a wide spectrum of acids, alkalines, bleaches and solvents in many chemical applications. It also offers higher HDT values for high heat resistance applications and excellent mechanical properties.

Syntal FR VE101 Halogenated, brominated, fire retardant medium-high reactivity vinyl ester resin that offers a high degree of chemical resistance and toughness. It is a resin used when both chemical resistance and flame retardancy are required.

Syntal VE 103 Epoxy novolac-based vinyl ester resins are designed to provide exceptional thermal and chemical resistance. It offers high resistance from solvents, acids and oxidizing substances (including chlorine). It's high retention of strength and toughness at higher temperatures makes it ideal for lue gas applications.
When perfectly designed and executed, high caliber GRP parts and structures require a Chemical Resistance Barrier (CRB) thickness of 2,5-5,5 mm which is designed for contact with a specific chemical environment. CRB layers consist of:

Introduction

Syntal unsaturated polyester resins (UPR) and Syntal epoxy vinyl ester resins were carefully designed and produced by CPC Composites. They present exceptional corrosion-resistant performance and fulfill critical requirements in Glass Reinforced Plastic (GRP) applications.

This Chemical Resistance Guide provides reference information regarding the performance of Syntal resins under speciic chemical environments and temperatures speciically for part designers and engineers of corrosion resistant GRP applications.

The corrosion resistance data set forth in this guide is meant for theoretically ideal designs and correctly manufactured composite GRP parts.

© A first layer which is usually between 0,4-1,0mm thick, composed of 90-95% resin, is then reinforced by 1-2 surfacing veils (C-glass or Synthetic Veils).

© The second is a 2,0-4,5mm layer composed of 75% resin which has been reinforced with chopped strand mat (powder binder only).

© Lastly, the CRB is backed with a structural lamination and is post cured which provides the mechanical rigidity and strength of the overall corrosion-resistant composite structure.

Due to numerous factors that affect the performance of a laminate which are beyond CPC's control, no warranty regarding the use of Syntal UPR and Syntal epoxy vinyl ester resins will be made.

The service conditions shown in this guide are within the known capabilities of Syntal unsaturated polyester resins and Syntal epoxy vinyl ester resins when laminates are properly designed, fabricated, post cured and installed.

For the optimal designs of GRP equipment, Syntal resins' users should refer to the appropriate industry standards and design guidelines. For more information, visit www.cpccomposites.com

How to Use this Chemical Resistance Guide

Contents

The listing of chemical environments contains the highest known temperature that GRP equipment which has been made with Syntal polyester and/or Syntal vinyl ester resins have either displayed good service within industry or, have been tested in the field or in the laboratory with results that indicate model longevity of use.

The given temperatures are not necessarily the maximum service temperature. The temperature data in each column is applicable to the derivative of each of the base. In the chemical resistance tables, a dash or blank space simply indicates that no data was available at the time that temperature ratings were assigned.

Some chemical formulas are not represented in the table.

Some chemicals have more than one name. In such cases, look for the reference "see chemical x" in the table.

Food Contact

The following resins are safe for the manufacturing of hygienic food contact surfaces and equipment.

- Syntal 9094
- Syntal 9094 HDT
- Syntal 9092
- Syntal 90350
- Gelcoat Syntal 099

Regular Updates

This guide is updated on a regular basis with new data (new products, other temperatures or concentrations, etc.) Please make sure you have the latest version of this guide.

Request Information about Specific Chemical ResistanceTo inquire about resin recommendations for corrosion resistant applications, please prepare the following information:

- List the chemical nature of all products along with their corresponding concentrations for a process or a batch. Be sure to include even trace amounts.
- Service temperatures, including maximum and upset temperatures (with corresponding duration).
- State: liquid/gas/solid (and risk of phasing or condensation, if applicable).
- Type of equipment (tank, pipe, lining, etc.).

Information given here in the Chemical Resistance Guide Annotations is critical to ensure the longevity of GRP equipment. It is strongly recommended that they are followed.

NR Stands for "not recommended" at any temperature.

LS Stands for "limited service" (at least 3 days to 1 year at room temperature *maximum 40°C). Generally in these cases, the respective resins can be used for GRP that is exposed accidentally, and where cleaning and inspection are possible within 3 days. Usually suficient for secondary containment.

Post curing

For service temperatures below 100°C: Post curing GRPs can possibly prolong their service life if the operating temperature is within 20°C of the Chemical Resistance Guide maximum temperature for the service. Post curing can also be beneficial for solvent applications with a temperature limit of 25-40°C.

For service temperatures above 100°C: Provided the resin's specific minimum barcol hardness values are reached before start up, post curing during service can possibly be sufficient.

For service in pure and neutral salt solutions: Generally, post curing may not be required, provided no acetone sensibility is shown and the resin's specific minimum barcol hardness values are reached before start up.

When using a BPO/ Amine curing system: Post curing is strongly recommended and should be done within two weeks of construction. The post cure conditions as detailed in DIN 18820 may be used for VE 101 and VE 102 at 80°C and for VE 103 resins at 100°C. Normally, 1 hour per mm thickness of the laminate (between 5 and 15 hours) is recommended.

Veil varieties

In general, both synthetic and glass veils are suitable for most chemical environments. However, Hydrofluoric acid (HF) containing chemical environments require the use of either synthetic or carbon veils. One veil layer will result in a thickness of approximately 0,2-0,4mm. Both the thickness and the composition of the veil layer are equally important to the stability of the structure. Carbon veils show excellent resistance to many aggressive chemicals such as HF, HCl, NaOH but NOT NaOCl (Sodium Hypochlorite). Carbon veils can also be used to achieve conductive surfaces. An aperture synthetic veil offers extra thickness and is preferred to extend the service life of materials exposed to hot caustic solutions.

Special Conditions

Insufficient Information

When no data is available regarding the environment or exposure conditions or said conditions are outside the scope of this guide, a test laminate must be exposed to the actual or simulated conditions proposed before a decision on resin suitability is made.

Coatings and Linings (reinforced and non-reinforced)

Each coating or lining will have their own specific thermal expansion properties which may limit operating temperatures. Consult with CPC's technical service department or a company which specializes in lining and coating technologies.

For liquid environments, laminate linings can be more durable than other lining systems. In order to achieve the highest quality results, they should only be applied with hand lay-up and not by spray-up. Generally, if low or missing exotherm is observed during polymerization, that part should be post cured (see also Post curing). The thicker and better curing the lining, the higher the diffusion resistance and prolonged life expectancy can be expected from strongly diffusing environments such as HCl, HF, etc.

Hot Flue Gases

Take care to ensure the temperature resistance of a synthetic veil is sufficient when it is recommended for hot gas environments. Otherwise, a carbon veil should be used. Special measures must be taken to prevent sub-dew point conditions in the laminate if the environment contains water vapor and/or acids.

Intermittent Exposure or Spillage

If exposure is short term and limited to fumes or spills only, it is possible to achieve extended service life at temperatures considerably higher than those discussed and in chemical environments shown as NR (not recommended. Consult with CPC's technical service department. A test of the actual or simulated conditions proposed is necessary before a final decision on resin suitability is made.

Synergetic Interactions

The information in this guide represents the performance of full GRP structures in contact with the stated chemical environment (unless otherwise indicated) and under continuous use. Certain combinations of chemicals and their reactions toward GRPs can be unpredictable. It is possible for some mixtures to be more aggressive toward GRPs than the individual components. Aggressively synergistic chemicals should receive special attention as their reactions cannot be predicted from the corrosion properties of the individual components. Therefore, chemical resistance may be negatively influenced by using the same equipment for alternating storage or transport of different products, particularly where these products have widely differing properties, such as acids and bases that chemically react with each other.

Safety Precautions

Using Syntal UPR and Syntal VE resins and the auxiliary materials (solvents, accelerators, catalysts, etc.) require extreme safety precautions. The necessary precautions for handling and using unsaturated polyesters are similar and will therefore be familiar to trained personnel. SDS Safety Data Sheets on all Syntal and Syntal resins and auxiliary materials are available for customers. Please read these documents in their entirety before use.

Notice

The information contained herein is subject to change without notice. The information provided on this document are prepared with long term laboratory tests and our own experiences. However, since as a material supplier, CPC Composites does not exercise any control over the use of Syntal resins, no legal responsibility is accepted for such recommendations. The information is given with goodwill to act as a guide but not as a reference. CPC Composites is not responsible for any damages or the user errors which may occur from using this document and/or information.

It is highly recommended that you to conduct tests in your own working condition before using the product on your production line. CPC Composites shall not be liable for technical or editorial errors or omissions contained here in.

Chemical name	Concn.	SYNTAL Polyester Resins					SYNTAL Vinyl Ester			
		9094 Ortho	9094 HDT Ortho	9092 ISO	9092 HDT ISO	90350 ISO NPG	VE 101 BPA Epoxy	VE102 BPA Epoxy	FR VE 101 BPA Epoxy	VE 103 Novolac Epoxy
	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
A Acetaldehyde	20							40	40	40
Acetaldehyde	100							NR	NR	LS
Acetic Acid	0-25	NR	25	35	30	60	95	100	100	100
Acetic Acid	26-50	NR	NR	25	40	60	80	80	80	80
Acetic Acid	51.75	NR	NR	25	35	50	65	65	65	65
Acetic Acid	76.85							45	45	45
Acetic Acid (glacial)	100	NR	NR	NR	NR	NR	NR	NR	NR	40
Acetic Acid/ Nitric Acid/Chromic Acid	3/5/3							65	65	80
Acetic Acid/ Sulfuric Acid	20/10							100	100	100
Acetic Anhydride	100							NR	NR	40
Acetone									80	80
Acetone	10	NR	20	NR	25	NR	NR		80	80
Acetone	20									40
Acetone	100	NR	NR	NR	NR	NR	NR	NR	NR	LS
Acetonitrile									80	80
Acetonitrile	20							40	40	40
Acetonitrile	100							NR	NR	LS
Acetyl Acetone	20							40	40	50
Acetyl Acetone	100							NR	NR	LS
Acid Cleaner 31% Hydrochloric acid	31							65	65	80
Acrolein (Acrylaldehyde)	20							40	40	40
Acrolein (Acrylaldehyde)	100							NR	NR	LS
Acrylaldehyde (Propenal)										
Acrylamide	50							40	40	40
Acrylic Acid	25							40	40	40
Acrylic Acid	100	NR		NR			NR	NR	NR	LS
Acrylic Latex	all							80	80	80
Acrylonitrile	7	NR	NR	NR	NR	NR	40	40	40	40
Acrylonitrile	100	NR	NR	NR	NR	NR	NR	NR	NR	LS
Acrylonitrile Latex dispersion	2							25	25	25
Activated Carbon Beds								80	80	100
Adipic Acid	23							80	80	80
Alachlore, Herbicide	all									40
Alcohol, Amyl	100							50	50	65
Alcohol, Butyl	100							50	50	65
Alcohol, Ethyl see Ethanol										
Alcohol, Isodecyl	100							50	50	80
Alcohol, Propyl	100							40	40	50
Alkaline Cleaner see Sodium and Potassium Hydroxides										
Alkaline Solutions see Sodium, Potassium and Am-										
Alkane Sulfonate see Sodium Dodecylbenzene Sulfonate										
Alkyl (C8-C10) Dimethyl Amine	100							80	80	100
Alkyl (C8-C18) Chloride	> 0,5							80	95	100

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		9094 Ortho	9094 HDT Ortho	9092 ISO	9092 HDT ISO	90350 ISO NPG	VE 101 BPA Epoxy	VE102 BPA Epoxy	FR VE 101 BPA Epoxy	VE 103 Novolac Epoxy
	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Alkyl Aryl Sulfonic Acid see Alkyl Benzene Sulfonc Acid										
Alkyl Benzene Sulfonic Acid	> 0,5							80	95	100
Alkyl Tolyl Trimethyl AmmoniumChloride								40	40	50
Alkyldiphenyloxide Disulfonate Anionc Surfactant	all							50	50	50
Allyl Alcohol	100							NR	NR	25
Allyl Chloride	100							25	25	25
Alpha-Methylstyrene	100							25	25	50
Alpha-Oleum Sulfates	100							50	50	50
Alum								100	100	120
Alumina Hydrate	all							80	80	80
Aluminum Chloride		40	45	50	70	80	100	100	100	120
Aluminum Chlorohydrate	> 0,5							100	100	100
Aluminum Chlorohydrate/ Hydrochloric Acid	> 0,5/< 15							80	80	100
Aluminum Chlorohydroxide	50							100	100	100
Aluminum Fluoride	all							25	25	25
Aluminum Hydroxide	100							80	80	95
Aluminum Nitrate	> 0,5							100	100	100
Aluminum Potassium Sulfate	sat'd							100	100	120
Aluminum Sulfate								100	100	120
Aluminum Sulfate (reactor)								100	100	
Amine Salts								50	50	65
Amine Scrubbing										
Amino Acids								40	40	40
Ammonia (aqueous) see Ammonium Hydroxide										
Ammonia (dry gas)	100							40	40	40
Ammonia (liquified gas)	100							NR	NR	NR
Ammonia (wet gas)	40 v0|.%							80	80	80
Ammonium Acetate	> 0,5							25	25	40
Ammonium Bicarbonate	0,5-50							70	70	70
Ammonium Bifluoride	> 0,5							65		65
Ammonium Bisulfite black liquor								80	80	80
Ammonium Bisulfite cooking liquor								65	65	65
Ammonium Bromate	0,5-43							70	70	70
Ammonium Bromide	0,5-43							70	70	70
Ammonium Carbonate	> 0,5	NR	NR	NR	NR	NR	65	65	65	65
Ammonium Chloride	> 0,5	40	45	50	70	80	100	100	100	100
Ammonium Citrate	> 0,5	30	40	45	60	60	65	65	65	65
Ammonium Fluoride	> 0,5							65	65	65
Ammonium Hydroxide	0,5-5	NR	NR	25	NR	35	80	80	80	65
Ammonium Hydroxide	6-20	NR	NR	NR	NR	25	60	65	65	40
Ammonium Hydroxide	61,7 (%30 NH3)	NR	NR	NR	NR	NR	40	40	40	40
Ammonium Hydroxide and Ammonium comp.NH4OH/ NH4CP	(%30 NH_3)/35/5							40	40	
Ammonium Lauryl Sulfate	0,5-30							50	50	50
Ammonium Ligno Sulfonate	0,5-50							80	80	80
Ammonium Molybdate	> 0,5							65		

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	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Ammonium Nitrate		30	40	45	65	75	90	100	105	120
Ammonium Oxalate	> 0,5							65		
Ammonium Pentaborate	0,5-12							50		
Ammonium Perchlorate	0,5-15							75		
Ammonium Persulfate	> 0,5						80	100	100	100
Ammonium Phosphate (dibasic)	> 0,5							100	100	100
Ammonium Phosphate (monobasic)	> 0,5							100	100	100
Ammonium Polysulfide	> 0,5							50		65
Ammonium Propionate	> 0,5							25	25	40
Ammonium Sulfate		40	45	50	70	80	100	100	105	120
Ammonium Sulfate / Ethyl Alcohol / Ethoxylate	60/15/3 cc/1c/o							40	40	65
Ammonium Sulfide (Bisulfide)								50		50
Ammonium Sulfide								65	65	65
Ammonium Thiocyanate	0,5-20	40	45	45	65	75	90	100	100	100
Ammonium Thiocyanate								50	50	50
Ammonium Thioglycolate	all							40	40	40
Ammonium Thiosulfate	all							60	60	60
Amyl Acetate	> 0,5	NR	NR	NR	25	NR	NR	20		50
Amyl Alcohol	100							50	50	65
Amyl Alcohol (vapor)	100							50	50	100
Amyl Chloride	100							50	50	50
Anaerobic Sewage				45	50	50	50	50	50	50
Aniline	20							40	40	40
Aniline	100	NR	NR	NR	NR	NR	NR	NR	NR	20
Aniline Hydrochloride	> 0,5							80	80	80
Aniline Sulfate	> 0,5							100	100	100
Animal Fat	100							80		
Anionic Surfactant	all							40	40	50
Anionic/ Cationic Polymer Emulsions Emulsion in water with Kerosene or Petroleum Distillates	0-50							40		50
Anodize (15% Sulfuric acid)								100	100	100
Antimony Pentachloride see Hydrochlorid Acid for aq. soln.										
Aqua Regia		NR	NR	NR	NR	NR	NR			
Aromatic Naphtha/ Naphthalene/ Isopropanol	60/5/10									50
Arsenic Acid	> 0,5							80	80	80
Arsenic Acid/ Copper Sulfate/ Sodium Dichromate	17/37/20							80	80	80
Arsenic Pentoxide/ Copper Oxide/ Chromic Acid	17/9/24							40	40	40
Arsenious Acid	190Be							80	80	80
B										
Barium Acetate	> 0,5							80		80
Barium Bromide	> 0,5							100	100	100
Barium Carbonate (slurry)	all							80	80	80
Barium Chloride	> 0,5	40	50	45	70	80	100	100	100	100
Barium Cyanide	> 0,5							65	65	65
Barium Hydroxide	> 0,5	NR	NR	NR	NR	20	65	65	65	65
Barium Sulfate	sat'd							100	100	120

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	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Barium Sulide	> 0,5							80	80	80
Barley Solution, Malt	> 0,5							75		
Beer	> 0,5		55				50	50		
Benzaldehyde	100							NR	NR	20
Benzalkonium Chloride	Hill iteH							40		
Benzene	100	NR	NR	NR	NR	NR	NR	NR	NR	40
Benzene (vapor)		NR	NR	NR	NR	NR	NR	25	NR	50
Benzene 50°C	100							NR	NR	LS
Benzene Sulfonic Acid	> 0,5							65	65	65
Benzene/ Ethylbenzene	33/67							NR	NR	40
Benzene/ Methyl Tertiary Butyl Ether	80/20							NR	NR	40
Benzenesulfonyl Chloride	100							NR	NR	LS
Benzoic Acid		50	50	70	70	95	100	100	100	100
Benzoyl Benzoic Acid o-Benzoyl Benzoic Acid	all							100	100	100
Benzyl Alcohol	20							40	40	50
Benzyl Alcohol	100	25	25	30	NR	25	NR	NR	NR	40
Benzyl Chloride	100	NR	NR	NR	NR	NR	NR	NR	NR	40
Benzyltrimethylammonium Chloride	60							40	40	40
Black Liquor (pulp mill)	thin							80	80	80
Black Liquor recovery, furnace gases								165	165	205
Black Liquor, thick/ heavy (pulp mill)	thick							95	105	105
Blow Down from Pulp Digester								120	120	120
Borax	> 0,5							100	100	100
Boric Acid	> 0,5	50	50	70	80	95	90	100	100	100
Boron Trichloride Scrubbing	> 0,5							65	65	65
Brake Fluids	100							50	50	50
Brass Plating Bath Solution Cu, Zn, NaCN, $Na2CO_3$								80	80	80
Brine Mix MgSOj, NaCl, $Na2SO_d$, K^SOj,								100	100	100
Brine, Chlorinated see Chlorinated Brine										
Brine, Salt								100	110	120
Brine, Salt	> 0,5							100	100	100
Brominated Phosphate Ester	> 0,5									50
Bromine (dry gas)	100							40	40	40
Bromine (liquid)	100							NR	NR	NR
Bromine (wet gas)	100							40	40	40
Bromine in Water no pure Bromine phase										80
Brown Stock								95	95	80
BTEX (Monoaromatic hydrocarbon mix) Benzene/ Ethyl Benzene/ Toluene/ Trimethyl Benzene/ Xylene	all							NR	NR	40
Bunker C Fuel Oil (heavy fraction)	100							100	100	105
Butadiene (gas)	100							45	45	45
Butane	100							60	60	60
Butanol	100							50	50	65
Butyl Acetate	100	NR	NR	NR	NR	NR	NR	NR	NR	30
Butyl Acrylate	100							NR	NR	25
Butyl Alcohol	100							50	50	65

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	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Butyl Alcohol/ Benzene	93/4							NR	NR	50
Butyl Amine n-Butyl Amine	100	NR	NR	NR	NR	NR	NR	NR	NR	LS
Butyl Benzoate n-Butyl Chloride	70									40
Butyl Benzyl Phthalate	100							80	80	100
Butyl Chloride	0,1-100							NR	NR	25
Butyl Hypochlorite	98							NR	NR	NR
Butyl Stearate 5% in Mineral Spirits								40		
Butylene Glycol	100							70	70	80
Butylene Oxide	100							NR	NR	LS
Butyraldehyde	100							NR	NR	40
Butyric Acid	0,5-50							100	100	100
Butyric Acid	100							25	25	50
C Cadmium Chloride	> 0,5							100	100	100
Cadmium Cyanide Plating Bath Soln. CdO, NaCN, NaOH		NR	NR	NR		80	80	80	80	80
Calcium Bisulfite	> 0,5	40	45	60	65	80	90	100	100	100
Calcium Bromide	> 0,5							100	100	100
Calcium Carbonate (lime stone slurry)	all							80	80	80
Calcium Chlorate	> 0,5							100	100	100
Calcium Chloride	> 0,5							100	100	100
Calcium Chloride								100	105	120
Calcium Hydroxide (lime)	100	20	35	30	45	60	80	100	100	100
Calcium Hydroxide (slurry)	0,5-25							80	80	40
Calcium Hypochlorite	all	NR	NR	NR	NR	NR	80	80	80	40
Calcium Nitrate	> 0,5	50	50	70	80	95	100	100	100	100
Calcium Sulfate Slurry	all	50	50	70	80	95	95	100	100	100
Calcium Sulite	> 0,5							100	100	100
Capric Acid see Decanoic Acid										
Capric Acid/ Lauric Acid/ Fatty Acids C10-C18 -	70/15/15							80	80	95
Caproic Acid										
Caprolactam	0-50							40	40	40
Caprolactam	100							NR	NR	LS
Caprolactone	100							NR	NR	LS
Caprylic Acid (Octanoic Acid)	100							80	80	100
Caramel	all							50		
Carbon Dioxide (gas)	all	50	50	70	80	95	65	165	165	205
Carbon Disulide	all							40	40	65
Carbon Disulide	100	NR	NR	NR	NR	NR	90	NR	NR	LS
Carbon Monoxide (gas)	all	75	70	120	80	110	80	165	165	205
Carbon Tetrachloride	100	20	25	30	NR	30	NR	65	65	80
Carbon Tetrachloride (vapor)	all							80	80	95
Carboxyethyl Cellulose	10							65	65	65
Cashew Nut Oil	100							65		
Castor Oil (Ricinus Oil)	100	75	70	110	65	110	NR	70	70	70
Cationic/ Anionic Polymer Emuls. Emulsion in water with Kerosene or Petroleum Distillates	0-50							40		50

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	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Caustic see Sodium Hydroxide										
Cetyl alcohol (Hexadecanol)	100							65	65	80
Chlordimeform Insecticide	100							25	25	50
Chloric Acid	all							25	25	25
Chlorinated Brine pH < 2,5	sat'd Cl							80	80	95
Chlorinated Brine pH 2.5-9	sat'd Cl							LS	LS	LS
Chlorinated Brine pH > 9 (Hypochlorite)	sat'd Cl							80	80	65
Chlorinated Pulp (pulp mill)	all							80	90	95
Chlorinated Solvent Recovery see Solvent name										
Chlorinated Wax	all							80	80	80
Chlorination Washer (hoods and vents)	all waicnr							80	80	95
Chlorine (dry gas)	100							80	80	100
Chlorine (wet gas)	100							80	80	100
Chlorine Dioxide (Chlorine) Beaching solution with or without pup	all							80	90	95
Chlorine Dioxide (no Chlorine) Bleaching solution with or without pulp	all							80	90	95
Chlorine Dioxide (solution storage)								20	20	20
Chlorine Dioxide Generator Effluent R2 system Chlorine Dioxide generator								65	65	80
Chlorine Dioxide Scrubber								75	75	
Chlorine Water see Chlorinated Brine										
Chlorine/ Chlorine Dioxide/ Sulfur Dioxide	0^/2/0J							95	95	95
Chlorine-Hydrogen Chloride with aqueous condensate	%8-10 HCl							80	80	100
Chloroacetic Acid	0-25							50	50	50
Chloroacetic Acid	26-50							40	40	40
Chloroacetic Acid	51-79							25	25	30
Chloroacetic Acid	80-85							25	25	25
Chloroacetic Acid	86-100							NR	NR	LS
Chlorobenzene	100	NR	NR	NR	NR	NR	65	NR	NR	40
Chlorofluorocarbon (CFC) 113 (Trichlorotrifluoroethane)								40	40	40
Chlorofluorocarbon (CFC) mix R-11 (Trichlorofluoromethane), R-12 (Dichlorodifluoromethane)	100							25	25	40
Chloroform									80	80
Chloroform	100	NR	NR	NR	NR	NR	NR	NR	NR	LS
Chloroform/ Dichloroethane/ Methylene Chloride	all							NR	NR	LS
Chloro-o-Tolyl (insecticide emulsion) n-Chloro-o-Tolyl	10							50	50	50
Chloropentane (1 to 5 Cl)	100							40	40	55
Chloropicrin (Nitrochloroform)	100							NR	NR	LS
Chloropyridine (tetra)	100							25	25	50
Chlorosulfonic Acid	10							NR	NR	NR
Chlorotoluene	100							25	25	40
Choline Chloride	> 0,5							50	50	65
Chrome (hard) Plating Bath Solution Plating Bath Solution with Sulfuric Acid								NR		
Chrome (hard) Plating Bath Solution								60		
Chrome Bath 19% Chromic Acid with Sodium Fluorosilicate and Sulfate								50	50	65
Chrome Reduction Process	25							90	90	
Chromic Acid	0,5-10							65	65	65
Chromic Acid	11-20	NR	NR	NR	25	30	30	65	50	65

Chemical name	Concn.	SYNTAL Polyester Resins					SYNTAL Vinyl Ester			
		9094 Ortho	9094 HDT Ortho	9092 ISO	9092 HDT ISO	90350 ISO NPG	VE 101 BPA Epoxy	VE102 BPA Epoxy	FR VE 101 BPA Epoxy	VE 103 Novolac Epoxy
	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Chromic Acid	30	NR	NR	NR	25	30	40	LS	LS	LS
Chromic Acid	40							NR	NR	LS
Chromic Acid/ Nitric Acid Mixture	5/10							40	40	65
Chromic Acid/ Sodium Metabisulfite	15/45							50	65	65
Chromic Acid/ Sulfuric Acid Mixture maximum total concentration 10%	10							50	50	65
Chromium Plating Bath Plating Bath Solution with Sulfuric Acid								NR	NR	NR
Chromium Plating Bath Plating Bath with Salt Solution								55	55	55
Chromium Sulfate (water soluble forms)	> 0,5							100	100	100
Citric Acid	> 0,5	50	50	70	75	95	NR	100	100	100
Clopidol	all									40
Cobalt Chloride	> 0,5							100	100	100
Cobalt Chloride (reactor) Hydrochloric-, Sulfuric Acid	40									
Cobalt Citrate	12							80		80
Cobalt Nitrate	> 0,5							100	100	100
Coconut Oil	100							80	80	95
Cod-liver Oil	100							40		
Copper Chloride								100	105	120
Copper Chloride and Ammonium Compounds $CuCL_{,}$, NH_3Cl, $NHjOH$ (see Ammonium Hydroxide)	26/5/2									
Copper Cyanide	> 0,5							100	100	100
Copper Cyanide and Potassium Compounds Copper Cyanide/ Potassium Cyanide/ Potassium Hydroxide	7/2,5/2							65	65	25
Copper Cyanide Plating Bath Solution Cu, NaCN, $KNaC¡HjOq$-$ZHjO$								70	70	70
Copper Matte Dipping Bath Solution 30% Iron (III) Choride, 19% Hydrochloric acid								80	95	95
Copper Nitrate	> 0,5							100	100	100
Copper Plating Bath Solution $Cu(BF_4)_2$, Cu_2SO_4								80	80	80
Copper Sulfate	sat'd							100	100	120
Corn Oil	100							80	80	100
Corn Starch	semi wet							100		
Corn Sugar/ Syrup (Glucose)	all							80		
Cottonseed Oil	100							100	100	100
Crude Oil (Sweet and Sour)	100							100	100	120
Cumene	100							25	25	50
Cumene/ Toluene/ Xylene	all							25	25	50
Cupric Chloride see Copper Chloride										
Cyanide Disposal Reaction with Hypo (gives Sodium Thiosulfite)										40
Cyanuric Acid	all							25	25	50
Cyanuric Chloride	all							50	50	50
Cyclohexane	100							50	50	65
Cyclohexylamine	100									40
Cyclopentane	100							40	40	50
D										
Dalapon, Sodium salt also 2,2- dichloropropionic acid	100							NR	NR	40
Decanoic Acid (Capric Acid)	> 0,5							80	80	80
Decanol	100							50	50	80
DEHPA and Kerosene Di-2-Ethylhexyl Phosphoric Acid	20							80	80	80
Deionized Water										

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		9094 Ortho	9094 HDT Ortho	9092 ISO	9092 HDT ISO	90350 ISO NPG	VE 101 BPA Epoxy	VE102 BPA Epoxy	FR VE 101 BPA Epoxy	VE 103 Novolac Epoxy
	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Demineralized Water see Water (demineralized)										
Detergents (organic)	all				25		70	80	70	
Detergents (sulfonated) see Sulfonated Detergents										
De-waxed Paraffin Distillate	100							80	80	80
Diacetone Alcohol	10								40	50
Diacetone Alcohol	100							NR	NR	LS
Diallyl Phthalate	all	45	50	60	50	70	80	80		100
Diammonium Phosphate	> 0,5							100	100	100
Dibasic Acid Acid mix 51-61% Glutaric, 18-28% - Succinic, 15-25% Adipc, 2% Nitric	> 0,5-50							80	80	95
Dibromonitrilo-Propionamide	100							NR	NR	40
Dibromophenol	100							NR	NR	40
Dibromopropane	100							NR	NR	40
Dibromopropanol	100									40
Dibutyl Carbitol Diethylene glycol dibutyl ether	100							25	25	40
Dibutyl Ether	100							25		80
Dibutyl Phthalate	100							80		100
Dibutyl Sebacate	100							50		65
Dichloroacetic Acid see Chloroacetic Acid										
Dichlorobenzene (ortho and para)	100	NR	NR	NR	NR	NR	NR	NR	NR	50
Dichloroethane	100	NR	NR	NR	NR	NR	NR	NR	NR	25
Dichloroethylene	100							NR	NR	LS
Dichloromethane (MethyleneChloride)	100							NR	NR	LS
Dichlorophenoxyacetic Acid 2,4-Dichlorophenoxyacetic Acid,salts,esters and comp								50	50	50
Dichloropropane	100							NR	NR	40
Dichloropropene	100							NR	NR	25
Dichloropropionic Acid	100							NR	NR	40
Dichlorotoluene	100							25	25	50
Diesel Fuel	100	35	30	45	25	40	80	80	80	100
Diethanolamine	100	NR	NR	NR	30	50	25	50	50	65
Diethanolamine/ Ethanolamine	80/20							50	50	50
Diethyl Carbonate	100							NR	NR	40
Diethyl Ether	100	NR	NR	NR	NR	NR	NR	NR	NR	NR
Diethyl Formamide	20							40	40	40
Diethyl Formamide	100							NR	NR	40
Diethyl Hydroxylamine	100							NR	NR	LS
Diethyl Ketone	20							40	40	50
Diethyl Ketone	100	NR	NR	NR	NR	NR	NR	NR	NR	25
Diethyl Sulfate	100							40	40	50
Diethylamine	20							40	40	40
Diethylamine	100							NR	NR	LS
Diethylaminoethanol	100							50	50	50
Diethylbenzene	100							40	40	65
Diethylene Glycol	100	50	55	80	75	95	90	80	80	100
Diethylene Glycol Dimethylether	20							40	40	40
Diethylene Glycol Dimethylether	**100**							**NR**	**NR**	**25**

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		9094 Ortho	9094 HDT Ortho	9092 ISO	9092 HDT ISO	90350 ISO NPG	VE 101 BPA Epoxy	VE102 BPA Epoxy	FR VE 101 BPA Epoxy	VE 103 Novolac Epoxy
	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Diethylene Glycol Methyl Ether	100							NR	NR	LS
Diethylene Glycol n-Butyl Ether Ethanol, 2-(2-butoxy-ethoxy) CAS 112-34-5	100							40	40	40
Diethylenetriaminepentaacetic acid Sodium salt	40							40	50	50
Diethylenetriaminepentaacetic acid	all							40	50	50
Diglycolamine (Aminoethoxyethanol)	20							40	40	50
Diglycolamine (Aminoethoxyethanol)	50							40	40	40
Diglycolamine (Aminoethoxyethanol)	100							NR	NR	LS
Diisobutyl Ketone	100							NR	NR	50
Diisobutyl Phthalate	100							65	65	65
Diisobutylene	100							40	40	40
Diisonoyl Phthalate	100							65	65	100
Diisopropanolamine	100							50	50	65
Dimethyl Acetamide									80	80
Dimethyl Acetamide	20							40	40	40
Dimethyl Acetamide	100							NR	NR	LS
Dimethyl Amine	20							40	40	40
Dimethyl Amine	40							LS	LS	LS
Dimethyl Aniline	100							NR	NR	40
Dimethyl Morpholine	100							NR	NR	50
Dimethyl Phthalate	100							65	65	80
Dimethyl Sulfate	20							40	40	50
Dimethyl Sulfate	100							NR	NR	LS
Dimethyl Sulfide	100							NR	NR	25
Dimethyl Sulfoxide (DMSO)	20							40	40	40
Dimethyl Sulfoxide (DMSO)	100							NR	NR	LS
Dimethyl Thiazolidine 2,2-Dimethyl Thiazolidine	1							65	65	80
Dimethyl Tin Dichloride/ Methyl Tin Tri-chloride Aqueous soluton of 90/10	50									45
Dimethylamine salt 2,4-D, Dimethylamine salt	67							50	50	50
Dimethylammonium Hydrochloride Dimethylamine HCl, DMA-HCl	70							40	40	50 (R12)
Dimethylcarbonate	100							NR	NR	NR
Dimethylethanolamine	20							50		60
Dimethylethanolamine	100							25	25	40
Dimethylformamide									80	80
Dimethylformamide	20							40	40	40
Dimethylformamide	100	NR	NR	NR	NR	NR	NR	NR	NR	LS
Dimethylformamide/ Acetonitrile/ Methanol	26/9/7							NR	NR	LS
Dioctyl Phthalate	100							65	65	100
Diphenyl Oxide Diphenyl Ether, Phenyl Ether	100							25	25	50
Diphenylmethane-4,4-Diisocyanate(MDI)	100							NR	NR	NR
Dipotassium phosphate	> 0,5							100	100	100
Dipropylene Glycol	100	50	55	80	75	95	80	80	80	100
Dipropylene Glycol MethylEtherPropanol, (2-Methoxy-methyle-thoxy) CAS 34590-94-8	20							40	50	65
Dipropylene Glycol Methyl Ether Propanol, (2-Methoxy-methyle-thoxy) CAS 34590-94-8	100							NR	NR	20
Dishwashing Detergent in Solution	all							80	80	65
Distilled Water see Water (distilled)										

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		9094 Ortho	9094 HDT Ortho	9092 ISO	9092 HDT ISO	90350 ISO NPG	VE 101 BPA Epoxy	VE102 BPA Epoxy	FR VE 101 BPA Epoxy	VE 103 Novolac Epoxy
	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Divinylbenzene	100							40	40	50
Dodecanol	-	-	-	-	-	-	-	-	-	-
Dodecene	100							65	65	80
Dodecyl Benzene Sulfonic Acid	100							80	95	100
Dodecyl Benzene Sulfonic Acid Mixture	85/10/4/1							65	65	65
Dodecyldimethylamine	100							80	80	100
Dodecylmercaptan	100							80	80	100
DowTherm Heat Transfer Agent	100							50	50	65
E Epichlorohydrin	100							LS	NR	25
Epoxidized Castor Oil	100							40		
Epoxidized Soybean Oil	100							65	65	65
Esters, Fatty Acid	100							80	80	80
Ethanol	Vapour							65	80	80
Ethanol (Ethyl Alcohol)	10	30	30	30	30	40	50	50	50	65
Ethanol (Ethyl Alcohol)	50	20	25	30	25	30	40	40	40	65
Ethanol (Ethyl Alcohol)	90-95							25	25	40
Ethanol (Ethyl Alcohol)	100	20	25	30	25	25	NR	NR	NR	40
Ethanol/ Ethylacetate/ Methanol/ DMF	35/29/10/10							NR	NR	LS
Ethanolamine	20							40	40	50
Ethanolamine	100							25	25	40
Ethoxy Acetic Acid	10									40
Ethoxy Acetic Acid	100							NR	NR	LS
Ethoxylated Alcohol C12-C14	100							25	25	50
Ethoxylated Alkyl Amines	100							25	25	50
Ethoxylated Nonyl Phenol	100							NR	NR	40
Ethyl Acetate	Vapour								80	80
Ethyl Acetate	100	NR	NR	NR	NR	NR	NR	NR	NR	25
Ethyl Acetate/ Sodium Hydroxide	4/0-50							50	50	40
Ethyl Acrylate	100							NR	NR	25
Ethyl Amine	20							40	40	40
Ethyl Amine	70							NR	NR	LS
Ethyl Benzyl Chloride	100							NR	NR	40
Ethyl Bromide	100							NR	NR	LS
Ethyl Chloride	100							NR	NR	25
Ethyl Ether	100	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethyl Silicate	100									40
Ethyl Sulfate	100							40	40	40
Ethyl-3-Ethoxy Propionate	100							NR	NR	25
Ethylbenzene	100							25	25	50
Ethylbenzene/ Benzene	67/33							NR	NR	40
Ethylene Chloride see Dichloroethane										
Ethylene Chlorohydrin	20							40	50	65
Ethylene Chlorohydrin	100							40	40	40

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		9094 Ortho	9094 HDT Ortho	9092 ISO	9092 HDT ISO	90350 ISO NPG	VE 101 BPA Epoxy	VE102 BPA Epoxy	FR VE 101 BPA Epoxy	VE 103 Novolac Epoxy
	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Ethylene Diamine	20							40	40	40
Ethylene Diamine	100							NR	NR	LS
Ethylene Dibromide	100							NR	NR	NR
Ethylene Dichloride see Dichloroethane										
Ethylene Dichloride/ EDB/ TEL ED/ Ethylene Dibromide/ Tetra Ethyl Lead (over water sol.)	5/5/5							NR	NR	LS
Ethylene Glycol	100	20	35	30	45	60	90	100	100	100
Ethylene Glycol based Coolants	> 0,5							100	100	100
Ethylene Glycol n-Butylether Ethanol, (2-butoxy) CAS 111-76-2	20							40	50	65
Ethylene Glycol n-Butylether Ethanol, (2-butoxy) CAS 111-76-2	100							40	40	65
Ethylene Glycol/Sulfuric Acid								65	80	80
Ethylene Oxide	100							NR	NR	NR
Ethylenediaminetetraacetic Acid (EDTA)	all							80	80	80
Ethylenesulfonic acid, sodium salt	all							70	70	70
Ethylhexyl Alcohol 2-Ethylhexyl Alcohol	100							65	70	80
Eucalyptus Oil	100							60	60	60
F										
Fatty Acid/ Sterol/ Triglyceride -	all							100	100	120
Fatty Acid/ Sulfuric Acid	5/ 2							100	100	100
Fatty Acids	all							100	100	120
Ferric Acetate	all							80	80	80
Ferric Chloride	> 0,5							100	100	100
Ferric Chloride/ Ferrous Chloride	5/20							100	100	100
Ferric Chloride/ Ferrous Chloride/ HCl	48/0,2/0,2							100	100	105
Ferric Chloride/ Hydrochloric Acid	0-29/1-20							80	80	105
Ferric or Ferrous Sulfate/ Sulfuric Acid	0-40/0-25							100	100	100
Ferric Sulfate	> 0,5							100	100	100
Ferrous Chloride	> 0,5	40	45	65	70	90	95	100	100	100
FerrousChlorideandcompounds/HClFerrous Chloride+Manganese Choride+Ferric Chloride/ HC	1-60/0-20							80	100	100
Ferrous Chloride/ Hydrochloric Acid	0-29/1-20							80	80	100
Ferrous Nitrate	> 08	40	45	65	75	95	95	100	100	100
Ferrous Sulfate	> 0,5	40	45	65	75	95	95	100	100	100
Fertilizer 32/ 0/ 0 Total wt. 32% Nitrogen in Urea								65	65	65
Fertilizer 8/ 8/ 8 Total wt. 8% Nitrogen, 8% Phosphorus, 8% Potassium								65	65	65
Flue Gas (dry)	all							165	160	205
Flue Gas (wet)	all	NR	45	65	75	90	90	80	80	100
Fluoboric Acid	all							100	100	100
Fluoride Salts/ Hydrochloric Acid	30/10							50	50	50
Fluorine in Flue Gas (wet)	2							80	80	100
Fluosilicic Acid	0-10							80	80	80
Fluosilicic Acid	11-20	NR	NR	35	35	35	50	60	60	60
Fluosilicic Acid	21-35							40	40	40
Fluosilicic Acid Fumes	all							80	80	80
Fluosilicic/ Hydrofluoric/ Phosphoric Acids	22/5/5							40	40	40
Fluozirconic Acid/ Fluotitanic Acid/ NH4OH Fluozirconic Acid/ Fluotitanic Acid/ Ammonium Hydroxide	5/4/3							40	40	40
Fly Ash Slurry								80	80	80

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		9094 Ortho	9094 HDT Ortho	9092 ISO	9092 HDT ISO	90350 ISO NPG	VE 101 BPA Epoxy	VE102 BPA Epoxy	FR VE 101 BPA Epoxy	VE 103 Novolac Epoxy
	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Formaldehyde	all						50	50	50	65
Formaldehyde/ Methanol								50	50	65
Formamide	20							40	50	65
Formamide	100							20	20	20
Formic Acid	10	25	35	55	65	80	80	80	80	80
Formic Acid	25							50	50	65
Formic Acid	50							50	50	50
Formic Acid	85							25	25	40
Formic Acid	98	NR	NR	NR	NR	NR	40			40
Fuel C (50% Isooctane, 50%Toluene)	100									50
Fuel C/ Methyl t-Butyl Ether (MTBE) see Fuel C	85/15									50
Fuel Oil	100							80	80	100
Fuel, Diesel see Diesel Fuel										
Fuel, Jet see Jet Fuel										
Fuel, Kerosene										
Fuel, Petrol Unleaded see Gasoline										
Furfural	0-10	NR	NR	35	NR	NR	38	40	40	50
Furfural	100	NR	NR	NR	NR	NR	NR	NR	NR	LS
Furfural (in organic solvent)	0-20							NR	NR	40
Furfural/ Acetic Acid/ Methanol	30/10/5							NR	NR	LS
Furfuryl Alcohol	20							40	40	65
Furfuryl Alcohol	100							NR	NR	25
G										
Gallic Acid								80	80	80
Gasohol (1-100% alcohol)	100									40
Gasoline (unleaded, no alcohol)	100	NR	NR	40	NR	NR	25			50
Glucose	100		60				100	80		
Glutamic Acid	50							50	50	50
Glutaraldehyde	50							50	50	50
Glutaric Acid	50							50	50	50
Glycerine	100							100	100	100
Glycine and derivatives	all							40	40	40
Glycol	100							100	100	100
Glycolic Acid see Hydroxyacetic acid										
Glyconic Acid	50							80	80	80
Glyoxal	40							40	40	40
Glyphosate	all									40
Gold Plating Bath Solution, $Au(CN)_2,NaCN$								100	100	100
Green Liquor (pulp mill)	all							80	80	80
Gypsum Slurry see Calcium Sulfate										
H										
Heptane	100	30	25	40	25	30	80	100	100	100
Heptane (vapor)	vapor							100	100	100
Herbicides										
Hexachloroethane	100							LS	LS	50

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	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Hexadecanol	100							65	65	80
Hexamethylenetetramine	40							40	40	50
Hexane	100	30	25	40	25	30	65	70	70	70
Hexanoic Acid (Caproic Acid)	100							25	25	50
Hot Stack Gas see Flue Gas										
Hydraulic Fluid (Alkaline)	100									
Hydraulic Fluid (Glycols)	100							80		
Hydrazine							LS	LS	80	80
Hydrazine	100							NR	NR	LS
Hydrazine/ Sodium Phosphate	5/ 10								LS	LS
Hydriodic Acid	40							65	65	65
Hydriodic Acid	57								40	40
Hydrobromic Acid	0-25	50	50	70	75	95	80	80	80	80
Hydrobromic Acid	48							65	65	65
Hydrobromic Acid	62	50	45	60	65	70	40	40	40	40
Hydrobromic Acid/ Bromine	40/ 2								40	40
Hydrochloric Acid		1.15								80
Hydrochloric Acid	16-20	20	25	35	30	40	40	80	100	110
Hydrochloric Acid	21-25							65	100	110
Hydrochloric Acid	26-30							65	80	100
Hydrochloric Acid	31-32							65	80	95
Hydrochloric Acid	33-34							50	65	80
Hydrochloric Acid	35-36							50	50	70
Hydrochloric Acid	37							40	50	60
Hydrochloric Acid & Organics	0-33% HCl							NR	40	50
Hydrochloric Acid + Aluminum(reactor), Aluminum Chloride	< 15% HCl							80		65
Hydrochloric Acid + Chlorine	0,5-20%HCl							80	80	
Hydrochloric Acid, Fumes Fumes + Free Chorine (dry above 100°C)									80	100
Hydrochloric Acid, Fumes								100		175
Hydrochloric Acid/ Aluminum Chloride	30/0-40							65	100	175
Hydrochloric Acid/ Bromine/ Chlorine	22/ 0,1/ 0,1							65	65	80
Hydrochloric Acid/ Calcium Chloride	27/15							65	80	100
Hydrochloric Acid/ DETA/ Ammonium Chloride	33/10/10								80	95
Hydrochloric Acid/ Ferric Chloride	1-20/0-29							80		65
Hydrochloric Acid/ Ferric Chloride/Organics	28/35/1							NR	80	105
Hydrochloric Acid/ Ferrous Chloride	1-20/0-29							80	NR	65
Hydrochloric Acid/ Formaldehyde	25/3							NR	80	100
Hydrochloric/ Hydrofluoric Acid	0,5-20/0-1							65	NR	65
Hydrochloric/ Hydrofluoric Acid	15/0,1-1							80	65	80
Hydrochloric/ Hydroluoric Acid	max.tot.20							40	100	100
Hydrochloric/ Hydroluoric Acid	25/6							40	40	40
Hydrochloric/ Hydroluoric Acid	30/15								40	50
Hydrochloric/ Hydroluoric Acid	36/1									40
Hydrochloric/ Hydrofluoric/ Xylene15/15/70								NR		40
Hydrochloric/ oth.acid mix, Nitrobenzene Hydrochloric/ Hydrofluoric/ Phos-		15/1/1/0 ,5								NR

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		9094 Ortho	9094 HDT Ortho	9092 ISO	9092 HDT ISO	90350 ISO NPG	VE101 BPA Epoxy	VE102 BPA Epoxy	FR VE101 BPA Epoxy	VE 103 Novolac Epoxy
	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Hydrocyanic Acid	all							100	100	100
Hydroluoric Acid	10							65	65	65
Hydroluoric Acid	20							40	40	40
Hydroluoric/ Nitric Acid								NR	NR	LS
Hydroluoric/ Nitric Acid	6/20							50	55	60
Hydroluoric/ Nitirc Acid	15/15									40
Hydrofluoric/ Nitric/ Sulfuric Acid	8/20/2									60
Hydroluosilicic Acid see Fluosilicic Acid										
Hydroluosilicic Acid / Polyaluminum Chloride Polyaluminum Hydroxychloride	1-22/1-35							40	40	40
Hydrofluosilicic Acid/ Zinc Chloride	20/all							40	40	40
Hydrogen Bromide (dry gas)	100							80	80	100
Hydrogen Bromide (wet gas)	100							80	80	80
Hydrogen Chloride (dry gas)	100							100	100	175
Hydrogen Chloride (wet gas)	100							100	100	110
Hydrogen Fluoride (dry gas) (dry gas, vapor (if wet max.40°C))								80	80	80
Hydrogen Peroxide	5	NR	NR	30	60	65	65	65	65	65
Hydrogen Peroxide	30	NR	NR	NR	25	25	40	40	40	65
Hydrogen Peroxide	35							25	30	40
Hydrogen Peroxide	50							NR	NR	LS
Hydrogen Sulfide	5	55	60	60	60	65	100	100	100	175
Hydrogen Sulfide (aqueous)	all							100	100	100
Hydrogen Sulide (dry gas)	100							100	100	110
Hydrogenated tallow alkylamine C8-C18	100							40		
Hydrosulite Bleach Aqueous solution 5%								80	80	80
Hydroxyacetic Acid (Glycolic Acid)	20							40	40	65
Hydroxyacetic Acid (Glycolic Acid)	70							40	40	40
Hydroxylamine Acid Sulfate	> 0,5									100
Hypochlorous Acid	0-10									
Hypophosphorous Acid	0-50							50	50	50
I										
Imidazoline Acetate/ Solvent	20							40	40	50
Imidazoline Acetate/ Solvent	60							NR	NR	40
Incinerator Gases see Flue Gas										
Insecticides emulsions										
Iodine (crystals)	100							65	65	65
Iodine (vapor)	100							65	65	80
Ion Exchange Resin								80	80	80
Iron and Steel Cleaning Acid Bath 9% Hydrochloric and 23% -Sulfuric acid								80	80	100
Iron Plating Bath Solution $FeCl_2$, $CaCl_2$, $FeSO_4$,$(NH_4)_2SO_4$ -								80	80	120
Isoamyl Alcohol	20							65	65	80
Isoamyl Alcohol	100							50	50	65
Isobutyl Alcohol	20							65	65	80
Isobutyl Alcohol	100							50	50	65
Isodecanol	100							50	50	80
Isononyl Alcohol	**100**							**65**	**65**	**65**

Chemical name	Concn.	SYNTAL Polyester Resins					SYNTAL Vinyl Ester			
		9094 Ortho	9094 HDT Ortho	9092 ISO	9092 HDT ISO	90350 ISO NPG	VE 101 BPA Epoxy	VE102 BPA Epoxy	FR VE 101 BPA Epoxy	VE 103 Novolac Epoxy
	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Isooctyl Adipate	100							50	50	65
Isooctyl Alcohol	100							65	65	65
Isopropanol Amine	100							50	50	50
Isopropyl Alcohol (Isopropanol)	100							50	50	50
Isopropyl Amine	0,5-50							40	40	40
Isopropyl Amine	100							NR	NR	LS
Isopropyl Myristate	100							100		110
Isopropyl Palmitate	100							100	100	110
Itaconic Acid	0,5-40							60	60	60
J										
Jet Fuel (general)	100	NR	NR	30	NR	25	NR	60	60	60
K										
Kerosene	100	40	30	50	30	35	80	80	80	80
Kraft Recovery Boiler Breeching (paper mill) see Flue Gas										
L										
Lactic Acid	all	50	55	70	70	95	100	100	100	100
Latex (Emulsion in Water) see under specific polymer name	all			NR		25	50	50	50	50
Lauroyl Chloride	100							40		50
Lauryl Alcohol	100							65	65	80
Lauryl Chloride	100							100	100	100
Lauryl Mercaptan	100							80	80	100
Lead Acetate	sat'd							100	100	110
Levulinic Acid								100	100	110
Lignin Sulfonate	all							80	80	80
Lime Slurry see Calcium Hydroxide										
Limestone Slurry see Calcium Carbonate										
Linseed Oil	100							100	100	110
Liquid Petroleum Gas (LPG)	100							60	60	60
Lithium Bromide								100	100	120
Lithium Carbonate	all							80	80	80
Lithium Chloride	> 0,5							100	100	100
Lithium Chloride	sat'd (35-40)							100	100	120
Lithium Hydroxide	all							80	80	40
Lithium Hypochlorite	all							80	80	40
M										
Magnesium Bicarbonate	all	30	40	40	60	80	80	80	80	80
Magnesium Bisulfite	> 0,5							100	100	100
Magnesium Carbonate	all							80	80	80
Magnesium Chloride	sat'd							100	100	120
Magnesium Fluorosilicate	all							80		80
Magnesium Hydroxide	> 0,5							100	100	100
Magnesium Nitrate	all							100	100	100
Magnesium Phosphate	> 0,5							100	100	100
Magnesium Sulfate	sat'd	45	50	70	75	95	95	100	100	120
Magnesium Sulfate/ Phosphoric Acid	1-40/0-36							100	100	100

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		9094 Ortho	9094 HDT Ortho	9092 ISO	9092 HDT ISO	90350 ISO NPG	VE 101 BPA Epoxy	VE102 BPA Epoxy	FR VE 101 BPA Epoxy	VE 103 Novolac Epoxy
	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Maleic Acid	> 0 5	45	45	65	75	90	90	80	80	100
Manganese Chloride (Manganous Chloride)	> 0 5							100	100	100
Manganese Nitrate (Manganous)	> 0,5							100	100	100
Manganese Sulfate (Manganous Sulfate)	> 0,5							100	100	100
MDI (Methylenediphenyl Diisocyanate) see Diphenylmethane-4,4-Di-isocyanate										
Melamine Formaldehyde Resin	all							40	40	50
Mercaptoacetic Acid	all							NR	NR	40
Mercaptoethanol	10									80
Mercuric Chloride	> 0,5							100	100	100
Mercurous Chloride	> 0,5							100	100	100
Mercury	100	55	60	100	65	100	100	100	100	120
Metal Pickling Acid Solutions Hydrochloric-, Sulfuric Acid and/or Phosphoric Acids	0 5 15 total							100	100	100
Methacrylic Acid	25							40	40	50
Methacrylic Acid	100							NR	NR	LS
Methane Sulfonic Acid	20-100							NR	NR	40
Methane/ Nitrogen	70/30							60	80	95
Methanol									80	80
Methanol (Methyl Alcohol)	5							50	50	50
Methanol (Methyl Alcohol)	20							NR	NR	40
Methanol (Methyl Alcohol)	40-100	30	25	35	25	30	NR	NR	NR	40
Methanol/ Ethanolamine	0-60/0-20							NR	NR	40
Methanol/ Formaldehyde	0-15/0-37							50	50	65
Methanol/ Formaldehyde	35/4							NR	NR	40
Methanol/ Formaldehyde/ Sulfuric Acid	60/20/2							NR	NR	40
Methoxy-2-Propanol 1-Methoxy-2-Propanol	100							NR	NR	20
Methyl Acetate	20							40	40	40
Methyl Acetate	100							NR	NR	LS
Methyl Bromide	10							25	25	25
Methyl Bromide	100							NR	NR	LS
Methyl Butyl Ketone (MBK) includes Methyl t-Butyl Ketone (MTBK) and other Isomers	100							25	25	50
Methyl Chloride									80	80
Methyl Chloride, Gas	all							40	40	65
Methyl Chloroform also 1,1,1-Trichloroethane inhibited	100							40	40	50
Methyl Chloroform/ Perchloroethylene	75/25							40	40	50
Methyl Distearyl Ammonium Chloride/ Isopropanol	75/25							50	50	50
Methyl Ethyl Ketone (MEK)	20	NR	NR	NR	NR	NR	NR	40	40	40
Methyl Ethyl Ketone (MEK)	100							LS	LS	20
Methyl Ethyl Ketone Mixture MEK	< 25 total							LS	LS	40
Methyl Formate	5							40	45	50
Methyl Isobutyl Ketone (MIBK)	100							25	25	50
Methyl Mercaptan (Gas)	all							40	40	65
Methyl Methacrylate	all	NR	NR	NR	NR	NR	NR	NR	NR	25
Methyl tert-butylether (MTBE)	vapor								80	80
Methyl tert-butylether (MTBE)	20							40	40	50
Methyl tert-butylether (MTBE)	100							NR	NR	25

Chemical name	Concn.	SYNTAL Polyester Resins					SYNTAL Vinyl Ester			
		9094 Ortho	9094 HDT Ortho	9092 ISO	9092 HDT ISO	90350 ISO NPG	VE 101 BPA Epoxy	VE102 BPA Epoxy	FR VE 101 BPA Epoxy	VE 103 Novolac Epoxy
	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Methyl tert-butylether (MTBE) / Fuel C see Fuel C	15/85							40	40	50
Methyl Tin Trichloride/ Dimethyl Tin Di-chloride Aqueous soluton of 9Q/1C	50									45
Methyl-2-pyrrolidone see N-methyl-2-pyrrolidone										
Methyl-2-pyrrolidone see N-methyl-2-pyrrolidone										
Methyl-3-Butenenitrile 2-Methyl-3-Butenenitrile	all							25	25	40
Methylamine	20							40	40	40
Methylamine	40							LS	LS	LS
Methylamine	100							NR	NR	LS
Methyldiethanolamine	20							50	50	80
Methyldiethanolamine	100							50	50	65
Methylene Chloride									80	80
Methylene Chloride	100							NR	NR	LS
Methylene Chloride/ Methanol/ Water	1/4/95							40	40	50
Methylstyrene (alpha)	100							25	25	50
Milk and Milk Products	all	25	28	28	28		70	70	70	
Mineral Oils (Aliphatic)	100							100	100	120
Molasses	100							80		
Mono chloroacetic Acid see Chloroacetic Acid										
Mono chlorobenzene	100							NR	NR	40
Mono ethanolamine see Ethanolamine										
Mono methylhydrazine	100							NR	NR	LS
Morpholine	20							40	45	50
Morpholine	100							NR	NR	25
Morpholine/ Cyclohexylamine	all							NR	NR	25
Motor Oil	100							100	100	120
Muriatic Acid										
Myristic Acid	100							100	100	120
N										
Naphtha (Aliphatic)	100							80	80	100
Naphtha (Heavy Aromatic)	100	30	25	40	30	30				50
Naphthalene	100	45	40	65	45	50	80	100	100	100
Neutralizer & Desmut	all							65	65	65
Nickel Chloride	> 0,5	50	50	70	75	95	90	100	100	100
Nickel Nitrate	> 0,5	50	50	70	75	95	90	100	100	100
Nickel Plating Bath soln. $NiSO_4$, NH_4Cl, H_3BO_3		45	45	60	70	90	80	80	80	80
Nickel Sulfamate	all							80	80	80
Nickel Sulfate	> 0,5	50	50	70	75	95	90	100	100	100
Nitric Acid	0-5	45	45	55	65	70	65	65	65	80
Nitric Acid	6-10							65	65	65
Nitric Acid	11-20	40	25	50	60	50	50	50	50	65
Nitric Acid	21-29							40	40	50
Nitric Acid	30-35	NR	NR	NR	40	30	40	25	30	40
Nitric Acid	36-40	NR	NR	NR	NR	NR	NR	NR	NR	40

Chemical name	Concn.	SYNTAL Polyester Resins					SYNTAL Vinyl Ester			
		9094 Ortho	9094 HDT Ortho	9092 ISO	9092 HDT ISO	90350 ISO NPG	VE 101 BPA Epoxy	VE102 BPA Epoxy	FR VE 101 BPA Epoxy	VE 103 Novolac Epoxy
	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Nitric Acid	70	NR	NR	NR	NR	NR	NR	NR	NR	LS
Nitric Acid Fumes	> DO (SOIM.)							80	80	80
Nitric Acid Fumes	< DO (soln)	NR	NR	NR	NR	NR	NR	80	80	80
Nitric Acid/ Hexavalent Chromium Chromic Acid	10/5							40	40	65
Nitric Acid/ Hydrogen Peroxide/ Hydroluoric Acid								25	30	40
Nitric/ Hydroluoric Acid	25/3							40	40	50
Nitric/ Hydroluoric Acid	15/15									40
Nitric/ Hydroluoric Acid	20/D							50	55	60
Nitric/ Hydroluoric Acid								NR	NR	LS
Nitric/ Hydroluoric/ Sulfuric Acid	20/8/2									60
Nitric/ Phosphoric Acid	24/23							40	40	50
Nitric/ Phosphoric Acid	5/ 5							65	80	80
Nitric/ Sulfuric Acid	20/20							40	40	50
Nitric/ Sulfuric/ Phosphoric Acid	20/5/2							40	40	50
Nitrobenzene	100	NR	NR	NR	NR	NR	NR	NR	NR	40
Nitrogen Tetroxide	100	NR	NR	NR	NR	NR	NR	NR	NR	NR
Nitrophenol								NR	NR	40
N-methyl-2-pyrrolidone	10									LS
N-methyl-2-pyrrolidone	100							NR	NR	LS
Noncondensable Blow DownGases see Flue Gas or Blow Down										
O										
Octanoic Acid										
Oil (Crude) see Crude Oil										
Oleic Acid	100	50	50	70	70	95	100	100		
Oleum (fuming Sulfuric Acid)		NR	NR	NR	NR	NR	NR	NR	NR	LS
Olive Oil	100							100		
Ortho-dichlorobenzene see Dichlorobenzene										
Oxalic Acid								50	50	50
Ozone in solution	2mg/l							40	40	40
P										
Palladium suspensions in HCl (see Hydrochloric Acid)										
Palladium suspensions in NH_4OH (see Ammonium Hydroxide)										
Palmitic Acid	100							100		
Paper Mill Efluent (pulp mill) see Sulfite/ Sulfate Liquors										
Para-dichlorobenzene see Dichlorobenzene										
Parrain Distilate (dewaxed)	100							80	80	80
Peanut Oil	100							80		
Pentabromo diphenyl oxide	100							25	25	50
Pentachlorophenol	all							50	50	50
Pentanedioic Acid see Glutaric Acid										
Peracetic Acid	20							40	40	40
Peracetic Acid	35							NR	NR	LS
Perchloric Acid	10	NR	20	NR	50	50	65	65	65	65
Perchloric Acid	30	NR	NR	NR	30	25	40	40	40	40
Perchloroethylene	**100**							**25**	**25**	**50**

Chemical name	Concn.	SYNTAL Polyester Resins						SYNTAL Vinyl Ester		
		9094 Ortho	9094 HDT Ortho	9092 ISO	9092 HDT ISO	90350 ISO NPG	VE 101 BPA Epoxy	VE102 BPA Epoxy	FR VE 101 BPA Epoxy	VE 103 Novolac Epoxy
	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Perchloroethylene/ Methyl chloroform	75/25							40	40	50
PG/ Ethoxylated Fatty Alcohols/ BDG Prop.Gly./ Ethox. Fatty Alco./	60/20/20							40	40	50
Phenol (Carbolic Acid)	0-2							25	25	50
Phenol (Carbolic Acid)	5							NR	NR	50
Phenol (Carbolic Acid)	10							NR	NR	50
Phenol (Carbolic Acid)	15							NR	NR	30
Phenol (Carbolic Acid)	88							NR	NR	20
Phenol Formaldehyde Resin	all							40	40	50
Phenol Sulfonic Acid	all							25	25	25
Phenol/ Methanol/ Anionic Detergent	15/10/20							NR	NR	LS
Phenolic Resin/ Phenol	80/20									25
Phenolic Resin/ Phenol	90/10									50
Phosphoric Acid	0,5-85	50	50	65	70	90	90	100	100	100
Phosphoric Acid	85-100							100	100	105
Phosphoric Acid (Polyphosphoric Acid)	115							100	100	105
Phosphoric Acid (vapor)	all							100	100	120
Phosphoric Acid 76% Superphosphoric Acid 76% P_2O_5	105							100	100	105
Phosphoric Acid/ Gypsum	61/39							100	100	100
Phosphoric Acid/ Hydrochloric Acid saturated with Cl	15/9							100	100	100
Phosphoric Acid/ Phosphorous Pentoxide (vap. mix.)								100	100	110
Phosphoric Acid/ Sulfuric Acid	85/ 15							40	40	50
Phosphoric Acid/ Sulfuric Acid	0-25/0-25							80	80	80
Phosphoric Acid/ Tributyl Phosphate vapor phase, condensation	85/0,5							50	50	60
Phosphoric Acid/ Tributyl Phosphate/ Hydrofluoric Acid	88/0,1/0,03							80	80	100
Phosphoric Acid/ Zinc Chloride	0-100/0,5-70							100	100	100
Phosphoric/ Sulfuric/ Hydrofluoric Acid	0-75/1/0-3							65	65	65
Phosphorous Acid	70							80	80	80
Phosphorous Acid/ Hydrochloric Acid								65	65	80
Phosphorous Acid/ Hydrochloric Acid	0-70/1-5							100	100	100
Phosphorus Oxychloride	100							NR	NR	LS
Phosphorus Trichloride	100							NR	NR	LS
Phthalic Acid	all	45	45	65	70	90	100	100	100	100
Picric Acid (alcoholic)	10							NR	NR	40
Pine Oil	100							90	90	90
Plating Bath Chemicals										
Polyacrylamide	all							80	80	80
Polyacrylic Acid	all							80	80	80
Polyethylene Glycol	100							100	100	100
Polyethylene glycol methyl ether	100									
Polyethyleneimine	all							80	80	80
Polyphosphoric Acid 115% H_3PO_4 see Phosphoric acid										
Polyvinyl Acetate Adhesives	all							50	50	50
Polyvinyl Alcohol	100							80	80	80
Polyvinyl Chloride Latex with 35 parts Dioctyl Phthalate	all							50	50	50
Potassium Aluminum Sulfate	sat'd							100	100	120

Chemical name	Concn.	SYNTAL Polyester Resins					SYNTAL Vinyl Ester			
		9094 Ortho	9094 HDT Ortho	9092 ISO	9092 HDT ISO	90350 ISO NPG	VE 101 BPA Epoxy	VE102 BPA Epoxy	FR VE 101 BPA Epoxy	VE 103 Novolac Epoxy
	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Potassium Bicarbonate	> 0,5							80	80	80
Potassium Bromide	> 0,5							100	100	100
Potassium Carbonate	0-50	NR	NR	25	25	80	65	80	80	65
Potassium Chloride	> 0,5	50	45	70	75	95	90	100	100	100
Potassium Detergent Soluiton	50/40/10							50		
Potassium Dichromate	> 0,5							100	100	100
Potassium Extinguishing Compositon	20/4/1							80	80	65
Potassium Ferricyanide	> 0,5	50	45	70	75	95	90	100	100	100
Potassium Ferrocyanide	> 0,5							100	100	100
Potassium Fluoride	all							80	80	80
Potassium Gold Cyanide	12							100	100	100
Potassium Hydroxide	0-45	NR	NR	NR	35	45	45	65	65	25
Potassium Hydroxide and Cyanide compounds KOH/ KCN/ CuCN	2/2,5/7							65	65	25
Potassium Iodide	all							100	100	100
Potassium Nitrate	> 0,5							100	100	100
Potassium Oxalate	all							65	65	65
Potassium Permanganate	> 0,5	NR	NR	25	25	35	90	100	100	100
Potassium Persulfate	all							100	100	100
Potassium Pyrophosphate	60							55	55	65
Potassium Silicoluoride	all							40	40	40
Potassium Sulfate	> 0,5	50	45	70	75	95	90	100	100	100
Propane	100							60	60	60
Propanol (n-)								80	80	80
Propanol (n-)	100							40	40	50
Propenal										
Propionic Acid	0-50						80	80	80	80
Propionic Acid	100							NR	NR	40
Propionyl Chloride	100							NR	NR	LS
Propyl Acetate	100							NR	NR	25
Propyl Bromide	100							NR	NR	25
Propyl Chloride	100							NR	NR	25
Propylene Glycol	100	50	55	80	75	95	80	100	100	100
Propylene Glycol Methyl Ether 2-Propanol,1- Methoxy-;	100							NR	NR	20
Propylene Glycol Methyl Ether Acetate	20							40	40	50
Propylene Glycol Methyl Ether Acetate	100							NR	NR	20
Propylene Glycol/ Monoethanolamine	0-99/ 1							25	25	40
Propylene Oxide									80	80
Propylene Oxide	100							NR	NR	NR
Pulp (paper mill) Blow Down see Blow Down										
Pyridine	20							40	40	40
Pyridine	100	NR	NR	NR	NR	NR	NR	NR	NR	LS
Q										
Quaternary Amine Salts	> 0,5	40	40	60	65	80	70	80	80	80
Quinoline	20							40	40	40
Quinoline	100									LS

Chemical name	Concn.	SYNTAL Polyester Resins					SYNTAL Vinyl Ester			
		9094 Ortho	9094 HDT Ortho	9092 ISO	9092 HDT ISO	90350 ISO NPG	VE 101 BPA Epoxy	VE102 BPA Epoxy	FR VE 101 BPA Epoxy	VE 103 Novolac Epoxy
	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
R Radiation Resistance										
Rayon Spin Bath										60
Rayon Spinning	vapor							60	60	60
Recovery Boiler Gases see Flue Gas										
Red Liquor	all							80	80	80
S Salicylic Acid	all							70		
Salt Brine see Brine, Salt										
Sea Water										
Selenious Acid	all							100	100	100
Silicon Tetraluoride/Hydroluoric/ Sulfuric Acid								50	50	50
Silver Nitrate	> 0,5							100	100	100
Silver Plating Bath Solution Ag, K, NaCN,K.CQ								80	80	65
Sodium Acetate	> 0,5	50	50	70	75	95	100	100	100	100
Sodium Alkyd Aryl Sulfonates	all							80	80	80
Sodium Aluminate	all							70	70	50
Sodium Benzoate	all							80	80	80
Sodium Bicarbonate	all	50	50	70	75	95	80	80	80	80
Sodium Bicarbonate/ Sodium Carbonate	15/20							80	80	65
Sodium Biluoride	all							50	50	50
Sodium Bisulfate	> 0,5	50	50	70	75	95	100	100	100	100
Sodium Bisulfide (Hydrosulfide)	all							80	80	80
Sodium Bisulfite	> 0,5							100	100	100
Sodium Borate	> 0,5							100	100	100
Sodium Borohydride Stabilized water solution	all							40		
Sodium Bromate	> 0,5							100	100	100
Sodium Bromide	> 0,5							100	100	100
Sodium Carbonate	all	NR	NR	25	25	70	70	80	80	65
Sodium Carbonate/ Sodium Bicarbonate	20/15							80	80	65
Sodium Chlorate	> 0,5	50	50	70	75	95	100	100	100	100
Sodium Chlorate/ Phosphoric Acid	1-20/1-20									
Sodium Chlorate/ Sodium Chloride	34/20							100	100	100
Sodium Chlorate/ Sulfuric Acid	1-20/1-20									
Sodium Chloride	> 08	50	50	70	75	95	100	100	100	100
Sodium Chloride (saturated solution) see Brine, Salt										
Sodium Chloride (with Chlorine) see Chlorinated Brine										
Sodium Chloride/ Ethyl Vanillin	0,1-25/1							50		
Sodium Chloride/ Magnesium Oxide/ Lime	0,5-26/0,1-20/0,1-10							100	100	100
Sodium Chloride/ Sodium Chlorate	20/34							100	100	100
Sodium Chloride/ Sodium Hydroxide	0,5-10/ 0,1-2							80	80	40
Sodium Chlorite, pH < 6 see Chorine Dioxide										
Sodium Chlorite, pH > 6	all							80	80	80
Sodium Chlorite/ Sodium Hypochlorite, pH > 11	0,1-25/ 0,1-15							40	40	40
Sodium Chromate	> 0,5							100	100	100

Chemical name	Concn.	SYNTAL Polyester Resins						SYNTAL Vinyl Ester		
		9094 Ortho	9094 HDT Ortho	9092 ISO	9092 HDT ISO	90350 ISO NPG	VE 101 BPA Epoxy	VE102 BPA Epoxy	FR VE 101 BPA Epoxy	VE 103 Novolac Epoxy
	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Sodium Cyanide	> 0,5							100	100	100
Sodium Dichrornate	> 0,5							100	100	100
Sodium Diphosphate	> 0,5							100	100	100
Sodium Dodecylbenzene Sulfonate	all							70	70	70
Sodium Ferricyanide	> 0,5	50	45	70	70	95	100	100	100	100
Sodium Ferrocyanide	> 0,5							100	100	100
Sodium Fluoride	all							80	80	80
Sodium Fluoroborate	> 0,5							95		95
Sodium Fluorosilicate	all							50	50	50
Sodium Gluconate	> 0,5							80	95	100
Sodium Glycolate	> 0,5							80	80	100
Sodium Hexametaphosphate	all							80	80	80
Sodium Hydrosulide (Bisulide) see Sodium Bisulfide										
Sodium Hydrosulfite	all							40	40	40
Sodium Hydroxide	all	NR	NR	NR	55	70	60	80	80	40
Sodium Hydroxide with Sodium Compounds mix.	20/15/8/15							80	80	40
Sodium Hydroxide/ Organics	8/ trace							80		
Sodium Hydroxide/ Sodium Bisulite	all							80	80	40
Sodium Hydroxide/ Sodium Hypochlorite (Active Chlorine)	0-20/0-0,1							80		
Sodium Hypochlorite Actve Chorine), pH > 1*	0,5-5,25	NR	NR	NR	NR	NR	50	65	80	40
Sodium Hypochlorite (Actve Chorine), pH > 12	5,25-18							65	65	
Sodium Hypochlorite Actve Chorine), pH > 13	18-21								40	
Sodium Hypochlorite (Actve Chorine), pH > 14	21-25								40	
Sodium Lauryl Sulfate	all							70	70	70
Sodium Metabisulfite	> 0,5							100	100	100
Sodium Methyldithiocarbamate	all							80	80	80
Sodium Monophosphate	> 0,5							100	100	100
Sodium Myristyl Sulfate	all							70	70	70
Sodium Nitrate	> 0,5							100	100	100
Sodium Nitrite	> 0,5							100	100	100
Sodium Oxalate	> 0,5							100	100	100
Sodium Perchlorate	60							40	40	40
Sodium Persulfate	all							100	100	100
Sodium Phosphate, mono-, di-, tribasic	> 0,5							100	100	100
Sodium Polyacrylate	all							80	80	80
Sodium salt o-phenylphenate (Antimicrobial)	all							50	50	50
Sodium Salts of Carbamate Derivatives	0,1-15/0,1-15							40	40	50
Sodium Sarcosinate	40							50	50	50
Sodium Silicate	> 0,5							80	80	65
Sodium Sulfate	> 0,5	50	45	70	75	95	100	100	100	100
Sodium Sulfate/ Sodium Sulfite	> 0,5							100	100	100
Sodium Hydrosulfide										
Sodium Sulfide	> 0,5	50	50	70	75	95	100	100	100	100
Sodium Sulfite	> 0,5	50	50	70	75	95	100	100	100	100
Sodium Sulphite/ Sodium Hydroxide/ Toluene	22/10/5							25	25	40

Chemical name	Concn.	SYNTAL Polyester Resins						SYNTAL Vinyl Ester		
		9094 Ortho	9094 HDT Ortho	9092 ISO	9092 HDT ISO	90350 ISO NPG	VE 101 BPA Epoxy	VE102 BPA Epoxy	FR VE 101 BPA Epoxy	VE 103 Novolac Epoxy
	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Sodium Tartrate	> 0,5							100	100	100
Sodium Tetraborate	all							80	80	80
Sodium Thiocyanate	all	40	45	65	70	90	80	80	80	80
Sodium Thiosulfate	all	45	50	65	70	85	80	80	80	80
Sodium Tripolyphosphate	> 0,5							100	100	100
Sodium Xylene Sulfonate	all							70	70	70
Solder Plating Bath see Plating Bath Chemicals										
Solvent Extraction Soln.								80	80	80
Solvent Extraction Soln.								80	80	80
Sorbitol Solutions	all							70	70	80
Sour Crude Oil see Crude Oil										
Soy Oil	100							100	100	100
Soy Sauce								70		
Spearmint Oil	100							40		
Stannic Chloride	> 0,5							100	100	100
Stannous Chloride	> 0,5	50	50	70	70	95	100	100	100	100
Steam (dry, no condensation)								100	100	105
Steam (wet, condensation)								80	80	80
Stearic Acid	all	45	45	65	75	90	100	100	100	100
Styrene	100	NR	NR	NR	NR	NR	NR	NR	NR	50
Styrene Acrylic Emulsion	all							50	50	50
Styrene-Butadiene Latex	all							60	60	60
Succinonitrile (aqueous)	all							25	25	40
Sugar Beet Liquor	all							80		
Sugar Cane Liquor and Sweetwater	all							80		
Sugar/ Sucrose	all							100		
Sulfamic Acid	0,5-10							100	100	100
Sulfamic Acid	11-15							80	80	80
Sulfamic Acid	16-25							65	65	65
Sulfamic/ Boric/ Glycolic Acid	0,5-25/0,5-30/0,5-10							65	65	65
Sulfanilic Acid, Meta	> 0,5							100	100	100
Sulfanilic Acid, Para	> 0,5							100	100	100
Sulfate Process (noncondensable gases)see Flue Gas										
Sulfated Detergents see Sulfonated Detergents										
Sulfated Tall Oil Fatty Acid see Tall Oil										
Sulfides Scrubbing with Caustic see Sodium Hydroxide										
Sulfite/ Sulfate Liquors (Pulp Mill)								95	95	95
Sulfonated Detergents	100	45	45	65	70	90	90	70	70	80
Sulfur Chloride	vapor							95	95	95
Sulfur Chloride	100							NR	NR	LS
Sulfur Dioxide see Flue Gas										
Sulfur Molten (dry)	100									150
Sulfur Trioxide (dry)	vapor									
Sulfur Trioxide (wet) see Sulfuric Acid										
Sulfur Wettable, Fungicide	all							80	80	80

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	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Sulfuric Acid	0,5-25	50	60	70	75	90	90	100	100	105
Sulfuric Acid	26-50	60	60	85	80	100	80	100	100	100
Sulfuric Acid	51-70	NR	NR	65	70	70	80	80	80	80
Sulfuric Acid	71-75	NR	NR	NR	25	40	40	40	40	80
Sulfuric Acid	> 80	NR	NR	NR	NR	NR	NR	NR	NR	LS
Sulfuric Acid	76-80	NR	NR	NR	25	40	40	40	40	50
Sulfuric Acid/ Ammonium Bifluoride								40	40	65
Sulfuric Acid/ Chromic Acid Mixture								50	50	65
Sulfuric Acid/ Copper Sulfate	0-25/1-35							100	100	100
Sulfuric Acid/ Copper Sulfate/ Sodium Persulfate/ EDTA	13/12/1/1							55	55	55
Sulfuric Acid/ H_2O_2/ $(NH_4)_2SO_4$/ Cu_2SO_4	10/5/5/5							40	40	40
Sulfuric Acid/ Hydriodic Acid	60/20							40	40	50
Sulfuric Acid/ Hydrochloric Acid	50/15							40	40	50
Sulfuric Acid/ Hydrochloric Acid	1-25/1-10							80	100	100
Sulfuric Acid/ Hydrofluoric Acid	10/10							40	40	65
Sulfuric Acid/ Hydrofluoric Acid	1-20/3-6							55	55	60
Sulfuric Acid/ Hydrofluoric Acid	30-35/3-5							LS	LS	LS
Sulfuric Acid/ Hydrofluoric Acid	25/10							40	40	50
Sulfuric Acid/ Hydrogen Peroxide	1-20/1-10							65	65	65
Sulfuric Acid/ Hydrogen Sulfide	150/010							100	100	100
Sulfuric Acid/ Inorganic Salts	0,5-20/0,5-50							100	100	100
Sulfuric Acid/ Inorganic Salts	21-50/0,5-20							80	80	80
Sulfuric Acid/ Methanol	30/5									50
Sulfuric Acid/ Nitric Acid	20/5							65	65	80
Sulfuric Acid/ Phosphoric Acid	0-25/0-25							80	80	80
Sulfuric Acid/ Sodium Chromate										
Sulfuric Acid/ Sodium Dichromate see Sulfuric Acid/Chromic										
Sulfuric Acid/ Sulfate Salts max. tot. concn. 80%										
Sulfuric/ Hydrochloric/ Hydrofluoric / Phosphoric Acids/ Cl Solvents	40/20/5/35/1							NR	NR	LS
Sulfuric/ Hydrofluosilicic Acids/ MIBK	25/10/2							LS	LS	50
Sulfuric/ Lactic Acids/ Sodium Sulfate	50/20/0-10							40	40	65
Sulfuric/ Nitric/ Phosphoric Acids	0-13/0-11/0							65	65	65
Sulfurous Acid	10							50	50	50
Superphosphoric Acid(76% Pp,) see Phosphoric acid	105% H3PO4									
Surfactant										
Surfactant (anionic) see Anionc Surfactant										
T										
Tall Oil (reactor)								100	100	105
Tall Oil (storage)	100							95	95	105
Tallow/ Sulfuric Acid	99/1							80		
Tannic Acid	> 0,5	50	50	70	75	95	100	100	100	100
Tap Water (hard) see Water (tap)										
Tap Water (soft) see Water (tap)										
Tartaric Acid	> 0,5							100	100	100
tert-Butyl Methyl Ether see Methyl tert-Butyl Ether										

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	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Tetrabutyltin	100							50	50	50
Tetrachloroethane	100							40	40	55
Tetrachloroethylene (Perchloroethylene)	100	NR	NR	NR	NR	NR	40	25	25	50
Tetrachloropyridine	100							25	25	50
Tetraethyl Orthosilicate	100									40
Tetrahydrofuran									80	80
Tetrahydrofuran	0-5	NR	NR	NR	NR	NR	25	40	40	50
Tetrahydrofuran	10-100	NR	NR	NR	NR	NR	NR	NR	NR	LS
Tetramethyl Ammonium Hydroxide	0-10							50	50	
Tetra-n-Butylammonium Hydroxide	40							40	40	
Tetra-n-Butylphosphonium Hydroxide	40							40	40	
Tetrapotassium Pyrophospate	0-60							55	55	65
Tetrasodium Ethylenediaminetetraacetic Acid Tetrasodium Salt of EDTA	all							80	80	65
Thioglycolic Acid see Mercaptoacetic Acid										
Thionyl Chloride	100							NR	NR	LS
Thiourea	0-50							65	65	65
Tin Fluoborate Plating Bath Solution $Sn(BF_4)_2$, Sn, HBF_4, H_3BO_3								100	100	100
Titanium Dioxide	all							80	80	80
Titanium Dioxide/ Sulfuric Acid	0-30/30							100	100	100
Titanium Tetrachloride	all							65	65	80
Tobias Acid (2-Naphthylamine-1-Sulfonic)	100							100	100	100
Toluene	100	NR	NR	NR	NR	30	NR	25	25	50
Toluene (vapor)									80	80
Toluene Diisocyanate (TDI)	100							NR	NR	30
Toluene Sulfonic Acid	> 0,5							80	95	100
Toluidine (ortho-, para-, meta-)	100							NR	NR	20
Tomato Sauce	all							90		
Transformer Oils Silcone and Mineral Oils	100							100	110	150
Transformer Oils Ester types	100							50	0	65
Tributyl Phosphate	100							50	50	60
Trichloroacetic Acid	85							25	25	50
Trichloroethane	100	NR	NR	NR	NR	NR	40	40	40	50
Trichloroethylene	100	NR	NR	NR	NR	NR	NR	NR	NR	LS
Tricresyl Phosphate	100							70	70	70
Triethanolamine	100							50	50	65
Triethylamine	all							50	50	50
Triethylamine/ Triethylamine Hydrochloride/ HCl	50/20/5							50	50	50
Triethylene Glycol see Ethylene Glycol										
Triluoroacetic Acid see Chloroacetic Acid										
Trimethyl Ammonium Chloride Trimethylamine HCl, TMA-HCl	70							40	40	50
Trimethyl Benzene	100							25	25	50
Trimethylamine	vapor								80	80
Trimethylamine	20							40	40	50
Trimethylamine	100							25	25	40
Trimethylene Chlorobromide								NR	NR	40

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	%	°C	°C	°C	°C	°C	°C	°C	°C	°C
Trioctyl Phosphine Oxide/ DEHPA/ Kerosene Di-2-Ethylhexyl Phosphoric Acid	4/4/92							80	80	80
Trioctylphosphate	100							70	70	80
Tripropylene Glycol see Ethylene Glycol										
Trisodium Phosphate								100	100	120
Turpentine	100							65	65	100
U										
Uranium Extraction										
Urea	all			45	65	90	65	70	70	70
Urea Formaldehyde Resin	all							40	40	50
Urea/ Ammonium Nitrate/ Water	35/44/20							65	65	65
Urine										
V										
Vanillin Black Liquor								50		
Vegetable Oil	100	40	50	50	80		95	95	95	95
Vinegar	100							100	100	100
Vinyl Acetate	20	NR	NR	NR	NR	NR	NR	40	40	40
Vinyl Acetate	100	NR	NR	NR	NR	NR	NR	NR	NR	LS
Vinyl Chloride	all								80	80
Vinyl Chloride	100							NR	NR	LS
Vinyl Toluene	100							25	25	50
W Water (deionized)	100	45	45	65	75	90	80	80	80	80
Water (demineralized)	100	45	45	65	75	90	80	80	80	80
Water (distilled)	100	45	45	65	75	90	80	80	80	80
Water (sea desalination)	all							80	80	80
Water (sea)		45	50	70	75	95	100	100	100	100
Water (steam condensate)										
Water (tap/ hard)	100							100	100	100
Water (tap/ soft)	100							80	80	80
Water Vapor (exhaust) see Flue Gas										
Water Vapor (wet)										
Water, Phenol see Phenol										
Whey	all							65		
White Liquor (Pulp Mill)	all							80	80	40
X Xylene									80	80
Xylene	100	30	NR	25	NR	25	25	25	25	50
Z										
Zinc Chloride	sat'd	50	50	70	75	95	100	100	100	120
Zinc Cyanide Plating Bath Zn, NaCN, NaOH						25		80	80	40
Zinc Electrolyte Zinc Sulfate 35g/l Sulfuric Acid (see Sulfuric Acid)										
Zinc Fluoborate Plating Bath Solution Zn(BF4)2, NH4Q, NH4BF4								95	95	95
Zinc Nitrate	sat'd							100	100	120
Zinc Phosphate (slurry)	> 0,5							80	80	80
Zinc Sulfate	sat'd	50	50	70	75	95	100	100	100	120

CAS Numbers and Chemical Names

CAS No.	Chemical Name	CAS No.	Chemical Name	CAS No.	Chemical Name	CAS No.	Chemical Name
10-54-3	Hexane	112-73-2	Diethylene Glycol dibutyl Ether	1336-21-6	Ammonium Hydroxide	16961-83-4	Hydrofluosilicic Acid
100-37-8	Diethylaminoethano	112-80-1	Oleic Acid	1341-49-7	Ammonium Bifluoride	17194-0-2	Barium Hydroxide
100-41-4	Ethylbenzene	117-81-7	Dioctyl Phthalate	1344-67-8	Copper Chloride	17439-11-1	Fluotitanic Acid
100-42-5	Styrene	120-51-4	Benzyl Benzoate	1344-9-8	Sodium Silicate	17496-8-1	Ammonium Propionate
100-44-7	3enzyl Chloride	121-3-9	Nitrotoluene (4-) Sulfonic Acid (2-;	1461-25-2	Tetrabutyltin	18130-44-4	Titanium Sulfate
100-51-6	3enzyl Alcoho	121-43-7	Trimethyl Borate in Methy Alcoho	1565-80-6	Amyl Alcoho	18483-17-5	Tannic Acid
100-52-7	3enzaldehyde	121-44-8	Triethylamine	1634-4-4	Methyl t-Butyl Ether	19351-18-9	2|2-Dimethyl Thiazolidine
100-97-0	Hexamethylenetetramine	121-47-1	Sulfanilic Acid (meta)	1634-4-4	t-Butyl Methyl Ether (MTBE)	105839-17-6	Epoxidized Castor Oil
101-2-0	Triphenyl Phosphite	121-57-3	Sulfanilic Acid (para)	1762-95-4	Ammonium Thiocyanate	287-92-3	Cyclopentane
101-68-8	Diphenylmethane-4,4-Diisocyanate (MDI)	121-69-7	Dimethylaniline (N,N)	1863-63-4	Ammonium Benzoate	298-12-4	Glyoxylic Acid
101-84-8	Diphenyl Oxide	123-42-2	Diacetone Alcohol	10025-67-9	Sulfur Chloride	298-14-6	Potassium Bicarbonate
102-71-6	Triethanolamine	123-51-3	soamyl Alcoho	10025-73-7	Chromic Chloride	298-7-7	DEHPA, HDEHPA
104-15-4	Toluenesulfonic Acid	123-72-8	Butyraldehyde	10025-87-3	Phosphorus Oxychloride	2008-39-1	2|4-D| Dimethylamine salt
104-74-5	_auryl Pyridinium Chloride	123-76-2	_evulinic Acid (4-oxopentanoic acid	10025-91-9	Antimony Trichloride	2052-49-5	Tetra-n-Butylammonium Hydroxide
104-76-7	Isooctyl Alcohol	123-86-4	Butyl Acetate	10026-4-7	Silicone Tetrachloride	2082-81-7	Trimethylamine
105-58-8	Diethyl Carbonate	123-91-1	Dioxane	10028-15-6	Ozone in solution	2090-64-4	Carbonic acid
105-60-2	Caprolactam	123-95-5	Butyl Stearate	10034-85-2	Hydriodic Acid	2235-54-3	Ammonium Lauryl Sulfate
106-43-4	Chlorotoluene (p-)	123-99-9	Azelaic Acid	10034-93-2	Hydrazine Sulfate	2402-79-1	Tetrachloropyridine
106-46-7	Dichlorobenzene (p-)	124-38-9	Carbon Dioxide	10035-10-6	Hydrobromic Acid or HBr	2836-32-0	Sodium Glycolate
106-49-0	Toluidine (p-)	124-40-3	Dimethyl Amine	10039-54-0	Hydroxylamine Acid Sulfate	2971-90-6	Clopido
106-88-7	3uty1ene Oxide (1,2-)	124-4-9	Adipic Acid	10043-1-3	Aluminum Sulfate	21645-51-2	Aluminum Hydroxide
106-89-8	Epichlorohydrin	124-64-1	THPC	10043-35-3	Boric Acid	23210-56-2	fenprodil (insecticide emulsion)
106-93-4	Ethylene Dibromide	124-7-2	Capryic Acid (Octanoic Acid)	10043-52-4	Calcium Chloride	24347-58-8	Butylene Glycol
106-94-5	Propyl 3romide	124-7-2	Octanoic Acid	10043-67-1	Aluminum Potassium Sulfate	24800-44-0	Tripropylene Glyco
106-97-8	3utane	126-11-4	Nitromethane (tris, hydroxymethyl)	10049-4-4	Chlorine Dioxide	25013-15-4	Vinyl Toluene

106-99-0	3utadiene	126-30-7	Neopentyl Glycol	10099-74-8	Lead (II) Nitrate	25154-55-6	Nitrophenol
107-13-1	Acrylonitrile	126-72-7	Dibromopropyl Phosphate	10101-53-8	Chromic Sulfate	25155-30-0	Sodium Dodecylbenzenesulfonate
107-15-3	Ethylene Diamine	126-73-8	Tributyl Phosphate	10108-64-2	Cadmium Chloride	25265-71-8	Dipropylene Glyco
107-18-6	Allyl Alcohol	127-18-4	Perchloroethylene	10108-73-3	Cerous Nitrate	25322-68-3	Polyethylene Glyco
107-21-1	Ethylene Glyco	127-18-4	Tetrachloroethyene (Perchloroethylene)	10112-91-1	Mercurous Chloride	25339-17-7	Isodecanol
107-22-2	Glyoxa	127-19-5	Dimethyl Acetamide	10124-37-5	Calcium Nitrate	25340-17-4	Diethylbenzene
107-2-8	Acrolein (Acrylaldehyde)	127-20-8	Dalapon-Sodium	10137-74-3	Calcium Chlorate	25567-55-9	Sodium Tetrachlorophenate
107-39-1	Diisobutylene	127-9-3	Sodium Acetate	10141-0-1	Chromium Potassium Sulfate	25639-42-3	Methylcyclohexanol
107-5-1	Allyl Chloride	128-4-1	Sodium Dimethyldithiocarbamate	10141-5-6	Cobalt Nitrate (II)	26248-24-8	Sodium Tridecylbenzene Sulfonate
107-6-2	Dichloroethane	131-11-3	Dimethyl Phthalate	10196-4-0	Ammonium Sulfite	26968-58-1	Ethyl Benzyl Chloride
107-7-3	Ethylene Chlorohydrin	131-17-9	Diallylphthalate	10222-1-2	Dibromonitrilo-Propionamide	27138-31-4	Dipropylene Glycol Dibenzoate
107-92-6	3utyric Acid	132-27-4	DCS (Antimicrobial)	10257-55-3	Calcium Sulfite	27176-87-0	Dodecyl Benzene Sulfonic Acid
107-96-0	Mercaptopropionic (3-) Acid	136-60-7	Butyl Benzoate	10294-34-5	Boron Trichloride	27458-94-2	sononyl Alcoho
107-98-2	1-Methoxy-2-Propano	137-42-8	Sodium Methyldithiocarbamate	10361-37-2	Barium Chloride	28348-53-0	Sodium Cumenesulfonate
108-1-0	Dimethylethanolamine	140-1-2	DTPA acid, Sodium salt	10377-48-7	Lithium Sulfate	28553-12-0	Diisonoyl Phthalate
108-24-7	Acetic Anhydride	140-31-8	Aminoethyl Piperazine	10377-60-3	Magnesium Nitrate	29965-97-7	Cyclooctadiene
108-31-6	Maleic Anhydride	140-88-5	Ethyl Acrylate	10377-66-9	Manganese Nitrate (Manganous)	301-4-2	Lead (II) Acetate
108-44-1	Toluidine (m-)	141-32-2	Butyl Acrylate	10421-48-4	Ferric Nitrate	302-1-2	Hydrazine
108-46-3	Resorcino	141-43-5	Ethanolamine	10450-55-2	Ferric Acetate	334-48-5	Capric Acid (Decanoic Acid)
108-5-4	Vinyl Acetate	141-78-6	Ethyl Acetate	10545-99-0	Sulfur Dichloride	334-48-5	Decanoic Acid
108-65-6	Propylene Glycol Methyl Ether Acetate	141-91-3	Dimethyl Morpholine (2,6-)	10553-31-8	Barium Bromide	3012-65-5	Ammonium Citrate
108-77-0	Cyanuric Chloride	141-97-9	Ethyl Acetoacetate	10588-1-9	Sodium Dichromate	3039-83-6	Ethylenesulfonic acid, sodium salt
108-80-5	Cyanuric Acid	142-4-1	Aniline Hydrochloride	11120-25-5	Ammonium Tungstate	3251-23-8	Copper Nitrate
108-83-8	Diisobutyl Ketone	142-62-1	Caproic Acid (Hexanoic Acid)	12007-89-5	Ammonium Pentaborate	3710-84-7	Diethyl Hydroxylamine
108-88-3	Toluene	142-62-1	Hexanoic Acid	12021-95-3	F|uozirconic Acid	31142-56-0	Aluminum Citrate
108-90-7	Chlorobenzene	142-82-5	Heptane, n-	12028-48-7	Ammonium Metatungstate	34590-94-8	DPM Glycol Ether
108-90-7	Monochlorobenzene	142-91-6	sopropy Palmitate	12042-91-0	Aluminum Chlorohydroxide	35139-28-8	Ferric Sulfate
108-91-8	Cyclohexylamine	142-96-1	Dibutyl Ether (-n)	12124-99-1	Ammonium Sulfide	36653-82-4	Cetyl alcoho

108-94-1	Cyclohexanone	143-33-9	Sodium Cyanide	12125-1-8	Ammonium Fluoride	36653-82-4	Hexadecanol (n-)
108-95-2	Phenol	143-7-7	_auric Acid	12125-2-9	Ammonium Chloride	497-19-8	Sodium Carbonate
109-43-3	Dibutyl Sebacate	144-55-8	Sodium Bicarbonate	12259-92-6	Ammonium Polysulfide	4316-73-8	Sodium Sarcosinate
109-60-4	Propyl Acetate	144-62-7	Oxalic Acid	12379-40-7	midazoline Acetate	50-0-0	Formaldehyde
109-64-8	Dibromopropane	149-91-7	Gallic Acid	12501-45-0	Ammonium Molybdate	50-21-5	Lactic Acid
109-69-3	3utyl Chloride	151-21-3	Sodium Lauryl Sulfate	13235-36-4	EDTA	50-70-4	Sorbitol Solutions
109-70-6	Trimethylene Chlorobromide	151-50-8	Potassium Cyanide	13463-67-7	Titanium Dioxide	50-78-2	Acetylsalicylic Acid
109-73-9	3utyl Amine	1066-33-7	Ammonium Bicarbonate	13473-90-0	Aluminum Nitrate	56-23-5	Carbon Tetrachloride
109-89-7	Diethylamine	1071-83-6	Glyphosate	13478-10-10	Ferrous Chloride	56-81-5	Glycerin or Glycerol
109-99-9	Tetrahydrofuran THF	1113-38-8	Ammonium Oxalate	13520-68-9	Ferrous Nitrate	56-93-9	Benzyltrimethylammonium Chloride
110-16-7	Maleic Acid	1191-50-0	Sodium Myristyl Sulfate	13598-36-2	Phosphorous Acid, ortho-	57-10-3	Palmitic Acid
110-27-0	Isopropyl Myristate	1300-21-6	Dichloroethane	13601-19-9	Sodium Ferrocyanide	57-11-4	Stearic Acid
110-61-2	Succinonitrile	1300-72-7	Sodium Xylene Sulfonate	13674-87-8	Dichloro-(2)-Propyl Phosphate	57-13-6	Urea
110-82-7	Cyclohexane	1302-42-7	Sodium Aluminate	13746-66-2	Potassium Ferricyanide	57-50-1	Sugar Cane
110-86-1	Pyridine	1303-96-4	Borax	13755-29-8	Sodium Fluoroborate	57-55-6	Propylene Glycol
110-91-8	Morpholine	1305-62-0	Calcium Hydroxide	13770-89-3	Nickel Sulfamate	502-44-3	Caprolactone
110-94-1	Glutaric Acid	1309-42-8	Magnesium Hydroxide	13774-25-9	Magnesium Bisulfite	506-59-2	Dimethylamine Hydrochloride
111-30-8	Glutaraldehyde	1310-58-3	Potassium Hydroxide	13814-97-6	Tin Fluoborate	506-64-9	Silver Cyanide
111-40-0	Diethylenetriamine	1310-65-2	Lithium Hydroxide	13826-88-5	Zinc Fluoborate	507-40-4	Butyl Hypochlorite (tert-)
111-42-2	Diethanolamine	1310-73-2	Sodium Hydroxide	13840-33-0	Lithium Hypochlorite	513-77-9	Barium Carbonate
111-46-6	Diethylene Glycol	1312-76-1	Potassium Metasilicate	13843-59-9	Ammonium Bromate	526-83-0	Tartaric Acid
111-76-2	2-3utoxyethanol	1313-82-2	Sodium Sulfide	13846-18-9	Calcium Bisulfite	526-95-4	Glyconic Acid
111-77-3	Diethylene Glycol Methyl Ether	1314-56-3	Phosphorous Pentoxide	13943-58-3	Potassium Ferrocyanide	527-7-1	Sodium Gluconate
111-90-0	Diethylene Glycol Monoethyl Ether	1314-85-8	Phosphorus Sesquisulfide	13967-50-5	Potassium Gold Cyanide	532-32-1	Sodium Benzoate
111-96-6	Diethylene Glycol Dimethylether	1317-65-3	Calcium Carbonate	14216-75-2	Nickel Nitrate	540-54-5	Propyl Chloride
112-16-3	_auroyl Chloride	1319-77-3	Cresylic Acid	14217-21-1	Sodium Ferricyanide	540-59-0	Dichloroethylene
112-18-5	Dodecyldimethylamine	1327-41-9	Aluminum Chlorohydrate	14518-69-5	Tetra-n-Butylphosphonium Hydroxide	540-72-7	Sodium Thiocyanate
112-27-6	Triethylene Glycol	1327-52-2	Arsenic Acid	15972-60-8	Alachlore, Herbicide	540-82-9	Ethyl Sulfate

112-30-1	Decanol	1327-53-3	Arsenious Acid	16529-56-9	2-Methyl-3-Butenenitrile	541-41-3	Ethyl Chloroformate
112-34-5	Diethylene Glycol 3utyl Ether	1330-20-7	Xylene	16672-87-0	Ethephon	542-16-5	Aniline Sulfate
112-40-3	Dodecane	1330-43-4	Sodium Tetraborate	16721-80-5	Sodium Bisulfide (Hydrosulfide)	542-62-1	Barium Cyanide
112-41-4	Dodecene	1330-78-5	Tricresyl Phosphate	16721-80-5	Sodium Hydrosulfide	542-75-6	Dichloropropene
112-52-7	_auryl Chloride	1330-86-5	sooctyl Adipate	16872-11-0	F|uoboric Acid	543-59-9	Amyl Chloride
112-53-8	Dodecanol (_auryl Alcohol)	1330-96-4	Sodium Borate	16893-85-9	Sodium Fluorosilicate	543-59-9	Chloropentane
112-53-8	_auryl Alcohol	1333-39-7	Phenol Sulfonic Acid	16940-66-2	Sodium Borohydride (aq. soln.)	543-80-6	Barium Acetate
112-55-0	Dodecylmercaptan	1333-83-1	Sodium Bifluoride	16949-65-8	Magnesium Fluosilicate	544-63-8	Myristic Acid
112-55-0	**_auryl Mercaptan**	**1335-54-2**	**Diisopropanolamine**	**16961-83-4**	**F|uosilicic Acid**	**544-92-3**	**Copper Cyanide**