



Vipel[®] Chemical Resistance Guide

**CORROSION
RESISTANT RESINS
FOR THE HARSH
ENVIRONMENTS**



| **aliancys**



| aliancys

The Right Chemistry for the Harshest Environments - AOC Aliancys is leading the composites industry in the fight against damaging and costly corrosion. Our Vipel corrosion-resistant resins set the global standard for proven performance in a wide range of fibre-reinforced polymer (FRP) applications, including pipes, tanks, water and wastewater treatment, chemical processing, pulp and paper, mining and power generation. With unparalleled strength and durability, AOC Aliancys resins combat corrosion in even the harshest conditions.



Selecting a Resin System

This guide is designed to assist fabricators of FRP components in selecting the appropriate resin for parts which will be exposed to highly corrosive environments. The data presented is the result of years of extensive laboratory testing and actual field exposure in North America and Europe.

Resin system selection is determined by the chemical service and environment to which the equipment will be exposed, end-user specifications and preferences, or fabricator recommendation. AOC Alliancys Corrosion advisors also are available any time to answer questions.

Users frequently specify the resin system and laminate construction for particular applications. The requirement may be based on past experience, resin manufacturer recommendations, the supplier of the chemicals being handled, or the manufacturer of an equipment package. Fabricators should always confirm the source of selection and the acceptability of equivalent alternate systems.

Gathering Data for Resin Selection

When users depend on fabricators to recommend a resin system, it is critical that the user states all aspects of the application and service. Fabricators should get the following information from users:

- The common name and, when possible, the chemical name. For example, muriatic is a common name for hydrochloric acid. This information is generally contained in the Safety Data Sheet for the medium.
- Concentration of each of the chemical components.
- Specific gravity of each chemical solution or mixture.
- pH, if it is an aqueous system.
- Maximum operating temperature (not design temperature) and any anticipated temperature excursions.
- Pressure and/or vacuum conditions. For tanks it is also important to know if filling will be by pressure, such as from a tank wagon.
- Any use in food and drug applications, where applicable.

- Length of exposure to the medium if less than continuous. For example, the laminate may need to withstand only occasional splashes of exposure.
- Process description, where a reaction such as neutralization takes place in the tank.
- Fire retardancy, where applicable, including flame spread rating and smoke requirements.

Sorting Out the Details

Normally a suitable resin can be selected from the Chemical Resistance Guide based on the information in the “Gathering Data” section above. A few comments on information featured in this guide should be noted:

- Temperature data presented in the guide represents the highest temperature at which the individual product has demonstrated acceptable service life in a laboratory environment or in actual field use.
- Testing of coupons is ongoing, and environments not tested may be done at the customer’s request.
- Serviceability should not be interpreted to mean the full retention of all visual and mechanical properties, but rather an expectation of how a properly designed and fabricated structure will perform.
- Short exposure periods at higher temperatures usually do not affect product integrity if the heat distortion temperature of the cured resin is not exceeded. However, the highest temperature reached and the exposure duration at this temperature should be indicated when making inquiries.
- This list does not apply to mixtures of different media unless explicitly stated. It contains chemically declared media and some brand name chemicals, which were not precisely identified with respect to chemical composition.
- When the concentration is listed as less than 100%, the remaining product is water, unless specifically stated otherwise.
- The chemical resistance of Vipel resins can be negatively affected by fillers or thixotropic additives, and should not be used in the corrosion barrier in most applications.

VIPEL PRODUCT OVERVIEW



CORROSION RESINS

Resin Chemistry	Product Series	Description	Heat Distortion Temp. (°C / °F)	Elongation at Break (%)	Styrene Content (%)	FDA Title 21 CFR 177.2420 Versions
Bisphenol A Epoxy Vinyl Ester	F010	Excellent corrosion resistance to both acidic and alkaline environment. Suitable for equipment subjected to high static and dynamic loads.	120 / 248	6.2	38	Yes
	F013	Higher styrene bisphenol A epoxy vinyl ester resin. Offers the best resistance to hot caustic solutions.	111 / 232	6.6	45	Yes
	F007	Lower VOC/HAP bisphenol A epoxy vinyl ester resin.	130 / 266	5.1	32	Yes
Epoxy Novolac Vinyl Ester	F085	Suitable for elevated temperatures. Excellent resistance to acidic and mild alkaline environments. Performs well in a wide range of acidic oxidants and solvents.	149 / 300	3.3	34	No
	F086	Higher heat distortion temperature than Vipel F085. Preferred over standard epoxy novolac resins in chlorine and other oxidated environments.	165 / 330	2.8	37	No
Bisphenol A Fumarate Polyester	F282	Proven resistance to both acidic and alkaline environments. A powdered alkyd version of F282 is available.	135 / 275	2.6	50	Yes
Isophthalic Polyester	F701	A proven resin with broad chemical resistance at moderate temperatures. Resistant to many petroleum products including kerosene, heating oils and crude oils.	107 / 224	2.8	44	Yes
	F737	Higher elongation versions of F701 used primarily where additional flexibility is important, such as in filament winding and pultrusion processes.	92 / 197	4	40	Yes
	F739		89 / 192	4.9	37	Yes
	F764	A high reactivity resin that meets UL 1316, UL 1746 and Steel Tank Institute requirements. Field proven for many fuel blends.	139 / 282	2.3	42	Yes
Terephthalic Polyester	F774	Provides a higher heat distortion temperature while maintaining a higher elongation compared to F764. Vipel F774 also meets UL 1316, UL 1746 and Steel Tank Institute requirements. Field proven for many fuel blends.	146 / 295	2.3	42	No

CORROSION AND FIRE RETARDANT RESINS

Resin Chemistry	Product Series	Description	Heat Distortion Temp. (°C / °F)	Elongation at Break (%)	Styrene Content (%)	FDA Title 21 CFR 177.2420 Versions
Fire Retardant Brominated Bisphenol A Epoxy Vinyl Ester	K022	Versions are available to achieve ASTM E84 Class I and Class II flame spread. Excellent resistance to both acidic and alkaline environments. Provides exceptional thermal and mechanical properties.	112 / 234	5.4	39	No
	K026	Can meet ASTM E84 Class I flame spread and smoke development without antimony trioxide. Excellent resistance to both acidic and alkaline environments. Provides exceptional thermal and mechanical properties.	119 / 246	4	38	No
Fire Retardant Brominated Epoxy Novolac Vinyl Ester	K095	Can meet ASTM E84 Class I flame spread and smoke development without antimony trioxide. Excellent resistance to acidic and mild alkaline environments. Performs well in a wide range of acidic oxidants and solvents. Suitable for elevated temperatures.	143 / 289	3.6	35	No
Fire Retardant Brominated Isophthalic Polyester	K733	Versions are available to achieve ASTM E84 Class I flame spread with or without antimony trioxide. Exhibits mild corrosion resistance to acidic environments.	93 / 200	2.2	39	No
Fire Retardant Chloroendic Acid Polyester	K190	For high temperature applications and demanding chemical environments such as hot wet chlorine and oxidizing chemicals. Can meet ASTM E 84 Class II Flame Spread and Class 1 smoke development with the addition of 3% antimony trioxide.	138 / 280	2.4	39	No

SPECIALTY RESINS

NSF/ANSI 61 Certified Bisphenol A Epoxy Vinyl Ester	F010-H2OB / F010-H2OM	Vipel F010-H2O series of resins are certified to NSF/ANSI 61 standard for use in potable water applications. Both the BPO (B) and MEKP (M) cure versions have been certified for fabricating tanks 25 gallons or greater and pipes one inch in diameter or greater. When these products are used as directed, the fabricator does not need to perform additional testing to manufacture NSF / ANSI 61 compliant coatings. The Vipel F010-H2OB version can also be used for sodium hypochlorite containment.	120 / 248	6.2	39	Yes
Elastomeric Bisphenol A Epoxy Vinyl Ester	F017	Designed as a primer for bonding fiberglass laminates to steel, concrete and other substrates. Exhibits improved interlaminar adhesion and can be used to manufacture composites with extra flexibility.	93 / 199	9.1	40	Yes
Isophthalic Neopentyl Glycol Polyester	F707- PVA	PVC bonding resin with broad chemical resistance at moderate temperatures.	78 / 173	3.7	48	Yes

APPLICATION RECOMMENDATIONS

CAUTION:

Many of the applications and chemical services listed in the guide make reference to NOTES in the column adjacent to the chemical. These notes are an integral part of the listing recommendation and must be strictly followed. The notes will indicate those applications requiring different veil materials, cure systems, liner construction or thickness and post curing requirements.

In those instances where the specific application is not listed, the fabricator is encouraged to contact AOC Aliancys. The information in the "Gathering Data" section above should be included and directed to:

AOC Aliancys
Corrosion Product Leader
Phone: +1 901.854.2800
Fax: +1 901.854.2895
E-mail: corrosion@aocaliencys.com

CHEMICAL LISTINGS NOTES:

1. Synthetic veil recommended.
2. Double synthetic veil recommended.
3. Double C-glass veil recommended.
4. The thickness of the chemical resistance barrier (veil plus chopped glass fibers) should be ≈ 0.200 inches thick.
5. Carbon Veil is recommended for improved service life.
6. Acid resistant (ECR) glass recommended in chopped glass layer behind the veil layer(s).
7. BPO/DMA or BPO/DEA curing system is recommended for improved service life.
8. Post cure recommended for improved service life.
9. Satisfactory up to maximum stable temperature of component.
10. Contact Corrosion Product Leader (see page 3).
11. Vipel F764 or Vipel F774 are recommended as the preferred products over Vipel F701.
12. Only F010, F007, F013, F015, F701 and F737 are suitable for FDA/USDA applications.
13. Vipel F013 should be used instead of F010.

ABBREVIATIONS:

- **NR** Not recommended.
- **"ALL"** in concentration column refers to concentrations in water.
- **"100"** in concentration column refers to the pure chemical.
- **"SAT'D"** in concentration column refers to maximum dissolved solute in water at a given temperature/pressure.

The information contained in this guide is based on laboratory data and field experience. AOC Aliancys believes this information to be reliable, but does not guarantee its applicability to the user's process or assume any liability for occurrences arising out of its use. The user, by accepting the products described herein, agrees to be responsible for thoroughly testing each product before committing to production. Our recommendations should not be taken as inducements to infringe any patent or violate any law, safety code or insurance regulation. The term resistance is used in the sense which is commonly used in the trade, not as the complete retention of all optical and mechanical characteristics. Refer to ASTM G 15 and ASME/ANSI RTP-1 for common corrosion definitions.

The resistance of Vipel resins to chemical environments listed in this guide has been established according to ASTM C581 and the ASME/ANSI RTP-1 standard coded "Reinforced Thermoset Plastic Corrosion Resistant Equipment."

The Vipel Chemical Resistance Guide and its contents are the confidential and proprietary information of AOC Aliancys and it may not be modified altered deconstructed or presented in any other manner without the explicit authorization of AOC Aliancys and/or its legal counsel.

CHEMICAL LISTINGS

CONCENTRATIONS AND RECOMMENDED MAXIMUM CONTINUOUS EXPOSURE TEMPERATURE - DEGREES °F AND °C

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026			F086		F282	F764 F774	F739	
			°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C
ACETALDEHYDE	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
ACETIC ACID	10	6	200/93	200/93	-	210/99	200/93	200/93	210/99	130/54	-
ACETIC ACID	25	6	200/93	200/93	-	210/99	200/93	200/93	210/99	130/54	-
ACETIC ACID	50	6	160/71	160/71	-	180/82	180/82	130/54	180/82	120/49	-
ACETIC ACID	75	6	140/60	140/60	-	150/66	150/66	100/38	150/66	NR	NR
ACETONE	1		-	-	NR	150/66	150/66	150/66	NR	NR	NR
ACETONE	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
ACETONE : MEK : MIBK	6		-	-	NR	105/41	80/27	-	NR	NR	NR
ACETONITRILE	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
ACRYLAMIDE	50		-	-	100/38	100/38	100/38	-	80/27	-	-
ACRYLIC ACID	10		100/38	100/38	100/38	100/38	100/38	100/38	100/38	100/38	NR
ACRYLIC ACID	25		100/38	100/38	NR	100/38	NR	100/38	100/38	100/38	NR
ACRYLIC LATEX	ALL		180/82	180/82	125/52	180/82	180/82	180/82	100/38	-	-
ACRYLONITRILE	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
ADIPIC ACID	100		180/82	180/82	180/82	180/82	180/82	180/82	200/93	-	-
ADIPONITRILE	100		120/49	120/49	100/38	120/49	120/49	120/49	160/71	-	-
ALKYL BENZENE SULPHONIC ACID	> 0.5		140/60	140/60	140/60	140/60	140/60	140/60	100/38	-	-
ALKYL AMINO POLYGLYCOL ETHER	100		NR	NR	80/27	80/27	80/27	80/27	90/32	-	-
ALKYL ARYL SULFONATE SALTS	100		140/60	140/60	120/49	140/60	140/60	140/60	150/66	-	-
ALKYL ARYL SULFONIC ACID	100	6	140/60	140/60	120/49	140/60	140/60	140/60	160/71	-	-
ALKYL ARYL AMMONIUM SALT	> 0.5		180/82	180/82	180/82	180/82	180/82	180/82	180/82	-	-
ALKYL BENZENE AMMONIUM SALT	> 0.5		180/82	180/82	180/82	180/82	180/82	180/82	-	-	-
ALKYL BENZENE SULFONIC ACID	> 0.5		140/60	140/60	120/49	140/60	140/60	140/60	150/66	-	-
ALKYL NAPHTOL POLYGLYCOL ETHER	100		140/60	140/60	120/49	140/60	140/60	140/60	150/66	-	-
ALKYL ALKOXYLATE	100		140/60	140/60	120/49	140/60	140/60	140/60	150/66	-	-
ALKYL ETHER PHOSPHATE	ALL		80/27	80/27	80/27	80/27	80/27	80/27	90/32	-	-
ALKYL ETHER SULFATE	ALL		140/60	140/60	120/49	140/60	140/60	140/60	150/66	-	-
ALKYL SULFATES AND SALTS	> 0.5		140/60	140/60	120/49	140/60	140/60	140/60	150/66	-	-
ALKYL PHENOL POLYGLYCOL ETHER	ALL		-	-	80/27	80/27	80/27	80/27	80/27	-	-
ALKYL PHENOL POLYGLYCOL ETHER SULFATES AND SALTS	> 0.5		140/60	140/60	120/49	140/60	140/60	140/60	150/66	-	-
ALKYL SULFONATE	ALL		140/60	140/60	120/49	140/60	140/60	140/60	150/66	-	-
ALKYL SULFONATE AND SULFONATES	ALL		140/60	140/60	120/49	140/60	140/60	140/60	150/66	-	-
ALLYL ALCOHOL	100		NR	NR	NR	80/27	NR	NR	NR	NR/ NR	NR
ALLYL CHLORIDE	100		NR	NR	80/27	80/27	80/27	-	80/27	NR/ NR	NR
ALPHA METHYLSTYRENE	100		NR	NR	NR	120/49	100/38	NR	NR	NR/ NR	NR
ALUM	SAT'D		200/93	200/93	190/88	210/99	210/99	210/99	220/104	170/77	150/66

CHEMICAL LISTINGS

CONCENTRATIONS AND RECOMMENDED MAXIMUM CONTINUOUS EXPOSURE TEMPERATURE - DEGREES °F AND °C

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026	°F/°C	°F/°C	°F/°C	F086	°F/°C	°F/°C	°F/°C	F764 F774
ALUMINUM CHLORIDE	ALL		200/93	200/93	190/88	210/99	210/99	210/99	220/104	170/77	100/38
ALUMINUM CHLOROHYDRATE	> 0.5		200/93	200/93	190/88	210/99	210/99	210/99	170/77	170/77	100/38
ALUMINUM CHLOROHYDROXIDE	50		200/93	200/93	190/88	210/99	210/99	210/99	-	170/77	100/38
ALUMINUM CITRATE	> 0.5		200/93	200/93	190/88	210/99	210/99	210/99	220/104	170/77	100/38
ALUMINUM FLUORIDE	ALL	2	115/46	115/46	90/32	115/46	115/46	115/46	90/32	90/32	90/32
ALUMINUM HYDROXIDE	ALL	2	160/71	160/71	160/71	180/82	180/82	160/71	-	-	-
ALUMINUM NITRATE	SAT'D		160/71	160/71	180/82	180/82	180/82	160/71	190/88	150/66	130/54
ALUMINUM POTASSIUM SULPHATE	SAT'D		195/91	195/91	190/88	210/99	210/99	210/99	210/99	170/77	140/60
ALUMINUM SULFATE/ACETIC ACID	ALL	6,10	140/60	140/60	100/38	180/82	180/82	180/82	200/93	-	-
ALUMINUM SULPHATE	SAT'D		195/91	195/91	180/82	210/99	210/99	210/99	210/99	170/77	140/60
AMINO ACIDS	100		105/41	105/41	80/27	105/41	105/41	105/41	140/60	-	-
AMINOSULPHONIC ACID	ALL		180/82	180/82	120/49	180/82	180/82	180/82	190/88	-	-
AMMONIA (DRY GAS)	100		100/38	100/38	100/38	100/38	100/38	100/38	100/38	80/27	NR
AMMONIA VAPORS (WET)	40 (Vol.%)		180/82	180/82	180/82	180/82	180/82	180/82	NR	NR / NR	-
AMMONIA, LIQUIFIED GAS	100		NR	NR	NR	NR	NR	NR	NR	NR / NR	NR
AMMONIUM ACETATE	ALL		80/27	80/27	80/27	100/38	80/27	80/27	-	-	-
AMMONIUM BENZOATE	ALL		180/82	180/82	180/82	180/82	180/82	180/82	120/49	-	-
AMMONIUM BICARBONATE	0.5 - 50		160/71	160/71	160/71	160/71	160/71	160/71	-	NR / NR	NR
AMMONIUM BICARBONATE	SAT'D		160/71	160/71	160/71	160/71	160/71	160/71	NR	NR / NR	NR
AMMONIUM BIFLUORIDE	> 0.5	2	150/66	150/66	150/66	150/66	150/66	150/66	-	-	-
AMMONIUM BISULPHITE BLACK LIQUOR	ALL		180/82	180/82	140/60	180/82	180/82	180/82	180/82	NR / NR	NR
AMMONIUM BROMATE	0.5 - 43		200/93	200/93	170/77	210/99	210/99	210/99	210/99	180/82	120/49
AMMONIUM BROMIDE	0.5 - 43		200/93	200/93	170/77	210/99	210/99	210/99	210/99	180/82	120/49
AMMONIUM CARBONATE	> 0.5		150/66	150/66	150/66	150/66	150/66	150/66	NR	NR	NR
AMMONIUM CHLORIDE	> 0.5		200/93	200/93	170/77	210/99	210/99	210/99	200/93	180/82	160/71
AMMONIUM CITRATE	> 0.5		150/66	150/66	150/66	160/71	160/71	160/71	-	120/49	-
AMMONIUM FLUORIDE	> 0.5	2,	150/66	150/66	150/66 /	150/66	150/66	170/77	-	NR / NR	NR
AMMONIUM HYDROXIDE (AQUEOUS AMMONIA)	1	2	180/82	180/82	150/66	-	-	175/79	NR	NR	NR
AMMONIUM HYDROXIDE (AQUEOUS AMMONIA)	5	2	180/82	180/82	100/38	-	-	160/71	NR	NR	NR
AMMONIUM HYDROXIDE (AQUEOUS AMMONIA)	10	2	160/71	160/71	100/38	120/49	120/49	150/66	NR	NR	NR
AMMONIUM HYDROXIDE (AQUEOUS AMMONIA)	20	2	150/66	150/66	-	100/38	100/38	140/60	NR	NR	NR
AMMONIUM HYDROXIDE (AQUEOUS AMMONIA)	29	2	100/38	100/38	-	-	-	100/38	NR	NR	NR
AMMONIUM LAURYL SULPHATE	0.5 - 30		120/49	120/49	100/38	120/49	120/49	120/49	120/49	-	-
AMMONIUM LIGNOSULPHONATE	50		180/82	180/82	150/66	180/82	180/82	-	-	-	-
AMMONIUM MOLYBDATE	> 0.5		150/66	150/66	120/49	120/49	120/49	150/66	NR	-	-

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026	°F/°C	°F/°C	°F/°C	F086	°F/°C	°F/°C	°F/°C	F764 F774
AMMONIUM NITRATE	SAT'D		200/93	200/93	150/66	210/99	210/99	210/99	200/93	160/71	140/60
AMMONIUM OXALATE	> 0.5		150/66	150/66	150/66	100/38	100/38	120/49	NR	-	-
AMMONIUM PENTABORATE	0.5 - 12		120/49	120/49	120/49	100/38	100/38	100/38	NR	-	-
AMMONIUM PERSULPHATE	> 0.5		200/93	200/93	200/93	200/93	200/93	200/93	150/66	NR	NR
AMMONIUM PHOSPHATE, DIBASIC	> 0.5		200/93	200/93	180/82	210/99	210/99	210/99	150/66	NR	NR
AMMONIUM PHOSPHATE, MONOBASIC	> 0.5		200/93	200/93	180/82	210/99	210/99	210/99	-	150/66	130/54
AMMONIUM POLYSULPHIDE	SAT'D		120/49	120/49	80/27	150/66	150/66	120/49	NR	-	-
AMMONIUM SULPHATE	SAT'D		200/93	200/93	180/82	210/99	210/99	210/99	210/99	170/77	120/49
AMMONIUM SULPHIDE	SAT'D		120/49	120/49	80/27	120/49	120/49	100/38	120/49	-	-
AMMONIUM SULPHITE	SAT'D		150/66	150/66	120/49	150/66	150/66	150/66	NR	NR	NR
AMMONIUM THIOCYANATE	20		200/93	200/93	180/82	210/99	210/99	210/99	200/93	170/77	130/54
AMMONIUM THIOCYANATE	50		120/49	120/49	80/27	120/49	120/49	120/49	120/49	100/38	80/27
AMMONIUM THIOSULFATE	SAT'D		120/49	120/49	80/27	120/49	120/49	120/49	120/49	NR	NR
AMYL ACETATE	100		NR	NR	NR	120/49	-	100/38	90/32	NR	NR
AMYL ALCOHOL (SEC-)	100	11	120/49	120/49	120/49	150/66	140/60	150/66	150/66	100/38	NR
AMYL ALCOHOL (SEC-)	VAPORS	11	120/49	120/49	150/66	210/99	210/99	210/99	210/99	100/38	NR
AMYL ALCOHOL (TERT-)	100	11	120/49	120/49	120/49	150/66	140/60	150/66	150/66	100/38	NR
AMYL ALCOHOL (TERT-)	VAPORS	11	120/49	120/49	150/66	210/99	210/99	210/99	210/99	100/38	NR
AMYL CHLORIDE	100		120/49	120/49	120/49	120/49	120/49	120/49	80/27	NR	NR
ANILINE	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
ANILINE HYDROCHLORIDE	> 0.5		180/82	180/82	160/71	180/82	180/82	180/82	-	-	-
ANILINE SULPHATE	> 0.5		200/93	200/93	170/77	210/99	210/99	210/99	200/93	NR	NR
ANTIMONY PENTACHLORIDE	100		100/38	100/38	80/27	100/38	100/38	100/38	90/32	-	-
ANTIMONY TRICHLORIDE	100		100/38	100/38	80/27	100/38	100/38	100/38	90/32	-	-
AQUA REGIA (HCL:HNO3 = 3:1)	100	3, 4, 6, 8, 10	NR	NR	NR	NR	NR	NR	130/54	NR	NR
ARSENIC ACID	> 0.5		180/82	180/82	-	180/82	180/82	180/82	-	NR	NR
ARSENIOS ACID	19 Be		180/82	180/82	150/66	180/82	180/82	180/82	-	-	-
BARIUM ACETATE	> 0.5		180/82	180/82	180/82	180/82	180/82	180/82	180/82	NR	NR
BARIUM BROMIDE	> 0.5		200/93	200/93	200/93	200/93	200/93	200/93	-	-	-
BARIUM CARBONATE	ALL		180/82	180/82	180/82	180/82	180/82	180/82	180/82	100/38	NR
BARIUM CHLORIDE	> 0.5		200/93	200/93	200/93	210/99	210/99	210/99	200/93	170/77	130/54
BARIUM CYANIDE	> 0.5		150/66	150/66	150/66	150/66	150/66	150/66	-	-	-
BARIUM HYDROXIDE	> 0.5		150/66	150/66	110/43	150/66	150/66	150/66	NR	NR	NR
BARIUM NITRATE	> 0.5		190/88	190/88	180/82	210/99	210/99	210/99	200/93	-	-
BARIUM SULPHATE	SAT'D		190/88	190/88	180/82	210/99	210/99	210/99	180/82	170/77	120/49
BARIUM SULPHIDE	> 0.5		180/82	180/82	180/82	180/82	180/82	180/82	-	NR	NR
BEER	100	12	120/49	120/49	120/49	NR	NR	120/49	NR	90/32	NR
BEER SUGAR LIQUOR	> 0.5	12	180/82	180/82	180/82	200/93	200/93	180/82	180/82	120/49	80/27
BENZALDEHYDE	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
BENZENE	100		NR	NR	NR	100/38	NR	NR	90/32	NR	NR

CHEMICAL LISTINGS

CONCENTRATIONS AND RECOMMENDED MAXIMUM CONTINUOUS EXPOSURE TEMPERATURE - DEGREES °F AND °C

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026	°F/°C	°F/°C	°F/°C	F086	°F/°C	°F/°C	°F/°C	F764 F774
BENZENE	VAPORS	11	NR	NR	80/27	120/49	80/27	NR	90/32	90/32	NR
BENZENE SULPHONIC ACID	50		150/66	150/66	120/49	150/66	150/66	150/66	150/66	NR	NR
BENZENE: ETHYL BENZENE	100		NR	NR	NR	80/27	80/27	NR	80/27	-	NR
BENZOIC ACID	SAT'D		200/93	200/93	180/82	210/99	210/99	210/99	210/99	170/77	100/38
BENZOQUINONES	100		150/66	150/66	120/49	180/82	180/82	180/82	150/66	-	-
BENZOYL BENZOIC ACID (2-)	> 0.5		200/93	200/93	180/82	210/99	210/99	210/99	210/99	-	-
BENZOYL BENZOIC ACID (4-)	> 0.5		200/93	200/93	180/82	210/99	210/99	210/99	210/99	-	-
BENZYL ALCOHOL	100		NR	NR	80/27	100/38	100/38	100/38	100/38	-	NR
BENZYL CHLORIDE	100		NR	NR	NR	-	-	-	NR	NR	NR
BENZYL TRIMETHYL AMMONIUM CHLORIDE	60		100/38	100/38	100/38	100/38	100/38	100/38	100/38	-	-
BLACK LIQUOR (PULP MILL)	ALL		200/93	200/93	150/66	200/93	200/93	180/82	-	NR	NR
BLEACH, CHLORINE DIOXIDE, WET	SAT'D	9,10	150/66	150/66	120/49	180/82	180/82	180/82	180/82	NR	NR
BLEACH, CHLORINE WATER	SAT'D		180/82	180/82	120/49	200/93	200/93	180/82	140/60	NR	NR
BLEACH, CHLORITE	10		100/38	100/38	-	120/49	120/49	120/49	140/60	NR	-
BLEACH, (SODIUM HYPOCHLORITE, pH >11, ACTIVE CHLORINE <18%)		2,7,8,9,10	150/66	150/66	150/66	-	-	120/49	-	NR	NR
BLEACH, (CALCIUM HYPOCHLORITE, pH >11, ACTIVE CHLORINE <18%)		2,7,8,9,10	180/82	180/82	-	100/38	100/38	150/66	NR	NR	NR
BORAX	> 0.5		200/93	200/93	180/82	210/99	210/99	210/99	180/82	170/77	120/49
BORIC ACID	> 0.5		200/93	200/93	180/82	210/99	210/99	210/99	210/99	180/82	120/49
BRINE, SALT	> 0.5	12	210/99	210/99	210/99	210/99	210/99	210/99	210/99	150/66	140/60
BROMINE GAS, DRY	100		100/38	100/38	100/38	100/38	100/38	100/38	100/38	NR	NR
BROMINE GAS, WET	100		100/38	100/38	100/38	100/38	100/38	100/38	100/38	NR	NR
BROMINE LIQUID	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
BROMINE WATER	5		180/82	180/82	150/66	180/82	180/82	150/66	-	NR	NR
BUTANEDIOL (1,3-)	100		100/38	100/38	150/66	180/82	180/82	180/82	190/88	175/79	-
BUTANEDIOL (1,4-)	100		100/38	100/38	150/66	180/82	180/82	180/82	190/88	175/79	-
BUTANEDIOL (2,3-)	100		100/38	100/38	150/66	180/82	180/82	180/82	190/88	175/79	-
BUTOXYDIETHYLENE GLYCOL	100		-	-	80/27	100/38	100/38	100/38	100/38	NR	NR
BUTOXYETHANOL (2-)	100		80/27	80/27	100/38	100/38	100/38	100/38	100/38	-	-
BUTOXYETHOXYETHANOL (2,2-)	100		80/27	80/27	100/38	100/38	100/38	100/38	100/38	NR	NR
BUTYL ACETATE (N-)	100		NR	NR	-	80/27	80/27	90/32	-	-	NR
BUTYL ACETATE (SEC)	100		NR	NR	-	80/27	80/27	90/32	-	NR	NR
BUTYL ACETATE (TERT)	100		NR	NR	-	80/27	80/27	90/32	-	NR	NR
BUTYL ACRYLATE	100		NR	NR	-	80/27	NR	80/27	-	NR	NR
BUTYL ALCOHOL (N-)	ALL	11	100/38	100/38	120/49	150/66	120/49	120/49	100/38	80/27	NR

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026 °F/°C	°F/°C	°F/°C	F086 °F/°C	°F/°C	°F/°C	°F/°C	°F/°C	F764 F774 °F/°C
BUTYLALCOHOL (SEC-)	ALL	11	100/38	100/38	120/49	150/66	120/49	140/60	100/38	80/27	NR
BUTYLALCOHOL (TERT-)	ALL	11	100/38	100/38	120/49	150/66	120/49	140/60	100/38	80/27	NR
BUTYLAMINE (N-)	50		NR	NR	NR	-	-	-	-	NR	NR
BUTYLAMINE (N-)	100		NR	NR	-	NR	NR	NR	-	NR	NR
BUTYLAMINE (SEC-)	50		80/27	80/27	-	80/27	80/27	80/27	-	NR	NR
BUTYLAMINE (SEC-)	100		NR	NR	NR	NR	NR	NR	-	NR	NR
BUTYLAMINE (TERT-)	50		80/27	80/27	-	80/27	80/27	80/27	-	NR	NR
BUTYLAMINE (TERT-)	100		NR	NR	NR	NR	NR	NR	-	NR	NR
BUTYL BENZOATE	70		-	-	-	100/38	100/38	100/38	-	NR	NR
BUTYL BENZYL PHTHALATE	100		180/82	180/82	160/71	210/99	210/99	200/93	200/93	-	-
BUTYL CARBITOL	100		-	-	80/27	100/38	100/38	100/38	100/38	-	-
BUTYL CELLOSOLVE	100		-	-	80/27	100/38	100/38	100/38	100/38	-	NR
BUTYL DIGLYCOL	100		80/27	80/27	100/38	120/49	120/49	120/49	130/54	-	NR
BUTYL STEARATE (5% IN MINERAL SPIRITS)			100/38	100/38	100/38	100/38	100/38	80/27	80/27	NR	NR
BUTYLALDEHYDE	100		NR	NR	-	100/38	100/38	80/27	-	NR	NR
BUTYLENE GLYCOL	100		160/71	160/71	180/82	180/82	180/82	180/82	160/71	160/71	120/49
BUTYLENE OXIDE	100		NR	NR	NR	NR	NR	NR	-	NR	NR
BUTYRIC ACID	50		200/93	200/93	180/82	200/93	200/93	150/66	120/49	130/54	-
BUTYRIC ACID	85		80/27	80/27	100/38	120/49	120/49	100/38	90/32	NR	NR
BUTYRIC ACID	100		80/27	80/27	100/38	120/49	120/49	NR	90/32	NR	NR
CADMIUM CHLORIDE	> 0.5		200/93	200/93	200/93	200/93	200/93	200/93	210/99	140/60	100/38
CALCIUM BISULPHITE	> 0.5		200/93	200/93	200/93	210/99	210/99	200/93	-	170/77	80/27
CALCIUM BROMIDE	> 0.5		200/93	200/93	200/93	210/99	210/99	210/99	-	140/60	80/27
CALCIUM CARBONATE SLURRY	ALL		180/82	180/82	180/82	180/82	180/82	180/82	-	160/71	110/45
CALCIUM CHLORATE	> 0.5		200/93	200/93	200/93	210/99	210/99	210/99	210/99	140/60	100/38
CALCIUM CHLORIDE	SAT'D		200/93	200/93	200/93	210/99	210/99	210/99	210/99	180/82	130/54
CALCIUM HYDROXIDE	100	2	210/99	210/99	210/99	210/99	210/99	210/99	NR	NR	NR
CALCIUM HYDROXIDE SLURRY	0.5 - 25	2	180/82	180/82	120/49	100/38	100/38	180/82	NR	NR	NR
CALCIUM HYPOCHLORITE, pH >11, ACTIVE CHLORINE <18%		2,7,8,9,10	180/82	180/82	-	100/38	100/38	150/66	NR	NR	NR
CALCIUM NITRATE	> 0.5		200/93	200/93	200/93	210/99	210/99	210/99	210/99	180/82	130/54
CALCIUM SULPHATE	> 0.5		200/93	200/93	200/93	210/99	210/99	210/99	210/99	180/82	130/54
CALCIUM SULPHITE	> 0.5		200/93	200/93	180/82	200/93	200/93	200/93	-	-	-
CALCIUM THIOSULFATE	ALL		120/49	120/49	120/49	180/82	180/82	180/82	-	90/32	90/32
CANE SUGAR LIQUOR & SWEET WATER	> 0.5	12	180/82	180/82	180/82	200/93	200/93	180/82	180/82	120/49	80/27
CAPRIC ACID	100		180/82	180/82	150/66	180/82	180/82	180/82	180/82	140/60	80/27
CAPROLACTAM	50		100/38	100/38	100/38	100/38	100/38	100/38	-	-	-
CAPRYLIC ACID	100		200/93	200/93	170/77	210/99	210/99	210/99	140/60	160/71	80/27
CARBON DIOXIDE GAS			325/163	325/163	350/177	400/204	400/204	250/121	200/93	190/88	140/60
CARBON DISULPHIDE	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
CARBON MONOXIDE GAS			325/163	325/163	350/177	400/204	400/204	250/121	200/93	190/88	140/60

CHEMICAL LISTINGS

CONCENTRATIONS AND RECOMMENDED MAXIMUM CONTINUOUS EXPOSURE TEMPERATURE - DEGREES °F AND °C

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026			F086			F764 F774	F739	
			°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C
CARBON TETRACHLORIDE	100	11	150/66	150/66	180/82	180/82	180/82	120/49	130/54	80/27	NR
CARBONIC ACID	ALL		160/71	160/71	-	-	-	-	-	-	-
CARBOWAX, POLYETHYLENE GLYCOL	100		150/66	150/66	180/82	180/82	180/82	180/82	160/71	-	-
CARBOXY ETHYLCELLULOSE	10		150/66	150/66	150/66	150/66	150/66	150/66	-	-	-
CARBOXY METHYLCELLULOSE	ALL		150/66	150/66	150/66	150/66	150/66	150/66	-	-	-
CASHEW NUT OIL	100	12	150/66	150/66	150/66	200/93	200/93	200/93	180/82	140/60	100/38
CASTOR OIL	100		160/71	160/71	160/71	160/71	160/71	160/71	160/71	140/60	-
CHLORIC ACID	CONC.		80/27	80/27	-	80/27	80/27	80/27	-	NR	NR
CHLORINATED BRINE, PH<2.5	SAT'D CI	2,4,6,8	180/82	180/82	180/82	200/93	200/93	180/82	180/82	NR	NR
CHLORINATED BRINE, pH >9	SAT'D CI	2,6,7,8	180/82	180/82	180/82	130/54	130/54	180/82	NR	NR	NR
CHLORINATED BRINE, pH 2.5-9	SAT'D CI	10									
CHLORINATED WAXES	100		180/82	180/82	180/82	180/82	180/82	180/82	180/82	140/60	100/38
CHLORINE	LIQUID	4,6,8,	NR	NR	NR	NR	NR	NR	100/38	NR	NR
CHLORINE DIOXIDE <1G/LITER	0.1	9,10	140/60	140/60	140/60	180/82	180/82	160/71	90/32	NR	NR
CHLORINE GAS, DRY	100	3,4,6,8	180/82	180/82	180/82	200/93	200/93	200/93	200/93	NR	NR
CHLORINE GAS, WET	100	3,4,6,8	180/82	180/82	180/82	200/93	200/93	200/93	200/93	NR	NR
CHLORINATED WATER, pH <2.5	SAT'D CI	2,4,6,8	180/82	180/82	180/82	200/93	200/93	180/82	180/82	NR	NR
CHLORINATED WATER, pH >9	SAT'D CI	2,6,7,8	180/82	180/82	180/82	130/54	130/54	180/82	NR	NR	NR
CHLORINATED WATER, pH 2.5-9	SAT'D CI	10									
CHLORINE/HYDROCHLORIC ACID, WET		3,4,6,8	160/71	160/71	150/66	180/82	180/82	200/93	140/60	-	-
CHLOROACETIC ACID	50	6	100/38	100/38	100/38	100/38	100/38	100/38	100/38	NR	NR
CHLOROACETIC ACID	80		NR	NR	NR	NR	NR	NR	NR	NR	NR
CHLOROACETIC ACID	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
CHLOROBENZENE	100		NR	NR	NR	100/38	80/27	NR	NR	NR	NR
CHLOROCHOLINCHLORIDE	75		160/71	160/71	160/71	160/71	160/71	140/60	160/71	-	NR
CHLOROETHYLENE (1,1,1-)	100		100/38	100/38	100/38	120/49	120/49	100/38	-	NR	NR
CHLOROFORM	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
CHLOROPARAFFIN	100		180/82	180/82	180/82	180/82	180/82	180/82	180/82	140/60	100/38
CHLOROPROPIONIC ACID (-2)	ALL		80/27	80/27	80/27	80/27	80/27	80/27	-	NR	NR
CHLOROPROPIONIC ACID (-3)	ALL		80/27	80/27	80/27	80/27	80/27	80/27	-	NR	NR
CHLOROPYRIDINE (TETRA)	100		80/27	80/27	80/27	120/49	120/49	NR	-	NR	NR
CHLOROSULPHONIC ACID	10		NR	NR	NR	NR	NR	NR	-	NR	NR
CHLOROSULPHONIC ACID	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
CHLOROTOLUENE	10		80/27	80/27	-	80/27	80/27	NR	-	NR	NR
CHLOROTOLUENE	100		NR	NR	NR	NR	NR	NR	NR	-	NR

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026	°F/°C	°F/°C	°F/°C	F086	°F/°C	°F/°C	°F/°C	F774
			°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C
CHROME PLATING SOLUTION	10		120/49	120/49	120/49	150/66	120/49	120/49	100/38	NR	NR
CHROMIC ACID	10	6,8	150/66	150/66	100/38	150/66	150/66	150/66	180/82	100/38	NR
CHROMIC ACID	20	6,8	120/49	120/49	-	150/66	150/66	100/38	150/66	-	NR
CHROMIC ACID	30	6,8	NR	NR	NR	NR	NR	NR	120/49	NR	NR
CHROMIC ACID	40	6,8	NR	NR	NR	NR	NR	NR	90/32	NR	NR
CHROMIC/SULPHURIC ACID (2.5% / 13.7%)	16.2	6,8	NR	NR	-	NR	NR	NR	-	NR	NR
CHROMIC/SULPHURIC ACID, MAX. CONC. MIX. 10%	10	6,8	120/49	120/49	120/49	150/66	150/66	120/49	100/38	-	-
CHROMIUM SULPHATE	> 0.5		200/93	200/93	150/66	200/93	200/93	200/93	150/66	NR	NR
CHROMOUS SULPHATE	100		200/93	200/93	150/66	200/93	200/93	200/93	150/66	NR	NR
CINNAMALDEHYDE	100		80/27	80/27	-	80/27	80/27	NR	-	-	-
CITRIC ACID	> 0.5	6	200/93	200/93	170/77	210/99	210/99	210/99	200/93	180/82	80/27
COBALT CHLORIDE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	160/71	-	-
COBALT CITRATE	12		180/82	180/82	180/82	180/82	180/82	180/82	190/88	-	-
COBALT NITRATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	-	-
COCONUT FATTY ACID	100		200/93	200/93	200/93	200/93	200/93	200/93	210/99	-	-
COCONUT OIL	100	12	180/82	180/82	200/93	200/93	200/93	200/93	200/93	140/60	100/38
COD LIVER OIL	100	12	100/38	100/38	100/38	100/38	100/38	100/38	100/38	80/27	-
COPPER ACETATE	> 0.5		180/82	180/82	180/82	180/82	180/82	180/82	190/88	140/60	NR
COPPER AMMONIUM CHLORIDE	> 0.5		180/82	180/82	180/82	180/82	180/82	180/82	190/88	-	-
COPPER CYANIDE	100		200/93	200/93	200/93	210/99	210/99	210/99	200/93	90/32	NR
COPPER(I) CHLORIDE	SAT'D		200/93	200/93	200/93	210/99	210/99	210/99	210/99	180/82	140/60
COPPER(I) SULPHATE	SAT'D		200/93	200/93	200/93	210/99	210/99	210/99	210/99	180/82	100/38
COPPER(II) CHLORIDE	SAT'D		200/93	200/93	200/93	210/99	210/99	210/99	210/99	180/82	140/60
COPPER(II) NITRATE	ALL		200/93	200/93	200/93	210/99	210/99	210/99	210/99	160/71	100/38
COPPER(II) SULPHATE	SAT'D		200/93	200/93	200/93	210/99	210/99	210/99	210/99	180/82	100/38
CORN OIL	100	12	180/82	180/82	210/99	210/99	210/99	210/99	210/99	150/66	100/38
CORN STARCH SLURRY	> 0.5	12	200/93	200/93	210/99	210/99	210/99	210/99	210/99	120/49	100/38
CORN SUGAR	> 0.5	12	200/93	200/93	200/93	210/99	210/99	210/99	210/99	120/49	100/38
COTTONSEED OIL	100	12	200/93	200/93	210/99	210/99	210/99	210/99	100/38	100/38	-
CRESOL (M-)	10		NR	NR	-	80/27		NR	-	-	-
CRESOL (O-)	10		NR	NR	-	80/27	-	NR	-	-	-
CRESOL (P-)	10		NR	NR	-	80/27	-	NR	-	-	-
CRUDE OIL, SOUR AND SWEET	100	11	200/93	200/93	210/99	210/99	210/99	210/99	-	180/82	100/38
CYCLOHEXANE	100	11	120/49	120/49	150/66	150/66	150/66	120/49	140/60	120/49	NR
CYCLOHEXANOL	100	11	100/38	100/38	100/38	120/49	120/49	120/49	-	-	NR
CYCLOHEXANONE	100	11	NR	NR	-	80/27	-	NR	-	NR	NR
CYCLOHEXYLAMINE	100		-	-	-	80/27	NR	NR	-	-	NR
DECALIN	100		140/60	140/60	120/49	140/60	140/60	140/60	-	-	-
DECANES	100		180/82	180/82	180/82	180/82	180/82	180/82	180/82	-	-
DECANOL	100	11	120/49	120/49	150/66	180/82	150/66	180/82	140/60	100/38	NR

CHEMICAL LISTINGS

CONCENTRATIONS AND RECOMMENDED MAXIMUM CONTINUOUS EXPOSURE TEMPERATURE - DEGREES °F AND °C

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026	°F/°C	°F/°C	°F/°C	F086	°F/°C	°F/°C	°F/°C	F764 F774
DECENES	100		180/82	180/82	-	200/93	200/93	200/93	-	-	-
DEIONIZED WATER	100	8, 10, 11, 12	180/82	180/82	180/82	180/82	180/82	180/82	180/82	150/66	120/49
DEMINERALIZED WATER	100	8, 10, 11, 12	180/82	180/82	180/82	180/82	180/82	180/82	180/82	150/66	120/49
DETERGENTS, SULPHONATED	> 0.5		160/71	160/71	180/82	200/93	180/82	200/93	-	160/71	80/27
DI 2-ETHYL HEXYL PHOSPHORIC ACID (IN KEROSENE)	20		-	-	-	210/99	210/99	210/99	210/99	-	-
DIACETONE ALCOHOL	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
DIALLYL PHTHALATE	100	11	180/82	180/82	210/99	210/99	210/99	180/82	210/99	160/71	110/43
DIAMMONIUM PHOSPHATE	ALL		200/93	200/93	210/99	200/93	200/93	200/93	210/99	-	-
DIBROMOPHENOL	> 0.5		NR	NR	-	100/38	NR	NR	NR	NR	NR
DIBROMOPROPANOL	100		NR	NR	-	100/38	NR	NR	NR	NR	NR
DIBUTYL ETHER	100		NR	NR	100/38	150/66	150/66	150/66	80/27	80/27	NR
DIBUTYL PHTHALATE	100		180/82	180/82	180/82	210/99	180/82	210/99	90/32	90/32	NR
DIBUTYL SEBACATE	100		120/49	120/49	150/66	150/66	150/66	150/66	90/32	-	NR
DIBUTYLAMINE (N-)	50		80/27	80/27	-	80/27	80/27	80/27	-	-	-
DICHLOROACETIC ACID	80	6	NR	NR	-	80/27	80/27	NR	-	-	-
DICHLOROBENZENE (M-)	100		NR	NR	-	110/43	110/43	-	NR	-	NR
DICHLOROBENZENE (O-)	100		NR	NR	-	100/38	100/38	-	-	NR	NR
DICHLOROBENZENE (P-)	100		NR	NR	-	100/38	100/38	-	NR	-	NR
DICHLOROETHANE	100		NR	NR	NR	80/27	NR	NR	NR	NR	NR
DICHLOROETHYLENE	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
DICHLOROMETHANE	0.2		80/27	80/27	-	80/27	80/27	80/27	-	-	NR
DICHLOROMETHANE	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
DICHLOROPROPANE	100		NR	NR	-	80/27	80/27	NR	NR	NR	NR
DICHLOROPROPENE	100		NR	NR	NR	80/27	NR	NR	NR	NR	NR
DICHLOROPROPIONIC ACID	100		NR	NR	-	NR	NR	NR	-	-	-
DICHLOROTOLUENE	100		80/27	80/27	80/27	120/49	120/49	80/27	-	-	-
DIESEL FUEL, NO AROMATICS, NO METHANOL	100		180/82	180/82	190/88	200/93	200/93	200/93	175/79	175/79	120/49
DIESEL FUEL, AROMATICS, METHANOL	100	11	-	-	-	-	-	90/32	-	90/32	NR
DIETHANOL AMINE	100		120/49	120/49	120/49	150/66	120/49	120/49	110/43	-	-
DIETHYL AMINE	ALL		NR	NR	NR	NR	NR	NR	NR	NR	NR
DIETHYL ANILINE N,N	100		NR	NR	NR	80/27	80/27	80/27	-	-	-
DIETHYL BENZENE	100		80/27	80/27	120/49	150/66	150/66	NR	100/38	NR	NR
DIETHYL CARBONATE	100		NR	NR	80/27	100/38	80/27	NR	-	-	NR
DIETHYL ETHER	100		NR	NR	NR	NR	NR	NR	-	NR	NR
DIETHYL FORMAMIDE	100		NR	NR	NR	100/38	NR	NR	NR	NR	NR

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026	°F/°C	°F/°C	°F/°C	F086	°F/°C	°F/°C	°F/°C	F764 F774
			°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C
DIETHYL KETONE	100		NR	NR	NR	80/27	NR	NR	-	NR	NR
DIETHYL MALEATE	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
DIETHYL PHTHALATE	100	11	140/60	140/60	140/60	180/82	180/82	140/60	140/60	100/38	80/27
DIETHYL SULPHATE	100		100/38	100/38	120/49	120/49	120/49	100/38	100/38	-	-
DIETHYLENE GLYCOL	100		180/82	180/82	210/99	210/99	210/99	210/99	250/121	180/82	80/27
DIETHYLENE GLYCOL DIMETHYL ETHER	100		NR	NR	-	80/27	NR	NR	-	-	-
DIETHYLENE GLYCOL MONOBUTYL ETHER	100		-	-	-	80/27	NR	-	-	-	-
DIETHYLENETRIAMINE 1	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
DIISOBUTYL KETONE	100		NR	NR	NR	120/49	120/49	NR	80/27	-	-
DIISOBUTYL PHTHALATE	100	11	150/66	150/66	150/66	160/71	160/71	180/82	90/32	110/43	-
DIISOBUTYLENE	100	11	80/27	80/27	100/38	100/38	100/38	NR	100/38	80/27	NR
DIISOPROPANOL AMINE	100		100/38	100/38	120/49	150/66	150/66	100/38	-	-	-
DIISOPROPYLAMINE	100		100/38	100/38	120/49	120/49	120/49	NR	-	-	-
DIMETHYLACETAMIDE	100		NR	NR	-	NR	NR	NR	150/66	-	-
DIMETHYL AMINE	100		NR	NR	NR	80/27	NR	80/27	NR	NR	NR
DIMETHYLANILINE	100		-	-	-	100/38	80/27	80/27	-	-	-
DIMETHYL FORMAMIDE	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
DIMETHYL MORPHOLINE (2,6-)	100		80/27	80/27	-	100/38	80/27	NR	-	NR	NR
DIMETHYL PHTHALATE	100		150/66	150/66	180/82	180/82	180/82	180/82	-	-	NR
DIMETHYL SULPHATE	100		NR	NR	-	NR	NR	NR	-	-	-
DIMETHYL SULPHIDE	100		NR	NR	-	70/21	70/21	NR	-	NR	NR
DIMETHYL SULPHOXIDE	20		80/27	80/27	-	100/38	100/38	NR	-	-	-
DIMETHYL SULPHOXIDE	100		NR	NR	-	NR	NR	NR	-	-	-
DINONYL PHTHALATE	100		140/60	140/60	-	200/93	200/93	140/60	-	-	-
DIOCTYL PHTHALATE	100		150/66	150/66	190/88	210/99	210/99	140/60	-	-	-
DIOCTYL SULFOSUCCINATE SODIUM SALT	> 0.5		180/82	180/82	160/71	180/82	180/82	180/82	180/82	-	-
DIOXANE (1,4-)	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
DIPHENYL ETHER	100		80/27	80/27	100/38	120/49	120/49	80/27	80/27	NR	NR
DIPIPERAZINE SULPHATE SOLUTION	ALL		105/41	105/41	80/27	105/41	105/41	105/41	-	-	-
DIPOTASSIUM PHOSPHATE	> 0.5		210/99	210/99	210/99	210/99	210/99	200/93	200/93	100/38	80/27
DIPROPYLAMINE (N-)	50		80/27	80/27	-	80/27	80/27	80/27	-	-	-
DIPROPYLENE GLYCOL	100		180/82	180/82	210/99	210/99	210/99	210/99	210/99	160/71	NR
DISPERSIONS, COPOLYMER VINYL ACETATE/VINYL VERSATATE	50		80/27	80/27	-	80/27	80/27	80/27	-	-	-
DIVINYL BENZENE	100		80/27	80/27	100/38	120/49	120/49	NR	90/32	-	-
DODECANOL	100	11	140/60	140/60	160/71	180/82	180/82	160/71	180/82	120/49	NR
DODECENE	100	11	140/60	140/60	160/71	180/82	180/82	160/71	180/82	140/60	NR
DODECYL BENZENE SULPHONIC ACID	100	11	180/82	180/82	200/93	210/99	210/99	210/99	210/99	80/27	NR
DODECYL GUANIDINE HYDROCHLORIDE	100	11	180/82	180/82	180/82	175/79	175/79	175/79	180/82	80/27	NR
DOWANOL DB GLYCOL ETHER	100		80/27	80/27	100/38	100/38	100/38	80/27	80/27	-	-
EMBALMING FLUID	100		100/38	100/38	-	120/49	120/49	120/49	-	-	-

CHEMICAL LISTINGS

CONCENTRATIONS AND RECOMMENDED MAXIMUM CONTINUOUS EXPOSURE TEMPERATURE - DEGREES °F AND °C

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026			F086			F764 F774	F739	
			°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C
EPICHLOROHYDRIN	100		NR	NR	-	80/27	NR	NR	-	NR	NR
EPOXIDIZED CASTOR OIL	100	12	100/38	100/38	100/38	100/38	100/38	100/38	100/38	80/27	-
EPOXIDIZED SOYBEAN OIL	100	12	150/66	150/66	150/66	150/66	150/66	150/66	150/66	100/38	80/27
EPOXIDIZED VEGETABLE OILS	100		100/38	100/38	100/38	150/66	150/66	150/66	-	-	-
ESTERS, FATTY ACID	100		180/82	180/82	180/82	180/82	180/82	180/82	120/49	100/38	80/27
ETHANOLAMINE	100	10	80/27	80/27	90/32	100/38	90/32	80/27	80/27	NR	NR
ETHYL ACETATE	100		NR	NR	NR	80/27	NR	NR	NR	NR	NR
ETHYL ACRYLATE	100		NR	NR	NR	80/27	70/21	NR	NR	NR	NR
ETHYL ALCOHOL	10	11	80/27	80/27	120/49	150/66	120/49	150/66	-	80/27	NR
ETHYL ALCOHOL	50	11	NR	NR	80/27	150/66	100/38	120/49	150/66	90/32	NR
ETHYL ALCOHOL	96	11	NR	NR	80/27	100/38	80/27	100/38	100/38	90/32	NR
ETHYL AMINE	40		NR	NR	-	80/27	80/27	80/27	-	-	-
ETHYL BENZENE	100		NR	NR	NR	100/38	80/27	NR	NR	NR	NR
ETHYL BROMIDE	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
ETHYL CHLORIDE	100		NR	NR	NR	80/27	80/27	NR	90/32	NR	NR
ETHYL ETHER	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
ETHYL SULPHATE	100		NR	NR	100/38	100/38	100/38	100/38	100/38	-	-
ETHYLENE CHLORIDE	100		NR	NR	NR	80/27	80/27	NR	NR	NR	NR
ETHYLENE CHLOROHYDRIN	100		100/38	100/38	100/38	100/38	100/38	100/38	100/38	-	-
ETHYLENEDIAMINETETRAACETIC ACID, EDTA	100		180/82	180/82	180/82	180/82	180/82	180/82	-	-	-
ETHYLENE DICHLORIDE	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
ETHYLENE GLYCOL	100	11	210/99	210/99	210/99	210/99	210/99	210/99	250/121	180/82	130/54
ETHYLENE GLYCOL MONOBUTYL ETHER	100		100/38	100/38	100/38	100/38	100/38	80/27	80/27	-	NR
ETHYLENE OXIDE	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
ETHYLHEXANOL -2	100	11	160/71	160/71	-	180/82	180/82	160/71	-	100/38	-
ETHYLHEXYLACRYLATE -2	100		80/27	80/27	-	80/27	80/27	80/27	-	-	-
EUCALYPTUS OIL	100	12	140/60	140/60	140/60	160/71	160/71	150/66	150/66	120/49	NR
FATTY ACIDS (C12 OR HIGHER)	100	12	200/93	200/93	250/121	250/121	250/121	210/99	250/121	180/82	130/54
FERRIC ACETATE	ALL		180/82	180/82	180/82	180/82	180/82	180/82	180/82	-	-
FERRIC CHLORIDE	> 0.5	6	200/93	200/93	180/82	210/99	210/99	210/99	210/99	180/82	120/49
FERRIC CHLORIDE / FERROUS CHLORIDE (5%/20%)	25		200/93	200/93	180/82	210/99	210/99	210/99	210/99	180/82	-
FERRIC CHLORIDE / FERROUS CHLORIDE/HYDROCHLORIC ACID (48/2/2)	52	3,4,6,8	200/93	200/93	180/82	210/99	210/99	210/99	210/99	-	NR
FERRIC CHLORIDE / HYDROCHLORIC ACID (29%/18.5%)	47.5	3,4,6,8	180/82	180/82	160/71	210/99	210/99	210/99	180/82	-	NR
FERRIC NITRATE	> 0.5		200/93	200/93	180/82	210/99	210/99	210/99	210/99	180/82	120/49

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026 °F/°C	°F/°C	°F/°C	F086 °F/°C	°F/°C	°F/°C	°F/°C	°F/°C	F764 F774 °F/°C
FERRIC SULPHATE	> 0.5		200/93	200/93	180/82	210/99	210/99	210/99	200/93	180/82	120/49
FERRIC SULPHATE / SULPHURIC ACID	SAT'D/10		180/82	180/82	130/54	180/82	180/82	180/82	180/82	-	NR
FEROUS CHLORIDE	> 0.5		200/93	200/93	180/82	210/99	210/99	210/99	210/99	160/71	120/49
FEROUS CHLORIDE / FERRIC CHLORIDE (20%/5%)	25		200/93	200/93	170/77	210/99	210/99	210/99	210/99	140/60	-
FEROUS CHLORIDE-HYDROCHLORIC ACID	ALL	3, 4, 6, 8	120/49	120/49	80/27	120/49	120/49	120/49	150/66	-	-
FEROUS NITRATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	160/71	120/49
FEROUS SULPHATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	160/71	120/49
FEROUS SULPHATE / MAGNESIUM OXIDE (20%/10%)	30		200/93	200/93	180/82	210/99	210/99	210/99	210/99	-	-
FERTILIZER UREA		10	-	-	-	-	-	-	-	-	-
FERTILIZER, 8-8-8		10	-	-	-	-	-	-	-	-	-
FERTILIZER, UREAAMMONIUM 35.4% UREA		10	-	-	-	-	-	-	-	-	-
FLUE GAS, WET	ALL	10	180/82	180/82	210/99	200/93	200/93	180/82	210/99	-	-
FLUOBORIC ACID	10	2, 6	180/82	180/82	180/82	180/82	180/82	180/82	200/93	-	-
FLUOBORIC ACID	15	2, 6	100/38	100/38	100/38	100/38	100/38	100/38	100/38	-	-
FLUOBORIC ACID	25	2, 6	100/38	100/38	100/38	100/38	100/38	100/38	100/38	-	-
FLUOBORIC ACID	SAT'D	2, 6	100/38	100/38	80/27	100/38	100/38	100/38	100/38	80/27	NR
FLUORIDE SALTS / HYDROCHLORIC ACID (30%/10%)	40	2, 6, 8	120/49	120/49	80/27	120/49	120/49	120/49	120/49	-	-
FLUORINE GAS		2	-	-	-	70/21	70/21	-	-	-	-
FLUOROCARBON 11	100	1	110/43	110/43	-	110/43	110/43	110/43	-	-	-
FLUOSILICIC ACID	10	2, 6	150/66	150/66	150/66	180/82	180/82	150/66	180/82	80/27	NR
FLUOSILICIC ACID	25	2, 6	100/38	100/38	100/38	100/38	100/38	100/38	100/38	NR	NR
FLUOSILICIC ACID	35	2, 6	80/27	80/27	-	100/38	100/38	80/27	100/38	NR	NR
FORMALDEHYDE	50		120/49	120/49	120/49	150/66	150/66	120/49	-	-	-
FORMAMIDE	100		80/27	80/27	120/49	150/66	150/66	120/49	100/38	-	-
FORMIC ACID	30	6	120/49	120/49	120/49	150/66	150/66	120/49	-	NR	NR
FORMIC ACID	50	6	120/49	120/49	120/49	120/49	120/49	100/38	100/38	NR	NR
FORMIC ACID	85	6	80/27	80/27	80/27	80/27	80/27	-	-	-	-
FORMIC ACID	98		NR	NR	-	NR	NR	NR	-	NR	NR
FREON 11	100		80/27	80/27	-	100/38	100/38	80/27	-	-	-
FUEL OIL	100	11	180/82	180/82	210/99	210/99	210/99	210/99	-	120/49	NR
FURFURAL IN WATER	5		100/38	100/38	120/49	120/49	120/49	120/49	120/49	-	NR
FURFURAL	100		NR	NR	NR	NR	NR	NR	-	NR	NR
FURFURYL ALCOHOL	100	8	NR	NR	NR	80/27	NR	-	-	NR	NR
GALLIC ACID	> 0.5		180/82	180/82	180/82	180/82	180/82	180/82	180/82	-	-
GASOLINE FUEL	100	10	-	-	-	-	-	-	-	-	-
GLUCONIC ACID	50		120/49	120/49	120/49	180/82	180/82	120/49	120/49	80/27	-
GLUCOSE	> 0.5	12	180/82	180/82	180/82	210/99	210/99	210/99	180/82	160/71	120/49
GLUTARALDEHYDE	50		120/49	120/49	120/49	120/49	120/49	80/27	120/49	80/27	NR
GLUTARIC ACID	50	6	120/49	120/49	120/49	120/49	120/49	120/49	-	-	-
GLYCERINE	100		200/93	200/93	210/99	210/99	210/99	210/99	200/93	180/82	130/54

CHEMICAL LISTINGS

CONCENTRATIONS AND RECOMMENDED MAXIMUM CONTINUOUS EXPOSURE TEMPERATURE - DEGREES °F AND °C

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026	°F/°C	°F/°C	°F/°C	F086	°F/°C	°F/°C	°F/°C	F764 F774
			°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C
GLYCERINE TRIACETATE	ALL		80 / 27	80 / 27	-	80 / 27	80 / 27	NR	-	80 / 27	NR
GLYCOLIC ACID	35	6	100 / 38	100 / 38	-	150 / 66	150 / 66	140 / 60	140 / 60	120 / 49	-
GLYCOLIC ACID	70	6	100 / 38	100 / 38	-	100 / 38	100 / 38	100 / 38	100 / 38	-	NR
GLYME			NR	NR	-	NR	NR	NR	-	NR	NR
GLYOXAL	40		100 / 38	100 / 38	100 / 38	100 / 38	100 / 38	100 / 38	-	NR	NR
GREEN LIQUOR (PULP MILL)			180 / 82	180 / 82	140 / 60	180 / 82	180 / 82	180 / 82	NR	NR	NR
GYPSUM SLURRY			180 / 82	180 / 82	180 / 82	180 / 82	180 / 82	180 / 82	-	NR	NR
HEPTANE	100		200 / 93	200 / 93	210 / 99	210 / 99	210 / 99	200 / 93	200 / 93	200 / 93	NR
HEPTENE	100		200 / 93	200 / 93	-	210 / 99	210 / 99	200 / 93	-	-	-
HEXACHLOROCYCLOPENTADIENE	100		-	-	-	120 / 49	120 / 49	120 / 49	-	-	NR
HEXAMETHYLENETETRAMINE	60		100 / 38	100 / 38	-	120 / 49	120 / 49	120 / 49	-	-	-
HEXANE	100		160 / 71	160 / 71	160 / 71	160 / 71	160 / 71	160 / 71	160 / 71	140 / 60	140 / 60
HEXANEDIOL	100		180 / 82	180 / 82	-	180 / 82	180 / 82	180 / 82	-	-	-
HEXENE	100		140 / 60	140 / 60	-	160 / 71	160 / 71	140 / 60	-	-	-
HEXENE (2-)	100		140 / 60	140 / 60	-	160 / 71	160 / 71	140 / 60	-	-	-
HEXENE (2-TRANS-)	100		140 / 60	140 / 60	-	160 / 71	160 / 71	140 / 60	-	-	-
HEXENE (3-TRANS-)	100		140 / 60	140 / 60	-	160 / 71	160 / 71	140 / 60	-	-	-
HYDRAULIC FLUID, ALKALINE	100		80 / 27	80 / 27	-	80 / 27	80 / 27	80 / 27	-	NR	NR
HYDRAULIC FLUID, NEUTRAL	100	11	180 / 82	180 / 82	180 / 82	180 / 82	180 / 82	180 / 82	-	80 / 27	NR
HYDRAZINE	50		NR	NR	-	70 / 21	70 / 21	NR	-	NR	NR
HYDRAZINE	100		NR	NR	-	NR	NR	NR	-	NR	NR
HYDRAZINE HYDRATE	16		80 / 27	80 / 27	-	80 / 27	80 / 27	80 / 27	-	-	-
HYDROBROMIC ACID	18	6	180 / 82	180 / 82	160 / 71	180 / 82	180 / 82	180 / 82	180 / 82	160 / 71	80 / 27
HYDROBROMIC ACID	26	6	180 / 82	180 / 82	140 / 60	180 / 82	180 / 82	180 / 82	180 / 82	160 / 71	-
HYDROBROMIC ACID	48	6	150 / 66	150 / 66	150 / 66	150 / 66	150 / 66	150 / 66	150 / 66	100 / 38	NR
HYDROBROMIC ACID	62	4,6,8	100 / 38	100 / 38	-	100 / 38	100 / 38	100 / 38	-	-	-
HYDROCHLORIC ACID	10	4,6,8	180 / 82	180 / 82	210 / 99	210 / 99	210 / 99	210 / 99	210 / 99	160 / 71	120 / 49
HYDROCHLORIC ACID	18	4,6,8	180 / 82	180 / 82	200 / 93	210 / 99	210 / 99	180 / 82	210 / 99	100 / 38	80 / 27
HYDROCHLORIC ACID	21	4,6,8	150 / 66	150 / 66	180 / 82	210 / 99	180 / 82	180 / 82	180 / 82	100 / 38	80 / 27
HYDROCHLORIC ACID	25	4,6,8	150 / 66	150 / 66	180 / 82	200 / 93	180 / 82	180 / 82	180 / 82	-	-
HYDROCHLORIC ACID	37	4,6,8	100 / 38	100 / 38	100 / 38	120 / 49	120 / 49	90 / 32	100 / 38	NR	NR
HYDROCHLORIC ACID	FUMES		210 / 99	210 / 99	-	250 / 121	250 / 121	250 / 121	250 / 121	NR	NR
HYDROCHLORIC ACID AND TRACE ORGANICS	0 - 33	4,6,8,10	NR	NR	-	120 / 49	-	NR	80 / 27	-	-
HYDROCYANIC ACID, SATURATED			210 / 99	210 / 99	-	210 / 99	210 / 99	200 / 93	200 / 93	80 / 27	NR
HYDROFLUORIC ACID	10	2,6,8,10	120 / 49	120 / 49	120 / 49	150 / 66	150 / 66	100 / 38	100 / 38	-	NR

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026	°F/°C	°F/°C	°F/°C	F086	°F/°C	°F/°C	°F/°C	F764 F774
			°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C
HYDROFLUORIC ACID	20	2,6,8,10	100/38	100/38	100/38	100/38	100/38	NR	90/32	NR	NR
HYDROFLUOSILICIC ACID	10	2,6,8,10	180/82	180/82	150/66	180/82	180/82	150/66	180/82	80/27	NR
HYDROFLUOSILICIC ACID	25	2,6,8,10	100/38	100/38	-	100/38	100/38	100/38	140/60	NR	NR
HYDROFLUOSILICIC ACID	35	2,6,8,10	80/27	80/27	-	100/38	100/38	80/27	100/38	NR	NR
HYDROGEN BROMIDE GAS, DRY	ALL		180/82	180/82	-	180/82	180/82	180/82	200/93	90/32	NR
HYDROGEN BROMIDE GAS, WET	ALL		180/82	180/82	-	180/82	180/82	180/82	180/82	90/32	NR
HYDROGEN CHLORIDE GAS, DRY	100	6	200/93	200/93	200/93	250/121	250/121	210/99	250/121	120/49	NR
HYDROGEN CHLORIDE GAS, WET	100	6	200/93	200/93	200/93	210/99	210/99	210/99	210/99	120/49	NR
HYDROGEN FLUORIDE GAS, DRY	ALL	2,10	-	-	-	180/82	180/82	100/38	-	-	-
HYDROGEN PEROXIDE	5	7,8	150/66	150/66	-	150/66	150/66	150/66	150/66	150/66	NR
HYDROGEN PEROXIDE	30	7,8	80/27	80/27	80/27	100/38	100/38	80/27	100/38	NR	NR
HYDROGEN PEROXIDE	50	7,8	-	-	-	-	-	-	100/38	-	-
HYDROGEN SULPHIDE, DRY GAS	5		200/93	200/93	-	350/177	350/177	250/121	-	140/60	77/25
HYDROGEN SULPHIDE, DRY GAS	100		200/93	200/93	190/88	210/99	210/99	210/99	250/121	140/60	77/25
HYDROXYACETIC ACID	35		100/38	100/38	-	150/66	150/66	140/60	140/60	120/49	-
HYDROXYACETIC ACID	70		100/38	100/38	-	100/38	100/38	100/38	100-38/	-	NR
HYDROXYBENZENESULFONIC ACID	ALL		140/60	140/60	-	140/60	140/60	140/60	-	70/21	-
HYPOCHLOROUS ACID	10		80/27	80/27	-	100/38	100/38	100/38	100/38	-	NR
HYPOPHOSPHOROUS ACID	50		120/49	120/49	80/27	120/49	120/49	120/49	110/43	-	-
IODINE CRYSTALS			150/66	150/66	150/66	150/66	150/66	150/66	-	-	-
IODINE VAPOUR			150/66	150/66	150/66	180/82	150/66	-	180/82	-	-
ISOAMYL ALCOHOL	100	11	120/49	120/49	140/60	150/66	140/60	100/38	100/38	70/21	-
ISOBUTYL ALCOHOL	100	11	120/49	120/49	-	150/66	150/66	120/49	-	120/49	NR
ISODECANOL	20	11	140/60	140/60	-	180/82	180/82	150/66	-	140/60	NR
ISODECANOL	100	11	120/49	120/49	120/49	150/66	150/66	150/66	150/66	140/60	NR
ISONONYL ALCOHOL	100	11	150/66	150/66	150/66	150/66	150/66	150/66	-	140/60	NR
ISOCTYL ADIPATE	100		120/49	120/49	120/49	150/66	150/66	150/66	-	-	NR
ISOCTYL ALCOHOL	100	11	140/60	140/60	150/66	150/66	150/66	140/60	-	140/60	NR
ISOPROPYL ALCOHOL	100	11	100/38	100/38	120/49	120/49	120/49	120/49	-	80/27	NR
ISOPROPYL AMINE	100		NR	NR	NR	70/21	-	NR	NR	-	-
ISOPROPYL MYRISTATE	100		200/93	200/93	230/110	230/110	230/110	210/99	-	-	-
ISOPROPYL PALMITATE	100		200/93	200/93	220/104	230/110	230/110	210/99	-	120/49	NR
ISOPROPYL SULFATE	100		-	-	-	80/27	80/27	80/27	-	-	-
ITACONIC ACID	40		140/60	140/60	-	140/60	140/60	140/60	-	-	-
ITACONIC ACID	SAT'D		120/49	120/49	-	120/49	120/49	120/49	-	-	NR
JET FUEL AV GAS	100	10,11	140/60	140/60	140/60	140/60	140/60	120/49	-	120/49	-
JET FUEL A AND A1	100	10,11	140/60	140/60	140/60	140/60	140/60	120/49	-	120/49	-
JET FUEL B	100	10,11	100/38	100/38	140/60	140/60	140/60	120/49	-	120/49	-
JET FUEL JP-4	100	10,11	100/38	100/38	120/49	120/49	120/49	120/49	-	120/49	-
JET FUEL JP-8	100	10,11	100/38	100/38	120/49	120/49	120/49	120/49	-	120/49	-

CHEMICAL LISTINGS

CONCENTRATIONS AND RECOMMENDED MAXIMUM CONTINUOUS EXPOSURE TEMPERATURE - DEGREES °F AND °C

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026	°F/°C	°F/°C	°F/°C	F086	°F/°C	°F/°C	°F/°C	F764 F774
JET FUEL JP-10	100	10,11	100/38	100/38	120/49	120/49	120/49	120/49	-	120/49	-
JOJOBA OIL	100		180/82	180/82	-	180/82	180/82	180/82	-	-	-
KEROSENE	100	10,11	180/82	180/82	180/82	180/82	180/82	180/82	180/82	180/82	120/49
LACTIC ACID	10		180/82	180/82	-	180/82	180/82	180/82	-	140/60	120/49
LACTIC ACID	80		80/27	80/27	-	80/27	80/27	80/27	-	80/27	80/27
LATEX, ALKALINE	ALL		80/27	80/27	-	80/27	80/27	80/27	-	-	-
LATEX, PAINT EMULSION	ALL		120/49	120/49	120/49	120/49	120/49	120/49	-	-	NR
LATEX, PVA EMULSION	ALL		100/38	100/38	100/38	120/49	120/49	120/49	-	-	-
LATEX, RUBBER EMULSION	ALL		100/38	100/38	-	120/49	120/49	120/49	-	-	NR

LAURIC ACID	> 0.5		200/93	200/93	200/93	210/99	210/99	210/99	-	180/82	120/49
LAUROYL ALCOHOL	100	11	200/93	200/93	200/93	200/93	200/93	200/93	-	80/27	-
LAUROYL CHLORIDE	100		120/49	120/49	-	120/49	120/49	120/49	-	-	-
LAURYL ALCOHOL	100	11	150/66	150/66	180/82	180/82	180/82	180/82	120/49	80/27	-
LAURYL CHLORIDE	100		210/99	210/99	210/99	210/99	210/99	210/99	210/99	-	-
LAURYL ETHER SULFATE	100		140/60	140/60	-	140/60	140/60	140/60	-	80/27	NR
LAURYL MERCAPTAN	100		180/82	180/82	150/66	200/93	200/93	200/93	120/49	-	-
LEAD ACETATE	> 0.5	11	210/99	210/99	160/71	210/99	210/99	180/82	160/71	160/71	100/38
LEAD CHLORIDE	SAT'D		200/93	200/93	-	210/99	210/99	210/99	-	-	-

LEAD NITRATE	> 0.5		200/93	200/93	180/82	210/99	210/99	210/99	-	120/49	90/32
LEVULINIC ACID	SAT'D		200/93	200/93	220/104	230/110	230/110	210/99	-	160/71	-
LIGNIN SULPHATE, PH 3-7	ALL		180/82	180/82	180/82	180/82	180/82	180/82	-	-	-
LIGNIN SULFONATE SODIUM SALT	> 0.5		180/82	180/82	-	180/82	180/82	180/82	-	-	-
LINOLEIC ACID	100		200/93	200/93	-	210/99	210/99	210/99	-	160/71	-
LINOLENIC ACID	100		200/93	200/93	-	210/99	210/99	210/99	-	-	-
LINSEED OIL	100	11	210/99	210/99	210/99	230/110	230/110	210/99	200/93	180/82	120/49
LIQUID SUGAR	> 0.5	12	180/82	180/82	180/82	210/99	210/99	210/99	180/82	160/71	120/49
LITHIUM BROMIDE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	180/82	140/60	-

LITHIUM CARBONATE	> 0.5		180/82	180/82	180/82	180/82	180/82	180/82	180/82	-	-
LITHIUM CHLORIDE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	140/60	-
LITHIUM HYDROXIDE	ALL	2, 8, 10	180/82	180/82	180/82	100/38	100/38	170/77	NR	-	-
LITHIUM HYPOCHLORITE	ALL	2,6,7,8,9,10	180/82	180/82	180/82	100/38	100/38	100/38	-	-	-
LITHIUM SULPHATE	> 0.5		200/93	200/93	-	210/99	210/99	210/99	200/93	-	-
MAGNESIUM BICARBONATE	> 0.5		180/82	180/82	180/82	180/82	180/82	180/82	180/82	140/60	100/38
MAGNESIUM BISULPHITE	> 0.5		180/82	180/82	180/82	180/82	180/82	180/82	180/82	-	-
MAGNESIUM CARBONATE	15		180/82	180/82	180/82	180/82	180/82	180/82	160/71	180/82	-

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026	°F/°C	°F/°C	°F/°C	F086	°F/°C	°F/°C	°F/°C	F774
			°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C
MAGNESIUM CARBONATE	SAT'D		180/82	180/82	180/82	180/82	180/82	180/82	160/71	150/66	100/38
MAGNESIUM CHLORIDE	SAT'D		210/99	210/99	210/99	210/99	210/99	210/99	210/99	180/82	80/27
MAGNESIUM FLUOSILICATE	37.5	2	180/82	180/82	180/82	180/82	180/82	180/82	-	-	-
MAGNESIUM HYDROXIDE	> 0.5		200/93	200/93	210/99	210/99	210/99	210/99	-	-	NR
MAGNESIUM NITRATE	> 0.5		200/93	200/93	210/99	210/99	210/99	210/99	-	140/60	100/38
MAGNESIUM SILICOFLUORIDE	37.5	2	100/38	100/38	100/38	140/60	140/60	140/60	-	-	NR
MAGNESIUM SULPHATE	SAT'D		210/99	210/99	210/99	210/99	210/99	210/99	200/93	180/82	120/49
MALEIC ACID	> 0.5		180/82	180/82	180/82	210/99	210/99	210/99	-	140/60	80/27
MALEIC ANHYDRIDE	100		200/93	200/93	200/93	210/99	210/99	210/99	-	140/60	-
MANGANESE SULPHATE/SULPHURIC ACID (90%/10%)	100		180/82	180/82	-	210/99	210/99	210/99	180/82	-	NR
MANGANESE(II)CHLORIDE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	-	140/60	100/38
MANGANESE(II)NITRATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	-	-	NR
MANGANESE(II)SULPHATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	-	140/60	100/38
MAPLE SYRUP	ALL	12	180/82	180/82	180/82	180/82	180/82	180/82	180/82	180/82	120/49
MELAMINE RESINS	ALL		100/38	100/38	120/49	100/38	100/38	100/38	80/27	-	-
MERCAPTOACETIC ACID	ALL		NR	NR	NR	100/38	80/27	80/27	-	-	NR
MERCAPTOPROPIONIC -2	10		180/82	180/82	-	180/82	180/82	180/82	NR	-	-
MERCURIC CHLORIDE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	170/77	120/49
MERCURIC NITRATE	> 0.5		200/93	200/93	-	210/99	210/99	210/99	-	-	NR
MERCUROUS CHLORIDE	> 0.5		200/93	200/93	200/93	210/99	210/99	210/99	210/99	170/77	120/49
MERCURY	100		200/93	200/93	250/121	250/121	250/121	210/99	250/121	180/82	120/49
METHACRYLIC ACID	40		100/38	100/38	-	120/49	100/38	100/38	100/38	-	NR
METHANE SULPHONIC ACID	ALL		NR	NR	-	100/38	NR	100/38	-	-	NR
METHANOL = METHYL ALCOHOL	5		120/49	120/49	100/38	120/49	120/49	100/38	-	-	-
METHANOL = METHYL ALCOHOL	100	10, 11	NR	NR	NR	100/38	NR	100/38	100/38	90/32	NR
METHOXYETHYLACETATE	100		NR	NR	-	NR	NR	NR	-	NR	NR
METHYL ACETATE	100		NR	NR	NR	NR	NR	NR	-	NR	-
METHYL BROMIDE, GAS	10		80/27	80/27	80/27	80/27	80/27	80/27	-	NR	NR
METHYL ETHYL KETONE	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
METHYL ISOBUTYL KETONE	100		NR	NR	NR	120/49	100/38	NR	NR	NR	NR
METHYL METHACRYLATE	100		NR	NR	-	80/27	70/21	NR	-	NR	NR
METHYL STYRENE	100		NR	NR	-	120/49	80/27	NR	NR	NR	NR
METHYL-2-PENTANEDIOL-2,4	100	11	200/93	200/93	-	200/93	200/93	180/82	-	120/49	-
METHYLAMINE	100		NR	NR	-	NR	NR	NR	-	NR	NR
METHYLANILINE	100		NR	NR	-	NR	NR	NR	-	-	-
METHYLCELLOSOLVE	100		NR	NR	-	NR	NR	NR	-	NR	NR
METHYL CHLOROPHOXYACETIC ACID (MCPA)	100		80/27	80/27	-	80/27	80/27	-	-	-	-
METHYL CHLOROPHOXYPROPIONIC ACID (MCP)	100		80/27	80/27	-	80/27	80/27	-	-	-	-
METHYLDIETHANOLAMINE	100		120/49	120/49	-	150/66	120/49	80/27	-	-	-
METHYLENE BROMIDE	100		NR	NR	-	NR	NR	NR	-	NR	NR

CHEMICAL LISTINGS

CONCENTRATIONS AND RECOMMENDED MAXIMUM CONTINUOUS EXPOSURE TEMPERATURE - DEGREES °F AND °C

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026			F086			F764 F774	F739	
			°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C
METHYLENE CHLORIDE	0.2		80 / 27	80 / 27	-	80 / 27	80 / 27	80 / 27	-	-	-
METHYLENE CHLORIDE	100		NR	NR	-	NR	NR	NR	-	NR	NR
METHYLENEBLUE SALTS PH 2-5.5, AQ	ALL		140 / 60	140 / 60	-	140 / 60	140 / 60	140 / 60	-	100 / 38	-
METHYLPENTANOL-2 (ETHYLHEXANOL)	100		180 / 82	180 / 82	-	180 / 82	180 / 82	180 / 82	-	-	-
MILK AND MILK PRODUCTS	ALL	12	160 / 71	160 / 71	160 / 71	180 / 82	180 / 82	180 / 82	160 / 71	160 / 71	100 / 38
MINERAL OILS	100		210 / 99	210 / 99	230 / 110	250 / 121	250 / 121	210 / 99	220 / 104	180 / 82	140 / 60
MINERAL SPIRITS	100	11	180 / 82	180 / 82	210 / 99	210 / 99	210 / 99	210 / 99	210 / 99	180 / 82	140 / 60
MOLASSES (2<PH<9)	ALL	12	180 / 82	180 / 82	180 / 82	180 / 82	180 / 82	180 / 82	180 / 82	140 / 60	100 / 38
MOLYBDIC ACID	100		170 / 77	170 / 77	-	170 / 77	170 / 77	170 / 77	-	-	NR
MONOCHLOROACETIC ACID	50		120 / 49	120 / 49	-	120 / 49	120 / 49	120 / 49	90 / 32	-	NR
MONOCHLOROACETIC ACID	80		NR	NR	-	100 / 38	100 / 38	NR	-	-	-
MONOCHLOROACETIC ACID	100		NR	NR	-	NR	NR	NR	-	-	-
MONOCHLOROBENZENE	100		NR	NR	-	100 / 38	80 / 27	NR	NR	NR	NR
MONOETHANOLAMINE	100		NR	NR	-	NR	NR	NR	NR	NR	NR
MONOMETHYLHYDRAZINE	100		NR	NR	-	NR	NR	NR	-	NR	NR
MORPHOLINE	100		NR	NR	-	80 / 27	NR	NR	100 / 38	-	NR
MOTOR OIL	100	11	210 / 99	210 / 99	250 / 121	250 / 121	250 / 121	210 / 99	-	180 / 82	110 / 43
MURIATIC ACID (SEE HYDROCHLORIC ACID)			-	-	-	-	-	-	-	-	-
MUSTARD	> 0.5	12	180 / 82	180 / 82	180 / 82	210 / 99	210 / 99	210 / 99	180 / 82	150 / 66	100 / 38
MYRISTIC ACID	100		210 / 99	210 / 99	210 / 99	250 / 121	250 / 121	210 / 99	-	-	-
NAPHTALENE	100		210 / 99	210 / 99	210 / 99	210 / 99	210 / 99	210 / 99	90 / 32	150 / 66	100 / 38
NAPHTENOIC ACID (1-)	100		180 / 82	180 / 82	180 / 82	210 / 99	210 / 99	210 / 99	-	-	-
NAPHTENOIC ACID (2-)	100		180 / 82	180 / 82	180 / 82	210 / 99	210 / 99	210 / 99	-	-	-
NAPHTHA, ALIPHATIC	100	11	180 / 82	180 / 82	210 / 99	210 / 99	210 / 99	200 / 93	-	120 / 49	140 / 60
NAPHTHA, AROMATIC	100	11	-	-	120 / 49	120 / 49	120 / 49	120 / 49	-	120 / 49	-
NAPHTHYLAMINE-1-SULPHONIC ACID (2-)	100		-	-	-	210 / 99	210 / 99	-	-	-	-
NEOPENTYL GLYCOL	80		180 / 82	180 / 82	180 / 82	180 / 82	180 / 82	180 / 82	-	-	-
NEOPENTYL GLYCOL	100	11	180 / 82	180 / 82	180 / 82	180 / 82	180 / 82	180 / 82	-	140 / 60	100 / 38
NICKEL CHLORIDE	ALL		210 / 99	210 / 99	210 / 99	210 / 99	210 / 99	210 / 99	210 / 99	180 / 82	100 / 38
NICKEL NITRATE	> 0.5		210 / 99	210 / 99	210 / 99	210 / 99	210 / 99	210 / 99	210 / 99	180 / 82	100 / 38
NICKEL SULFAMATE	> 0.5		180 / 82	180 / 82	180 / 82	180 / 82	180 / 82	180 / 82	180 / 82	-	-
NICKEL SULPHATE	ALL		210 / 99	210 / 99	210 / 99	210 / 99	210 / 99	210 / 99	210 / 99	180 / 82	100 / 38
NICOTINIC ACID	> 0.5		120 / 49	120 / 49	-	120 / 49	120 / 49	120 / 49	-	-	NR
NITRIC ACID	2	6	150 / 66	150 / 66	150 / 66	180 / 82	180 / 82	200 / 93	210 / 99	-	-
NITRIC ACID	10	6	150 / 66	150 / 66	140 / 60	150 / 66	150 / 66	150 / 66	150 / 66	-	NR

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026 °F/°C	°F/°C	°F/°C	F086 °F/°C	°F/°C	°F/°C	°F/°C	°F/°C	F774 °F/°C
NITRIC ACID	20	6	120/49	120/49	120/49	150/66	150/66	120/49	140/60	-	NR
NITRIC ACID	30	6,8	100/38	100/38	80/27	100/38	100/38	100/38	140/60	-	NR
NITRIC ACID	50	6,8	NR	NR	NR	NR	NR	80/27	110/43	-	NR
NITRIC ACID	60	6,8	NR	NR	NR	NR	NR	NR	-	NR	NR
NITRIC ACID	FUMES	6,8	180/82	180/82	180/82	180/82	180/82	180/82	180/82	-	NR
NITRIC ACID / CHROMIC ACID (15%/3%)	18	2,6,8,10	NR	NR	-	-	-	NR	-	-	-
NITRIC ACID / HYDROFLUORIC ACID (8%/4%)	12	2,6,8,10	-	-	-	-	-	-	80/27	-	-
NITROBENZENE	100		NR	NR	80/27	100/38	80/27	NR	-	NR	NR
NITROGEN TETROXIDE	100		NR	NR	-	-	NR	NR	-	NR	NR
NITROPHENOL			NR	NR	80/27	100/38	80/27	-	-	-	-
NITROUS ACID	10		80/27	80/27	-	80/27	80/27	80/27	90/32	-	-
N-METHYL-2-PYRROLIDONE	10		-	-	-	NR	NR	NR	-	-	-
N-METHYL-2-PYRROLIDONE	100		NR	NR	-	NR	NR	NR	-	-	-
NONANES	100		200/93	200/93	-	210/99	210/99	200/93	-	-	-
NONENES	100		200/93	200/93	-	210/99	210/99	200/93	-	-	-
OCTANE	100		200/93	200/93	-	210/99	210/99	200/93	-	-	-
OCTANOIC ACID (SEE CAPRYLIC ACID)	100		180/82	180/82	180/82	210/99	210/99	210/99	140/60	160/71	80/27
OCTANOL (1-)	100		180/82	180/82	-	180/82	180/82	180/82	-	140/60	-
OCTANOL (2-)	100		180/82	180/82	-	180/82	180/82	180/82	-	140/60	-
OCTANOL (N-)	100		180/82	180/82	-	180/82	180/82	180/82	-	140/60	-
OCTENE	100		200/93	200/93	-	210/99	210/99	200/93	-	-	-
OCTYLAMINE (2-)	100		-	-	-	120/49	120/49	120/49	-	-	-
OCTYLAMINE (N-)	100		-	-	-	120/49	120/49	120/49	-	-	-
OCTYLAMINE (TERT-)	100		-	-	-	120/49	120/49	120/49	-	-	-
OIL, SOUR AND SWEET CRUDE	100	11	200/93	200/93	200/93	210/99	210/99	210/99	-	180/82	100/38
OILS (GREASE, LUBE, VEGETABLE)	100		210/99	210/99	220/104	250/121	250/121	200/93	-	120/49	90/32
OLEIC ACID	100		210/99	210/99	180/82	210/99	210/99	210/99	200/93	170/77	120/49
OLEUM (FUMING SULPHURIC ACID)			NR	NR	NR	NR	NR	NR	-	NR	NR
OLIVE OIL	100	12	210/99	210/99	250/121	250/121	250/121	210/99	140/60	170/77	120/49
ORANGE OIL	100	12	180/82	180/82	180/82	180/82	180/82	180/82	140/60	160/71	120/49
OXALIC ACID	100		120/49	120/49	120/49	120/49	120/49	120/49	120/49	100/38	120/49
OZONE GAS	ALL		NR	NR	NR	NR	NR	NR	NR	NR	NR
PALM OIL	100	12	180/82	180/82	180/82	210/99	210/99	180/82	140/60	160/71	120/49
PALMITIC ACID	100		210/99	210/99	210/99	210/99	210/99	210/99	-	170/77	120/49
PALMITOYL CHLORIDE	100	10	120/49	120/49	-	120/49	120/49	120/49	-	-	-
PARAFFIN WAX	100		200/93	200/93	220/104	250/121	250/121	200/93	-	180/82	140/60
PEANUT OIL	100	12	180/82	180/82	180/82	200/93	200/93	200/93	180/82	170/77	80/27
PENTANE	100		-	-	-	120/49	120/49	120/49	-	-	-
PENTANEDIOIC ACID	50		120/49	120/49	120/49	120/49	120/49	120/49	-	-	-
PENTASODIUM TRIPHOSPHATE	10		200/93	200/93	-	210/99	210/99	210/99	-	-	-

CHEMICAL LISTINGS

CONCENTRATIONS AND RECOMMENDED MAXIMUM CONTINUOUS EXPOSURE TEMPERATURE - DEGREES °F AND °C

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026	F013	F007	F086	K095	F282	K190	F764 F774	F739
			°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C
PENTENE	100		80/27	80/27	-	80/27	80/27	80/27	-	-	-
PERCHLORIC ACID	10	6,8	150/66	150/66	140/60	150/66	150/66	150/66	150/66	NR	NR
PERCHLORIC ACID	30	6,8	100/38	100/38	80/27	100/38	100/38	100/38	100/38	NR	NR
PERCHLOROETHYLENE	100		80/27	80/27	110/43	120/49	120/49	100/38	100/38	NR	NR
PHENOL	<1		80/27	80/27	80/27	120/49	100/38	120/49	180/82	NR	NR
PHENOL	<5		NR	NR	NR	120/49	80/27	NR	120/49	NR	NR
PHENOL	>5		NR	NR	-	120/49	NR	NR	-	NR	NR
PHENOLFORMALDEHYDE RESIN	100		100/38	100/38	120/49	120/49	120/49	100/38	-	-	-
PHENOLSULPHONIC ACID	ALL		80/27	80/27	80/27	80/27	80/27	80/27	-	-	-
PHOSPHORIC ACID	0.5 - 85		210/99	210/99	210/99	210/99	210/99	210/99	210/99	160/71	150/66
PHOSPHORIC ACID	85 - 100		210/99	210/99	210/99	210/99	210/99	210/99	210/99	90/32	NR
PHOSPHORIC ACID (P2O5, HCL, H2S, SO2)	FUMES	10	-	-	-	210/99	210/99	-	210/99	-	-
PHOSPHORIC ACID, (POLYMERIC 115% PHOSPHORIC ACID)		6	200/93	200/93	-	210/99	210/99	210/99	-	-	NR
PHOSPHORIC ACID, (SUPER 105% PHOSPHORIC ACID)		6	210/99	210/99	210/99	210/99	210/99	210/99	-	90/32	NR
PHOSPHOROUS ACID	70	6	180/82	180/82	180/82	180/82	180/82	180/82	-	-	-
PHOSPHOROUS TRICHLORIDE	100		NR	NR	NR	NR	NR	NR	NR	-	-
PHOSSY WATER			-	-	-	NR	NR	NR	-	NR	NR
PHTHALATES/PHTHALATE ESTERS	100		140/60	140/60	140/60	140/60	140/60	140/60	140/60	-	NR
PHTHALIC ACID	100	13	210/99	210/99	210/99	210/99	210/99	210/99	-	-	-
PHTHALIC ANHYDRIDE	100		210/99	210/99	210/99	210/99	210/99	210/99	100/38	150/66	80/27
PICRIC ACID	10	6,13	80/27	80/27	80/27	150/66	150/66	120/49	100/38	NR	NR
PINE OIL	100		180/82	180/82	190/88	200/93	200/93	200/93	-	-	-
PINE OIL DISINFECTANT	100		120/49	120/49	110/43	120/49	120/49	120/49	-	-	-
PIPERAZINE DIHYDROCHLORIDE	ALL		-	-	-	120/49	120/49	120/49	-	-	-
PLATING SOLUTION, CADMIUM	14.4		140/60	140/60	140/60	140/60	140/60	140/60	-	-	-
PLATING SOLUTION, CHROME	19.11	2	120/49	120/49	80/27	120/49	120/49	NR	120/49	-	-
PLATING SOLUTION, COPPER			120/49	120/49	120/49	180/82	180/82	180/82	180/82	-	-
PLATING SOLUTION, GOLD	23.8		180/82	180/82	180/82	210/99	210/99	210/99	200/93	-	-
PLATING SOLUTION, LEAD	9.2	2	180/82	180/82	150/66	210/99	210/99	210/99	NR	-	-
PLATING SOLUTION, NICKEL		10	-	-	-	-	-	-	-	-	-
PLATING SOLUTION, PLATINUM			180/82	180/82	180/82	210/99	210/99	180/82	-	-	-
PLATING SOLUTION, SILVER		2	200/93	200/93	180/82	210/99	210/99	210/99	NR	-	-
PLATING SOLUTION, TIN	37.2	2	180/82	180/82	160/71	210/99	210/99	180/82	180/82	-	-
PLATING SOLUTION, ZINC	59.3	2	160/71	160/71	140/60	210/99	210/99	210/99	NR	-	-
PLURONIC SURFACTANT 25R-2	ALL		140/60	140/60	140/60	140/60	140/60	140/60	-	-	-

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026 °F/°C	°F/°C	°F/°C	F086 °F/°C	°F/°C	°F/°C	°F/°C	°F/°C	F764 F774 °F/°C
POLYACRYLAMIDE	ALL		180/82	180/82	180/82	180/82	180/82	180/82	NR	-	-
POLYESTER RESINS	100		NR	NR	-	100/38	100/38	80/27	-	-	-
POLYETHYLENE GLYCOL	100		200/93	200/93	200/93	210/99	210/99	210/99	-	140/60	-
POLYOLS	100		180/82	180/82	-	180/82	180/82	180/82	-	-	-
POLYVINYL ACETATE EMULSION	ALL		100/38	100/38	100/38	120/49	120/49	120/49	100/38	-	-
POLYVINYL ALCOHOL	ALL	11	180/82	180/82	180/82	180/82	180/82	180/82	80/27	80/27	-
POTASSIUM ALUMINUM SULPHATE	ALL		210/99	210/99	220/104	230/110	230/110	210/99	180/82	180/82	130/54
POTASSIUM AMYL XANTHANE	5		-	-	-	140/60	140/60	150/66	-	140/60	-
POTASSIUM BICARBONATE	> 0.5	2	180/82	180/82	180/82	180/82	180/82	160/71	90/32	100/38	80/27
POTASSIUM BROMATE	> 0.5		180/82	180/82	-	210/99	210/99	210/99	-	-	-
POTASSIUM BROMIDE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	-	140/60	100/38
POTASSIUM CARBONATE	50	2	180/82	180/82	180/82	140/60	140/60	140/60	110/43	90/32	-
POTASSIUM CHLORATE	> 0.5		200/93	200/93	-	210/99	210/99	210/99	-	-	-
POTASSIUM CHLORIDE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	180/82	120/49
POTASSIUM CHROMATE	> 0.5		200/93	200/93	-	210/99	210/99	210/99	-	-	-
POTASSIUM CYANIDE	ALL		140/60	140/60	-	140/60	140/60	140/60	-	-	-
POTASSIUM DICHROMATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	200/93	180/82	120/49
POTASSIUM FERRICYANIDE	> 0.5		210/99	210/99	180/82	210/99	210/99	210/99	-	180/82	130/54
POTASSIUM FERROCYANIDE	> 0.5		210/99	210/99	180/82	210/99	210/99	210/99	200/93	180/82	130/54
POTASSIUM FLUORIDE	ALL	2	180/82	180/82	180/82	140/60	140/60	140/60	150/66	-	-
POTASSIUM GOLD CYANIDE	12		210/99	210/99	210/99	210/99	210/99	210/99	210/99	180/82	-
POTASSIUM HYDROXIDE	1	2,8	150/66	150/66	140/60	140/60	140/60	150/66	-	NR	NR
POTASSIUM HYDROXIDE	10	2,8	150/66	150/66	110/43	100/38	100/38	120/49	NR	NR	NR
POTASSIUM HYDROXIDE	25	2,8	150/66	150/66	110/43	100/38	100/38	120/49	NR	NR	NR
POTASSIUM HYDROXIDE	45	2,8	150/66	150/66	110/43	100/38	100/38	120/49	NR	NR	NR
POTASSIUM HYDROXIDE	CONC	2,8	150/66	150/66	110/43	100/38	100/38	120/49	-	NR	NR
POTASSIUM IODIDE	ALL		150/66	150/66	140/60	150/66	150/66	150/66	-	NR	NR
POTASSIUM NITRATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	170/77	120/49
POTASSIUM NITRITE	> 0.5		200/93	200/93	200/93	210/99	210/99	210/99	-	-	-
POTASSIUM OXALATE	ALL		150/66	150/66	150/66	150/66	150/66	150/66	-	-	-
POTASSIUM PERMANGANATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	150/66	120/49	NR
POTASSIUM PERSULPHATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	90/32	90/32	-
POTASSIUM PHOSPHATE (TRIBASIC)	100		180/82	180/82	-	180/82	180/82	180/82	-	-	-
POTASSIUM PYROPHOSPHATE	60		120/49	120/49	140/60	150/66	150/66	150/66	100/38	-	-
POTASSIUM SILICOFLUORIDE	ALL	2,8	100/38	100/38	100/38	100/38	100/38	100/38	-	-	-
POTASSIUM SULPHATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	180/82	100/38
PROPANE	100		140/60	140/60	140/60	140/60	140/60	140/60	140/60	100/38	80/27
PROPANOL (1-)	100		100/38	100/38	120/49	120/49	120/49	120/49	-	-	-
PROPANOL (2-)	100		100/38	100/38	120/49	120/49	120/49	120/49	-	-	-
PROPIONIC ACID	40		180/82	180/82	180/82	180/82	180/82	180/82	-	-	-

CHEMICAL LISTINGS

CONCENTRATIONS AND RECOMMENDED MAXIMUM CONTINUOUS EXPOSURE TEMPERATURE - DEGREES °F AND °C

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026	°F/°C	°F/°C	°F/°C	F086	°F/°C	°F/°C	°F/°C	F764 F774
PROPRIONIC ACID	100	6	NR	NR	NR	100/38	80/27	NR	-	NR	NR
PROPYLAMINE N OR ISO	40		80/27	80/27	-	80/27	80/27	-	-	NR	-
PROPYLENE GLYCOL 1,2	100		210/99	210/99	210/99	210/99	210/99	210/99	180/82	170/77	130/54
PYRIDINE	20		100/38	100/38	100/38	100/38	100/38	100/38	-	-	-
PYRIDINE	100		NR	NR	-	NR	NR	NR	-	NR	NR
QUARternary AMMONIUM SALTS	25		175/79	175/79	-	175/79	175/79	150/66	-	-	-
QUARternary AMMONIUM SALTS	>25		180/82	180/82	-	180/82	180/82	180/82	-	-	-
QUINOLINE	100		NR	NR	NR	NR	NR	NR	NR	NR	NR
RAYON SPIN BATH			-	-	-	140/60	140/60	140/60	-	-	-
REF. FUEL C (ISOCTANE/TOLUENE)	100	11	-	-	-	80/27	80/27	-	-	80/27	NR
ROSIN SIZES			180/82	180/82	-	200/93	200/93	180/82	-	-	-
SALICYLALDEHYDE	100		80/27	80/27	-	80/27	80/27	-	-	-	NR
SALICYLIC ACID	ALL		160/71	160/71	160/71	150/66	150/66	150/66	-	-	-
SALT BRINE (SEE SODIUM CHLORIDE)	ALL		210/99	210/99	210/99	210/99	210/99	210/99	-	180/82	140/60
SELENIOS ACID	> 0.5		210/99	210/99	210/99	210/99	210/99	180/82	-	-	-
SEWAGE MUNICIPAL	ALL	10	100/38	100/38	100/38	100/38	100/38	100/38	90/32	100/38	80/27
SILICONE OILS OR GREASES	100		200/93	200/93	200/93	200/93	200/93	200/93	-	180/82	120/49
SILVER CYANIDE	> 0.5		200/93	200/93	200/93	210/99	210/99	210/99	-	-	-
SILVER NITRATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	170/77	120/49
SOAPS	ALL		160/71	160/71	180/82	200/93	200/93	180/82	-	-	-
SODIUM ACETATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	200/93	150/66	-
SODIUM ALKYL ARYL SULPHONATE	ALL		180/82	180/82	180/82	180/82	180/82	180/82	180/82	-	-
SODIUM ALUMINATE	ALL		160/71	160/71	160/71	120/49	120/49	150/66	NR	NR	NR
SODIUM BENZOATE	ALL		180/82	180/82	180/82	180/82	180/82	180/82	180/82	110/43	-
SODIUM BICARBONATE	ALL	2	180/82	180/82	180/82	180/82	180/82	180/82	140/60	140/60	-
SODIUM BICARBONATE / SODIUM CARBONATE (15%/20%)	35	2	180/82	180/82	180/82	150/66	150/66	140/60	140/60	-	-
SODIUM BIFLUORIDE	ALL	2	120/49	120/49	120/49	120/49	120/49	120/49	-	-	-
SODIUM BISULPHATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	200/93	170/77	120/49
SODIUM BISULPHITE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	200/93	170/77	120/49
SODIUM BORATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	170/77	170/77	120/49
SODIUM BOROHYDRIDE / SODIUM HYDROXIDE (12%/48%)	60		-	-	-	-	-	110/43	-	NR	NR
SODIUM BROMATE	> 0.5		210/99	210/99	210/99	195/91	195/91	195/91	-	80/27	NR
SODIUM BROMIDE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	170/77	120/49
SODIUM BROMIDE / SODIUM BROMATE (20%/20%)	40		210/99	210/99	210/99	210/99	210/99	210/99	170/77	160/71	100/38
SODIUM BUTYL XANTHANE	5		150/66	150/66	150/66	150/66	150/66	150/66	-	-	-

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026 °F/°C	°F/°C	°F/°C	F086 °F/°C	°F/°C	°F/°C	°F/°C	°F/°C	F764 F774 °F/°C
SODIUM CARBONATE	10	2	180/82	180/82	180/82	150/66	150/66	180/82	160/71	100/38	NR
SODIUM CARBONATE	35	2	160/71	160/71	160/71	140/60	140/60	140/60	90/32	90/32	NR
SODIUM CHLORATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	200/93	130/54	110/43
SODIUM CHLORIDE	> 0.5	12	210/99	210/99	210/99	210/99	210/99	210/99	210/99	180/82	140/60
SODIUM CHLORITE pH>6	10	9	180/82	180/82	-	180/82	180/82	180/82	-	-	NR
SODIUM CHROMATE	50		210/99	210/99	210/99	210/99	210/99	210/99	180/82	-	-
SODIUM CYANIDE	5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	120/49	-
SODIUM CYANIDE	15		180/82	180/82	180/82	180/82	180/82	180/82	180/82	100/38	NR
SODIUM DICHROMATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	-	140/60	-
SODIUM DIHYDROGEN PHOSPHATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	100/38	-
SODIUM DIPHOSPHATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	-	160/71	-
SODIUM DODECYL BENZENE SULPHONATE	ALL		100/38	100/38	100/38	160/71	160/71	160/71	120/49	-	-
SODIUM ETHYL XANTHANE	5		-	-	-	-	-	150/66	-	140/60	-
SODIUM FERRICYANIDE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	170/77	-
SODIUM FERROCYANIDE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	180/82	170/77	-
SODIUM FLUORIDE	ALL	2	180/82	180/82	180/82	180/82	180/82	180/82	-	80/27	NR
SODIUM FLUOSILICATE	ALL	2	120/49	120/49	120/49	120/49	120/49	120/49	-	-	-
SODIUM HEXAMETAPHOSPHATE	ALL		180/82	180/82	180/82	180/82	180/82	180/82	150/66	-	-
SODIUM HYDROSULPHIDE	ALL		180/82	180/82	180/82	180/82	180/82	180/82	160/71	-	-
SODIUM HYDROSULPHITE	ALL		100/38	100/38	100/38	100/38	100/38	100/38	-	-	-
SODIUM HYDROXIDE	1	2,5,8,10,13	180/82	180/82	160/71	120/49	120/49	200/93	NR	NR	NR
SODIUM HYDROXIDE	5	2,5,8,10,13	120/49	160/71	100/38	NR	NR	150/66	NR	NR	NR
SODIUM HYDROXIDE	25	2,5,8,10,13	150/66	180/82	150/66	NR	NR	150/66	NR	NR	NR
SODIUM HYDROXIDE	50	2,5,8,10,13	180/82	180/82	150/66	100/38	100/38	200/93	NR	NR	NR
SODIUM HYPOCHLORITE (pH >11, ACTIVE CHLORINE ALL)		10	-	-	-	-	-	-	-	NR	NR
SODIUM LAURYL SULFATE	ALL		140/60	140/60	-	160/71	160/71	160/71	100/38	-	-
SODIUM MONOPHOSPHATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	-	170/77	-
SODIUM NITRATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	150/66	120/49
SODIUM NITRITE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	180/82	150/66	120/49
SODIUM ORTHOPHOSPHATE (SEE TRISODIUM PHOSPHATE)	SAT'D		210/99	210/99	210/99	210/99	210/99	210/99	180/82	NR	NR
SODIUM OXALATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	200/93	150/66	120/49
SODIUM PERSULPHATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	150/66	120/49
SODIUM PHOSPHATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	200/93	150/66	120/49
SODIUM POLYACRYLATE	ALL		180/82	180/82	180/82	180/82	180/82	180/82	180/82	-	-
SODIUM SILICATE	> 0.5	1	210/99	210/99	210/99	210/99	210/99	210/99	160/71	NR	NR
SODIUM SULPHATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	100/38	120/49
SODIUM SULPHYDRATE	ALL		180/82	180/82	180/82	180/82	180/82	180/82	160/71	100/38	100/38
SODIUM SULPHIDE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	140/60	140/60	100/38
SODIUM SULPHITE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	90/32	-
SODIUM TARTRATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	150/66	-

CHEMICAL LISTINGS

CONCENTRATIONS AND RECOMMENDED MAXIMUM CONTINUOUS EXPOSURE TEMPERATURE - DEGREES °F AND °C

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026	°F/°C	°F/°C	°F/°C	F086	°F/°C	°F/°C	°F/°C	F764 F774
SODIUM TETRABORATE	ALL		180/82	180/82	180/82	180/82	180/82	180/82	180/82	100/38	-
SODIUM THIOCYANATE	ALL		180/82	180/82	180/82	180/82	180/82	180/82	180/82	160/71	100/38
SODIUM THIOSULPHATE	ALL		180/82	180/82	180/82	180/82	180/82	180/82	180/82	160/71	100/38
SODIUM TRIDECYLSULPHATE	> 0.5		180/82	180/82	180/82	190/88	190/88	180/82	160/71	140/60	120/49
SODIUM TRIPHOSPHATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	160/71	140/60	120/49
SODIUM TRIPOLYPHOSPHATE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	100/38	140/60	120/49
SODIUM XYLENE SULPHONATE	ALL		160/71	160/71	160/71	160/71	160/71	160/71	150/66	80/27	NR
SORBITOL SOLUTIONS	ALL		160/71	160/71	160/71	180/82	160/71	150/66	170/77	120/49	100/38
SOY SAUCE	100	8,12	160/71	160/71	160/71	160/71	160/71	160/71	160/71	140/60	NR
SOYA OIL	100	11,12	210/99	210/99	210/99	210/99	210/99	200/93	170/77	170/77	120/49
SOYBEAN OIL	100	12	210/99	210/99	210/99	210/99	210/99	210/99	170/77	170/77	120/49
SPEARMINT OIL	100		100/38	100/38	100/38	200/93	200/93	200/93	-	-	-
STANNIC CHLORIDE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	180/82	170/77	100/38
STANNOUS CHLORIDE	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	170/77	100/38
STANNOUS SULFATE	> 0.5		200/93	200/93	200/93	210/99	210/99	210/99	160/71	140/60	120/49
STARCH 4 < PH < 9	> 0.5	12	200/93	200/93	200/93	210/99	210/99	210/99	180/82	160/71	120/49
STEARIC ACID	100		210/99	210/99	210/99	210/99	210/99	210/99	250/121	170/77	120/49
STYRENE	100		NR	NR	-	120/49	100/38	NR	NR	NR	NR
SUCCINIC ACID	ALL		180/82	180/82	180/82	180/82	180/82	180/82	140/60	100/38	-
SUCCINONITRIL (AQUEOUS)	ALL		80/27	80/27	100/38	100/38	100/38	100/38	-	NR	NR
SUCROSE	> 0.5	12	210/99	210/99	210/99	210/99	210/99	210/99	200/93	140/60	100/38
SULPHAMIC ACID	10		210/99	210/99	210/99	210/99	210/99	210/99	-	150/66	80/27
SULPHAMIC ACID	25		150/66	150/66	150/66	150/66	150/66	150/66	-	100/38	-
SULPHANILIC ACID	10	6,13	210/99	210/99	210/99	210/99	210/99	210/99	-	-	-
SULPHATED DETERGENTS	100		160/71	160/71	180/82	180/82	180/82	180/82	-	80/27	NR
SULPHITE/SULPHATE LIQUORS (PULP MILL)			200/93	200/93	200/93	200/93	200/93	200/93	160/71	-	-
SULPHONATED DETERGENTS	100		160/71	160/71	160/71	180/82	180/82	180/82	-	80/27	NR
"SULPHONYL CHLORIDE, AROMATIC"	ALL		NR	NR	-	NR	NR	NR	80/27	NR	NR
SULPHUR	100		-	-	-	150/66	150/66	-	-	-	-
SULPHUR CHLORIDE	100		NR	NR	-	NR	NR	NR	NR	NR	NR
SULPHUR DICHLORIDE	100		NR	NR	-	NR	NR	NR	-	NR	NR
SULPHUR DIOXIDE GAS, DRY	ALL		220/104	220/104	240/116	250/121	250/121	220/104	220/104	150/66	-
SULPHUR DIOXIDE GAS, WET	ALL		180/82	180/82	210/99	210/99	210/99	180/82	210/99	100/38	NR
SULPHUR TRIOXIDE GAS, DRY GAS	10		210/99	210/99	210/99	250/121	210/99	220/104	90/32	-	NR
SULPHURIC ACID	1	6	210/99	210/99	180/82	210/99	210/99	210/99	210/99	170/77	120/49

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026	°F/°C	°F/°C	°F/°C	F086	°F/°C	°F/°C	°F/°C	F764 F774
SULPHURIC ACID	5	6	210/99	210/99	210/99	210/99	210/99	210/99	210/99	170/77	120/49
SULPHURIC ACID	10	6	210/99	210/99	210/99	210/99	210/99	210/99	210/99	150/66	100/38
SULPHURIC ACID	25	6	210/99	210/99	210/99	210/99	210/99	210/99	210/99	150/66	100/38
SULPHURIC ACID	50	6	210/99	210/99	210/99	210/99	210/99	210/99	200/93	120/49	NR
SULPHURIC ACID	70	6	180/82	180/82	180/82	180/82	180/82	180/82	190/88	NR	NR
SULPHURIC ACID	75	6,8	100/38	100/38	100/38	120/49	120/49	100/38	100/38	NR	NR
SULPHURIC ACID	93		NR	NR	NR	NR	NR	NR	-	NR	NR
SULPHURIC ACID	FUMING		NR	NR	NR	NR	NR	NR	NR	NR	NR
SULPHURIC ACID / FERROUS SULPHATE	10:SAT'D		200/93	200/93	-	210/99	210/99	210/99	180/82	-	-
SULPHURIC ACID / PHOSPHORIC ACID (10%/20%)	30		180/82	180/82	-	180/82	180/82	180/82	100/38	-	-

SULPHUROUS ACID	10		120/49	120/49	120/49	120/49	120/49	120/49	140/60	NR	NR
SULPHURYL CHLORIDE	100		NR	NR	-	NR	NR	NR	-	NR	NR
SUPERPHOSPHORIC ACID (76% P2O5)	100		210/99	210/99	210/99	210/99	210/99	210/99	-	80/27	NR
TALL OIL	100	11	200/93	200/93	220/104	210/99	210/99	210/99	200/93	140/60	-
TANNIC ACID	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	170/77	120/49
TARTARIC ACID	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	210/99	140/60	NR
TETRACHLOROETHANE	100		100/38	100/38	120/49	120/49	120/49	100/38	-	NR	NR
TETRACHLOROETHYLENE	100		80/27	80/27	100/38	120/49	120/49	100/38	-	NR	NR
TETRACHLOROPENTANE	100		-	-	-	80/27	80/27	NR	-	NR	NR
TETRACHLOROPYRIDINE	100		80/27	80/27	120/49	120/49	120/49	100/38	100/38	NR	NR

TETRAPOTASSIUM PYROPHOSPHATE	5		200/93	200/93	200/93	210/99	210/99	210/99	180/82	120/49	-
TETRAPOTASSIUM PYROPHOSPHATE	60		120/49	120/49	150/66	150/66	150/66	120/49	120/49	90/32	NR
TETRASODIUM ETHYLENEDIAMINE TETRAACETATE	ALL		180/82	180/82	180/82	150/66	150/66	150/66	100/38	-	-
TETRASODIUM PYROPHOSPHATE	5		200/93	200/93	200/93	210/99	210/99	210/99	180/82	120/49	NR
TETRASODIUM PYROPHOSPHATE	60		120/49	120/49	150/66	150/66	150/66	120/49	120/49	90/32	NR
THIOGLYCOLIC ACID	10		120/49	120/49	-	120/49	120/49	120/49	-	-	-
THIOGLYCOLIC ACID	80		NR	NR	-	80/27	80/27	NR	-	-	-
THIOGLYCOLIC ACID	100		NR	NR	-	80/27	80/27	NR	-	-	-
THIONYL CHLORIDE	100		NR	NR	-	NR	NR	NR	150/66	-	-
TOBIAS ACID	> 0.5		210/99	210/99	210/99	210/99	210/99	210/99	-	-	-

TOLUENE	100		NR	NR	80/27	120/49	100/38	80/27	90/32	90/32	NR
TOLUENE DIISOCYANATE	100		80/27	80/27	-	80/27	80/27	NR	150/66	NR	NR
TOLUENE SULPHONIC ACID	> 0.5		180/82	180/82	180/82	210/99	210/99	210/99	-	-	-
TRANSFORMER OILS	100	11	120/49	120/49	150/66	150/66	150/66	210/99	-	80/27	NR
TRI-(2-CHLOROETHYL) PHOSPHATE	ALL		80/27	80/27	-	80/27	80/27	80/27	-	-	-
TRIBUTYL PHOSPHATE	100		120/49	120/49	140/60	140/60	140/60	140/60	-	-	-
TRIBUTYLAMINE -N	100		80/27	80/27	-	120/49	120/49	120/49	-	-	-
TRICHLOROACETALDEHYDE	100		NR	NR	-	NR	NR	NR	-	-	-
TRICHLOROACETIC ACID	50		100/38	100/38	100/38	100/38	100/38	100/38	100/38	NR	NR
TRICHLOROBENZENE	100		80/27	80/27	-	80/27	80/27	-	NR	NR	NR

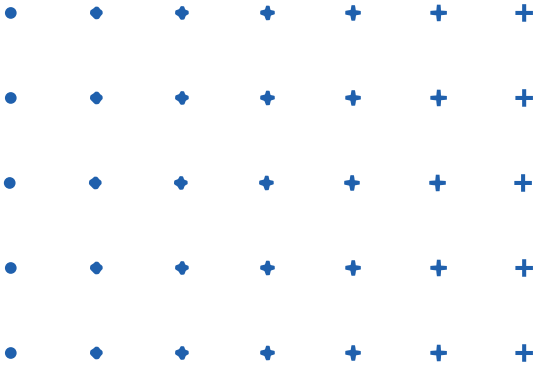
CHEMICAL LISTINGS

CONCENTRATIONS AND RECOMMENDED MAXIMUM CONTINUOUS EXPOSURE TEMPERATURE - DEGREES °F AND °C

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026			F086			F764 F774	F739	
			°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C	°F/°C
TRICHLOROETHANE	100		NR	NR	-	100/38	100/38	NR	NR	NR	NR
TRICHLOROETHYLENE	100		NR	NR	-	NR	NR	NR	NR	NR	NR
TRICHLOROMONOFUORMETHANE	100	2	NR	NR	-	80/27	80/27	80/27	-	-	-
TRICHLOROPHENOL	100		NR	NR	-	NR	NR	NR	-	-	-
TRICRESYL PHOSPHATE	100		160/71	160/71	160/71	160/71	160/71	140/60	-	-	-
TRIDECYL BENZENE SULPHONATE	100		200/93	200/93	200/93	210/99	210/99	210/99	120/49	-	-
TRIETHANOL AMINE	100		120/49	120/49	120/49	150/66	120/49	120/49	-	-	-
TRIETHANOL AMINE LAURYL SULPHATE	ALL		-	-	-	-	-	100/38	-	-	-
TRIETHYL AMINE	100		120/49	120/49	120/49	120/49	120/49	120/49	-	-	-
TRIETHYLENE GLYCOL	100	11	200/93	200/93	210/99	210/99	210/99	210/99	180/82	140/60	-
TRIMETHYL AMINE	100		80/27	80/27	80/27	100/38	80/27	80/27	-	-	-
TRIMETHYL AMINE HYDROCHLORIDE	SAT'D		100/38	100/38	100/38	120/49	100/38	100/38	100/38	NR	NR
TRIMETHYLENE CHLOROBROMIDE	100		NR	NR	-	NR	NR	NR	-	-	-
TRIPHENYL PHOSPHATE	100		140/60	140/60	140/60	140/60	140/60	140/60	120/49	80/27	-
TRIPHENYL PHOSPHITE	100		140/60	140/60	140/60	140/60	140/60	140/60	-	-	-
TRIPROPYL AMINE -N	ALL		80/27	80/27	-	80/27	80/27	80/27	-	-	-
TRIPROPYLENE GLYCOL	100		210/99	210/99	210/99	210/99	210/99	210/99	250/121	180/82	130/54
TRISODIUM PHOSPHATE	SAT'D		210/99	210/99	210/99	210/99	210/99	210/99	150/66	NR	NR
TRITOLYL PHOSPHATE	ALL		140/60	140/60	-	140/60	140/60	140/60	-	-	-
TUNA OIL	100	12	200/93	200/93	210/99	210/99	210/99	210/99	200/93	160/71	120/49
TURPENTINE	100	11	150/66	150/66	210/99	210/99	210/99	150/66	-	80/27	-
TWEEN SURFACTANT	100		150/66	150/66	-	170/77	170/77	150/66	-	-	-
UREA	ALL		160/71	160/71	160/71	160/71	160/71	160/71	160/71	150/66	-
UREA / AMMONIUM NITRATE / WATER (35% / 44% / 21%)	100		150/66	150/66	150/66	150/66	150/66	150/66	120/49	-	-
UREA FERTILIZER			150/66	150/66	150/66	150/66	150/66	150/66	120/49	120/49	-
UREA FORMALDEHYDE RESINS PH<7	ALL		100/38	100/38	120/49	120/49	120/49	100/38	80/27	-	-
VAR SOL SOLVENT	100	11	180/82	180/82	210/99	210/99	210/99	200/93	200/93	120/49	NR
VEGETABLE OILS	100	12	200/93	200/93	200/93	210/99	210/99	210/99	200/93	160/71	80/27
VINEGAR	100	12	210/99	210/99	210/99	210/99	210/99	200/93	200/93	130/54	120/49
VINYL ACETATE	100		NR	NR	-	NR	NR	NR	-	-	-
VINYL CHLORIDE	100		NR	NR	-	NR	NR	NR	90/32	-	-
VINYL TOLUENE	100		NR	NR	80/27	120/49	120/49	NR	80/27	NR	NR
WATER, DEIONISED	100	8, 10, 11, 12	180/82	180/82	170/77	180/82	180/82	180/82	180/82	150/66	120/49
WATER, DEMINERALIZED	100	8, 10, 11, 12	180/82	180/82	180/82	180/82	180/82	180/82	180/82	150/66	120/49
WATER, DISTILLED	100		180/82	180/82	180/82	180/82	180/82	180/82	180/82	140/60	120/49

CHEMICAL	CONC. %	NOTES	F010	F013	F007	F085	K095	F282	K190	F701	F737
			K022 K026	°F/°C	°F/°C	°F/°C	F086	°F/°C	°F/°C	°F/°C	F764 F774
WATER, SEA	100		180/82	180/82	180/82	180/82	180/82	180/82	180/82	150/66	140/60
WATER, STEAM CONDENSATE	100	8	180/82	180/82	180/82	180/82	180/82	180/82	180/82	150/66	120/49
WHISKEY			-	-	-	-	-	110/43	NR	80/27	NR
WHITE LIQUOR (PULP MILL)	10		180/82	180/82	180/82	100/38	100/38	190/88	-	-	-
WINE			-	-	-	-	-	110/43	-	80/27	NR
XYLENE	100	11	NR	NR	80/27	120/49	120/49	120/49	100/38	90/32	NR
XYLENE (M-)	100	11	NR	NR	80/27	120/49	120/49	120/49	-	90/32	NR
XYLENE (O-)	100	11	NR	NR	80/27	100/38	100/38	120/49	-	90/32	NR
XYLENE (P-)	100	11	NR	NR	80/27	100/38	100/38	120/49	-	90/32	NR
ZEOLITE ALL			-	-	-	-	-	210/99	-	-	-

ZINC CHLORATE	> 0.5		200/93	200/93	180/82	210/99	210/99	210/99	-	-	-
ZINC CHLORIDE	SAT'D		210/99	210/99	210/99	210/99	210/99	210/99	210/99	170/77	120/49
ZINC CYANIDE	> 0.5		180/82	180/82	180/82	180/82	180/82	175/79	NR	-	-
ZINC NITRATE	SAT'D		210/99	210/99	210/99	210/99	210/99	210/99	180/82	170/77	120/49
ZINC SULPHATE	ALL		210/99	210/99	210/99	210/99	210/99	210/99	210/99	170/77	120/49
ZINC SULPHITE	ALL		200/93	200/93	160/71	210/99	210/99	210/99	-	140/60	100/38
ZINC NITRATE	ALL		210/99	210/99	210/99	210/99	210/99	210/99	180/82	170/77	120/49
ZINC SULPHATE	ALL		210/99	210/99	210/99	210/99	210/99	210/99	210/99	170/77	120/49
ZINC SULPHITE	ALL		200/93	200/93	160/71	210/99	210/99	210/99	-	140/60	100/38



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