RECOMMENDED USE DEFINITIONS

IMMERSION SERVICE (Most Severe) – IS
Suitable for continuous contact with chemical exposure up to specified temperature.

CARGO/TEMPORARY IMMERSION – CI
Suitable for 60 day continuous contact with chemical exposure up to specified temperature. Coating will show no effect except slight softening or discoloration, possibly permanent, after 60 days or less continuous immersion. When used in transport or hauling conditions, the vessel must be completely drained to prevent puddling that would constitute continuous immersion.

SECONDARY CONTAINMENT – SC
Suitable for continuous contact up to 72 hours with chemical exposure or vapors. The coating will show no effects, except slight softening or discoloration, after 72 hours exposure to chemical or vapors. Data references the chemical resistance of the coating. System recommendation may include mat- or aggregate-reinforcement depending on substrate and/or exposure conditions.

FREQUENT CONTACT – FC
Suitable for frequent splash or up to 72 hours exposure to concentrated vapors. The coating will show no effects except slight softening or discoloration, possibly permanent, after eight hours continuous immersion in the liquid chemical or 72 hours exposure to the vapor.

OCCASIONAL CONTACT (Least Severe) – OC
Suitable for occasional splash and spillage or occasional exposure to concentrated vapors. The coating shows no effects, except slight softening or discoloration, following short exposure to splash or spillage which evaporates, is hosed off, or dried overnight or, 24 hours exposure to vapor.

NOT EVALUATED - NE
This chemical has not been evaluated for the listed chemical. Please contact Tnemec Technical Services for more information.

NOT RECOMMENDED - NR
This product is not recommended for the listed exposure.

CHEMICAL REFERENCES

The following references may be included in the chemical resistance guide listed below.

1 Product is NOT suitable for direct or indirect food contact. Intended Use and temperature information relates to product's performance capabilities only.

2 Product is suitable for direct or indirect food contact. Reference product data sheet for more information.

3 Service requires elevated temperature post cure (PC) of lining. Reference the product data sheet and application guide for more information.

4 System requires use of carbon veil. Reference the product data sheet and application guide for more information.

5 System requires use of glass surfacing veil. Reference the product data sheet and application guide for more information.

IMPORTANT NOTES

The term "chemicals" is used broadly in this guide and can refer to various constituents including, but not limited to, acids, fatty acids, food and beverage materials, finished and unrefined hydrocarbons, as well as individual chemicals and chemical blends. Unless otherwise referenced, the concentrations listed are aqueous solutions of the chemicals.

Temperature can have a significant effect on a coating's chemical resistance. Prior to coating selection, due care should be taken to determine the service temperature of stored chemicals, elevated temperature caused by natural environmental conditions (i.e. radiant heat from sun, weather), and temperature fluctuations during service (i.e. loading of cargo, service cycling).

Chemical mixtures and alternating chemical storage can aggressively degrade a coating or lining system. Prior to coating selection and application, the expected chemical exposures and sequence of chemical storage should be discussed with Tnemec Technical Service to ensure the proper coating is selected.

Proper surface preparation is always important to ensure optimum coating performance, but it is even more so for coatings that will undergo chemical exposure. Carefully read product data sheets along with related application guides to determine the required level of surface preparation and surface profile.

Structural designs of tanks, structures, and containment areas can greatly affect coating performance. Sharp angles, channels, edges, corners, pits, voids, defects, rough welds, and other similar conditions present areas that are either difficult to coat or achieve the required film thickness. Avoid skip welds in favor of continuous welds. A stripe coat on these areas, prior to full coating application, can help achieve needed film thickness and prevent premature coating failure. (Reference NACE SP0178-2007 for more information.)

The length of a coating system's service life depends on surface cleanliness and preparation prior to application, proper application procedures, exposure conditions, physical abuse, cleaning techniques, and frequency of inspection, maintenance, and repair. No coating system has an unlimited service life. Regular inspection of the coating system can prolong service life by identifying areas in need of repair. Additionally, regular inspections can determine when the coating system is nearing its end of service and should be completely replaced.

Chemical resistance information is provided for the purpose of establishing a general profile of the coating and was obtained through laboratory testing, field experience, and industry knowledge. Test results were produced in a controlled environment and Tnemec makes no claim that any tests, or published chemical resistance information, accurately represent all environments or correlate to actual field performance. Application, environmental and design factors, chemical temperatures, chemical mixtures, sequence of storage, conditions of service, and cleaning procedures can significantly impact coating performance, so due care must be exercised in the selection and use of the coating. Tnemec disclaims responsibility for product use outside its published information. Contact Tnemec Technical Service to review full project details before the coating or coating system is selected and applied.

	Intended Use (Maximum Temperature Listed)				
Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
1, 1, 1-Trichloroethane (Trichloroethane)	100°F (38°C)	100°F (38°C)	NR	NR	NR
Acetaldehyde	140°F (60°C)	NR	NR	NR	NR
Acetic Acid					
5%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
10%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
30%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
75%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Acetic Acid, Glacial	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Acetic Anhydride	100°F (38°C)	100°F (38°C)	NR	NR	NR
Acetone	100°F (38°C)	100°F (38°C)	NR	NR	NR
Acetonitrile					
20%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	100°F (38°C) - MB-1.0	100°F (38°C) - MB-1.0
100%	NR	NR	NR	NR	NR
Acrylic Acid	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Acrylic Latex Solution	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	140°F (60°C) - MB-1.1	140°F (60°C) - MB-1.1
Acrylonitrile	120°F (49°C)	NR	NR	NR	NR
Activated Carbon (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Adipic Acid (Dry)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	100°F (38°C) - MB-1.1	100°F (38°C) - MB-1.1
Allyl Chloride	100°F (38°C)	100°F (38°C)	NR	NR	NR
Aluminum Chloride					
25%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	150°F (66°C) - MB-1.1	150°F (66°C) - MB-1.1
Aluminum Hydroxide	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NR	NR
Aluminum Nitrate					
50%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	150°F (66°C) - MB-2.1	140°F (60°C) - MB-2.1

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	Intended Use (Maximum Temperature Listed)				
Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
Ammonium Bisulfite	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-3.1	130°F (54°C) - MB-3.1
Ammonium Carbonate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	120°F (49°C) - MB-3.1	120°F (49°C) - MB-3.1
Ammonium Chloride					
50%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	150°F (66°C) - SS-1.2	150°F (66°C) - SS-1.2
Ammonium Fluoride	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Ammonium Hydroxide (Aqua Ammonia)					
10%	400°F (204°C)	400°F (204°C)	400°F (204°C)	NR	NR
30%	400°F (204°C)	400°F (204°C)	400°F (204°C)	NR	NR
Ammonium Lauryl Sulfate					
30%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Ammonium Nitrate					
10%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
20%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
38%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
50%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Ammonium Nitrite					
50%	NR	NR	NR	NR	NR
Ammonium Perchlorate (Dry)	NR	NR	NR	NR	NR
Ammonium Persulfate					
10%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Ammonium Phosphate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Ammonium Sulfate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C)	120°F (49°C)
Ammonium Sulfide	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1

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	Intended Use (Maximum Temperature Listed)				
Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
Ammonium Sulfite	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-2.1	120°F (49°C) - MB-2.1
Ammonium Thiosulfate					
60%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	100°F (38°C) - MB-2.1	100°F (38°C) - MB-2.1
Amyl Acetate	100°F (38°C)	100°F (38°C)	NR	NR	NR
Aniline	NR	NR	NR	NR	NR
Animal Fats	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Aqua Regia	NR	NR	NR	NR	NR
Aviation Gas	NR	NR	NR	NR	NR
Barium Chloride					
50%	140°F (60°C)	140°F (60°C)	400°F (204°C) - RS-2.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Barium Hydroxide					
50%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Barium Nitrate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Barium Sulfate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Barium Sulfide	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Barley (malt) (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Beer (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Beet (liquor) (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Benzene	NR	NR	NR	NR	NR
Benzene Sulfonic Acid	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Benzoic Acid	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Benzoyl Chloride	400°F (204°C)	400°F (204°C)	NR	NR	NR
Benzyl Alcohol	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	100°F (38°C) - MB-1.1

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	Intended Use (Maximum Temperature Listed)				
Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
Benzyl Chloride	120°F (49°C)	120°F (49°C)	NR	NR	NR
Biodiesel (<2% FAME)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Black Liquor	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
Boric Acid					
5%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Brake Fluid (DOT 3)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	100°F (38°C) - MB-1.1	100°F (38°C) - MB-1.1
Brine chlorinated (ph 5-9) <12,000 ppm chlorides	NR	NR	NR	NR	NR
Brown Stock	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-3.1	140°F (60°C) - MB-3.1
Butyl Acrylate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Butyl Amine	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Butyric Acid	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Cadmium Bromide					
10%	400°F (204°C)	400°F (204°C)	NR	NR	NR
Cadmium Chloride	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Cadmium Plating (Cyanide) (4)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - RS-8.1	140°F (60°C) - RS-8.1
Calcium Bisulfate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Calcium Bromide	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Calcium Carbonate (Limestone Slurry)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NE	NE
Calcium Chloride	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C)	130°F (54°C)
Calcium Hydroxide (Lime Slurry)					
30%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NE	NE
100%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NE	NE

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	Intended Use (Maximum Temperature Listed)				
Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
Calcium Hypochlorite					
5%	120°F (49°C)	120°F (49°C)	NR	NR	NR
Calcium Nitrate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Calcium Nitrite	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Calcium Sulfate	120°F (49°C)	120°F (49°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Calcium Sulfite	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-2.1	120°F (49°C) - MB-2.1
Caprolactam	120°F (49°C)	120°F (49°C)	NR	NR	NR
Caramel (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NR	NR
Carbon Disulfide	100°F (38°C)	100°F (38°C)	NR	NR	NR
Carbon Tetrachloride	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Cashew Nut Oil (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Castor Oil (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Chlorinated Pulp	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	PC	PC
Chlorine Dioxide (gas)	120°F (49°C)	120°F (49°C)	NR	NR	NR
Chlorine Dioxide (Wet, Saturated)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
Chlorine Dioxide Generator	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Chlorobenzene	120°F (49°C)	120°F (49°C)	NR	NR	NR
Chloroform	120°F (49°C)	NR	NR	NR	NR
Chlorosulfonic Acid	NR	NR	NR	NR	NR
Chromic Acid					
10% (3)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
20% (3)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
25%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR

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	Intended Use (Maximum Temperature Listed)				
Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
Citric Acid					
50%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Coal (high and low sulfur)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-2.1	120°F (49°C) - MB-2.1
Cobalt Chloride	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Cobalt Citrate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Coconut Oil (refined) (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Cod Liver Oil (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	100°F (38°C) - MB-2.1	100°F (38°C) - MB-2.1
Cola (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-2.1	120°F (49°C) - MB-2.1
Copper (I) Chloride (Cuprous Chloride)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-2.1	120°F (49°C) - MB-2.1
Copper Acetate					
50%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Copper Sulfate					
10%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
20%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
50%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Copper Sulfate (dry)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Corn Mash Solution (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Corn Oil (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Corn Starch (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Corn Syrup (white) (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Cottonseed Oil (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR

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	Intended Use (Maximum Temperature Listed)				
Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
Cresylic Acid (Cresol)	NR	NR	NR	NR	NR
Crude Oil (Sour)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	180°F (82°C) - RS-2.1	180°F (82°C) - RS-2.1
Crude Oil (Sweet)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	180°F (82°C) - RS-2.1	180°F (82°C) - RS-2.1
Cumene	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-2.1	120°F (49°C) - MB-2.1
Cumene Hydroperoxide	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-2.1	120°F (49°C) - MB-2.1
Cyclohexane	NE	NE	NE	NE	NE
Cyclohexanol	NR	NR	NR	NR	NR
Cyclohexanone	NR	NR	NR	NR	NR
Cyclohexylamine	NR	NR	NR	NR	NR
Dextrose (1) (d-glucose)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NR	NR
Diacetone Alcohol	NR	NR	NR	NR	NR
Dichloroacetic Acid					
20%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-2.2	120°F (49°C) - MB-1.1
Diethanolamine	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Diethylene Glycol	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
Diethylene Glycol Monobutyl Ether (Butyl "Carbitol")	NE	NE	NE	NE	NE
Diethylene Glycol Monobutyl Ether Acetate (Butyl "Carbitol" Acetate)	NE	NE	NE	NE	NE
Diethylenetriamine	140°F (60°C)	140°F (60°C)	NR	NR	NR
Dimethyl Formamide	140°F (60°C)	140°F (60°C)	NR	NR	NR
Dioctyl Phthalate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Dipropylene Glycol	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Dodecyl Alcohol (Lauryl Alcohol)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Ethanol (1) (Denatured Alcohol, Ethyl Alcohol)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	110°F (43°C) - MB-2.1	100°F (38°C) - MB-2.1

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	Intended Use (Maximum Temperature Listed)				
Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
Ethanolamine	NE	NE	NE	NE	NE
Ethyl Acetate	NR	NR	NR	NR	NR
Ethyl Benzene	NR	NR	NR	NR	NR
Ethylamine					
20%	NR	NR	NR	NR	NR
Ethylene Glycol	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Ethylene Glycol Monobutyl Ether (Butyl "Cellosolve")	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	100°F (38°C) - MB-2.1	100°F (38°C) - MB-2.1
Ethylene Glycol Monobutyl Ether Acetate (Butyl "Cellosolve" Acetate)	120°F (49°C)	NR	NR	NR	NR
Ethylenediamine					
20%	120°F (49°C)	NR	NR	NR	NR
Fatty Acids (Greater than C6)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Ferric Chloride	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-2.1	130°F (54°C) - MB-2.1
Ferric Nitrate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Ferric Sulfate					
20%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
60%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Ferrous Chloride	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	150°F (66°C) - MB-2.1	140°F (60°C) - MB-2.1
Flue Gas (dry)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
Flue Gas (wet)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
Fluoboric Acid (3) (5)	150°F (66°C)	150°F (66°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Fluorosilicic Acid (Hydrofluorosilicic Acid)					
10%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Formaldehyde					

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	Intended Use (Maximum Temperature Listed)				
Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
37%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	100°F (38°C) - MB-2.1	100°F (38°C) - MB-2.1
Formic Acid					
10%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	120°F (49°C) - MB-1.1
25%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Fructose (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Furan	120°F (49°C)	NR	NR	NR	NR
Furfural					
10%	NE	NE	NE	NE	NE
Furfuryl Alcohol	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	100°F (38°C) - MB-1.1	100°F (38°C) - MB-1.1
Gasoline (Unleaded)	NR	NR	NR	NR	NR
Glucose (1) (l-glucose)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NR	NR
Glycerin	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Glycol	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	150°F (66°C) - MB-2.1	150°F (66°C) - MB-2.1
Glycolic Acid					
70%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Gold Plating Solution	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Grape Juice (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NR	NR
Grapefruit Juice (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NR	NR
Green Liquor (3)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Guar Gum (1)	100°F (38°C)	100°F (38°C)	NR	NR	NR
Hand Cleaner (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Heptane	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Hexane	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	110°F (43°C)	110°F (43°C)

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Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
Hexanol	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	110°F (43°C) - MB-1.1	110°F (43°C) - MB-1.1
Hydraulic Fluid (Hydraulic Oil)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	150°F (66°C) - MB-1.1	150°F (66°C) - MB-1.1
Hydrobromic Acid					
20%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
48%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Hydrochloric Acid					
5%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	110°F (43°C) - MB-2.1	110°F (43°C) - MB-2.1
10%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	110°F (43°C) - MB-2.1	110°F (43°C) - MB-2.1
15%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	110°F (43°C) - MB-2.1	110°F (43°C) - MB-2.1
20%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	110°F (43°C) - MB-2.1	110°F (43°C) - MB-2.1
28%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	110°F (43°C) - MB-2.1	110°F (43°C) - MB-2.1
33%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	110°F (43°C) - MB-2.1	110°F (43°C) - MB-2.1
37%	100°F (38°C)	100°F (38°C)	NR	NR	NR
Hydrofluoric Acid					
10%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NE-PC	NE-PC
20%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NE-PC	NE-PC
Hydrofluoroboric Acid					
62%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Hydrogen Peroxide					
30%	NR	NR	NR	NR	NR
Hydrogen Sulfide	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NR	NR
Iodine					
5%	140°F (60°C)	140°F (60°C)	NR	NE	NE

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	Intended Use (Maximum Temperature Listed)				
Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
Isobutyl Acetate	120°F (49°C)	120°F (49°C)	NR	NR	NR
Isobutyl Alcohol	NR	NR	NR	NR	NR
Isopropyl Alcohol (Isopropanol)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	110°F (43°C) - MB-1.1	110°F (43°C) - MB-1.1
Jet A Fuel	100°F (38°C)	100°F (38°C)	NR	NR	NR
JP-4 Aviation Fuel	100°F (38°C)	100°F (38°C)	NR	NR	NR
JP-5 Aviation Fuel	100°F (38°C)	100°F (38°C)	NR	NR	NR
Kaolin	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Kerosene	100°F (38°C)	100°F (38°C)	NR	NR	NR
Lactic Acid					
10%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
85%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
100%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Lauryl Chloride	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Lead Acetate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Levulinic Acid	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.2	120°F (49°C) - MB-2.1	120°F (49°C) - MB-2.1
Linseed Oil (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NR	NR
Lithium Bromide	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Lithium Chloride	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Lithium Hydroxide (saturated)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - RS-7.1	130°F (54°C) - RS-7.1
LPG (gas)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C)	120°F (49°C)
Lubricating Oil (SAE 5W-40, et al) (Motor Oil)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Magnesium Bisulfite	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Magnesium Chloride					

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	Intended Use (Maximum Temperature Listed)				
Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
50%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Magnesium Hydroxide					
50%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-3.1	130°F (54°C) - MB-3.1
Magnesium Sulfate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-3.1	130°F (54°C) - MB-3.1
Maleic Acid					
50%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Maleic Anhydride	120°F (49°C)	120°F (49°C)	NR	NR	NR
Malic Acid	100°F (38°C)	100°F (38°C)	NR	NR	NR
Mercuric Chloride	400°F (204°C)	400°F (204°C)	400°F (204°C)	130°F (54°C) - MB-2.1	130°F (54°C) - MB-2.1
Mercury	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	150°F (66°C) - MB-2.1	150°F (66°C) - MB-2.1
Methacrylic Acid	NR	NR	NR	NR	NR
Methane Gas	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Methanol (Methyl Alcohol)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	110°F (43°C) - MB-1.1	110°F (43°C) - MB-1.1
Methyl Acetate	NR	NR	NR	NR	NR
Methyl Acrylate	120°F (49°C)	NR	NR	NR	NR
Methyl Amyl Ketone	120°F (49°C)	NR	NR	NR	NR
Methyl Ethyl Ketone	NR	NR	NR	NR	NR
Methyl Isobutyl Chloride	120°F (49°C)	120°F (49°C)	NR	NR	NR
Methyl Isobutyl Ketone	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	100°F (38°C) - MB-1.1	100°F (38°C) - MB-1.1
Methyl Methacrylate	100°F (38°C)	100°F (38°C)	NR	NR	NR
Methyl Propyl Ketone	NR	NR	NR	NR	NR
Methyl tert-Butyl Ether (MTBE)	NR	NR	NR	NR	NR
Methylene Chloride	120°F (49°C)	NR	NR	NR	NR
Methylstyrene (alpha)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Milk (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	120°F (49°C) - MB-2.1	120°F (49°C) - MB-2.1

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Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
Milk Whey	NR	NR	NR	NR	NR
Mineral Oil	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Mineral Spirits	NR	NR	NR	NR	NR
Molasses (1)	NR	NR	NR	NR	NR
Morpholine	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Mustard (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-2.1	120°F (49°C) - MB-2.1
Naphtha	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Naphthalene	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Naphthenic Acid	120°F (49°C)	120°F (49°C)	NR	NR	NR
n-Butyl Acetate (Butyl Acetate)	400°F (204°C)	400°F (204°C)	NR	NR	NR
n-Butyl Alcohol (1-Butanol) (Butanol (Normal))	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
n-Decyl Alcohol (Decyl Alcohol (1-Decanol))	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Nickel Chloride	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Nitric Acid					
5%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
10%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
20%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
25%	140°F (60°C)	NR	NR	NR	NR
70%	120°F (49°C)	NR	NR	NR	NR
Nitrobenzene	NR	NR	NR	NR	NR
n-Methyl-2-Pyrrolidone	NE	NE	NR	NR	NR
n-Octyl Alcohol (Octanol)	NR	NR	NR	NR	NE
n-Propyl Alcohol (Propyl Alcohol)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	100°F (38°C) - MB-2.1	100°F (38°C) - MB-2.1

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	Intended Use (Maximum Temperature Listed)				
Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
Oleic Acid	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-2.1	120°F (49°C) - MB-2.1
Olive Oil (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NR	NR
Oxalic Acid					
10%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	120°F (49°C) - MB-2.1	120°F (49°C) - MB-2.1
Ozone <2 ppm	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Palm Oil (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Pentane	NR	NR	NR	NR	NR
Perchloric Acid					
30%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	100°F (38°C) - MB-1.1	100°F (38°C) - MB-1.1
Perchloroethylene (Tetrachloroethylene)	NR	NR	NR	NR	NR
Petroleum Ether	NR	NR	NR	NR	NR
Phosphoric Acid					
5%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	180°F (82°C) - SS-1.1	180°F (82°C) - SS-1.1
10%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	180°F (82°C) - SS-1.1	180°F (82°C) - SS-1.1
25%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	180°F (82°C) - SS-1.1	180°F (82°C) - SS-1.1
43%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	180°F (82°C) - SS-1.1	180°F (82°C) - SS-1.1
85%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	180°F (82°C) - SS-1.1	180°F (82°C) - SS-1.1
115%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	180°F (82°C) - SS-1.1	180°F (82°C) - SS-1.1
Phosphorous	NE	NE	NE	NE	NE
Phosphorous Acid	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Phthalic Acid (all)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Picric Acid (conc)	120°F (49°C)	NR	NR	NR	NR
Pine Oil	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-2.1	130°F (54°C) - MB-2.1

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	Intended Use (Maximum Temperature Listed)				
Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
Polyethylene Glycol	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-2.1	130°F (54°C) - MB-2.1
Polypropylene	NE	NE	NE	NE	NE
Polystyrene	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Polytetrafluoroethane	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Polyvinyl Acetate Emulsion	NE	NE	NE	NE	NE
Polyvinyl Chloride	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Potash Ore	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	120°F (49°C) - MB-2.1	120°F (49°C) - MB-2.1
Potassium Acetate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	140°F (60°C) - MB-1.1	140°F (60°C) - MB-1.1
Potassium Bromide	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Potassium Carbonate					
25%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NE	NE
50%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NE	NE
Potassium Chlorate	120°F (49°C)	120°F (49°C)	NE	NE	NE
Potassium Chloride	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-2.1	130°F (54°C) - MB-2.1
Potassium Cyanide	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-2.1	130°F (54°C) - MB-2.1
Potassium Ferricyanide	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.2	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Potassium Fluoride	400°F (204°C)	400°F (204°C)	400°F (204°C) - MB-1.1	NE	NE
Potassium Hydroxide					
50%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Potassium Iodide	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Potassium Nitrate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Potassium Permanganate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-2.1	130°F (54°C) - MB-2.1

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	Intended Use (Maximum Temperature Listed)				
Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
Potassium Persulfate	130°F (54°C)	130°F (54°C)	400°F (204°C)	130°F (54°C)	130°F (54°C)
Potassium Sulfate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-2.1	130°F (54°C) - MB-2.1
Propane	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Propanol	NR	NR	NR	NR	NR
Propionic Acid					
20%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
50%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
100%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Proponal (fumes)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	140°F (60°C) - MB-1.1	140°F (60°C) - MB-1.1
Propylene Glycol	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Pulpmill (Black Liquor)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NE	NE
Pulpmill (Green Liquor)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NE	NE
Pulpmill (White Liquor) (3)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	100°F (38°C) - MB-3.1	100°F (38°C) - MB-3.1
Pyridine					
20%	NR	NR	NR	NR	NR
Silver Nitrate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Sodium Acetate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	140°F (60°C) - MB-1.1	140°F (60°C) - MB-1.1
Sodium Aluminate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	120°F (49°C) - MB-3.1	120°F (49°C) - MB-3.1
Sodium Bisulfate					
30%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-3.1	130°F (54°C) - MB-3.1
Sodium Bisulfite					
38%	130°F (54°C)	130°F (54°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Sodium Borate (Borax)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1

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	Intended Use (Maximum Temperature Listed)				
Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
Sodium Bromide (all)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Sodium Carbonate (sat'd)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Sodium Carbonate (slurry)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Sodium Chlorate					
50%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Sodium Chloride (sat'd) (Brine, Water (Sea), Salt Brine)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NE	NE
Sodium Chlorite (>6 pH)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-1.1	140°F (60°C) - MB-1.1
Sodium Chromate					
50%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-3.1	130°F (54°C) - MB-3.1
Sodium Cyanide	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-3.1	140°F (60°C) - MB-3.1
Sodium Dichromate (all)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-3.1	140°F (60°C) - MB-3.1
Sodium Fluoride	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	120°F (49°C) - MB-3.1	120°F (49°C) - MB-3.1
Sodium Formate					
50%	400°F (204°C)	120°F (49°C)	400°F (204°C) - RS-1.1	120°F (49°C) - MB-2.1	120°F (49°C) - MB-2.1
Sodium Hydrosulfide					
45%	400°F (204°C)	130°F (54°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-2.1	130°F (54°C) - MB-2.1
Sodium Hydrosulfite					
10%	400°F (204°C)	130°F (54°C)	400°F (204°C) - RS-1.1	NE	NE
Sodium Hydroxide (Caustic Soda)					
50%	400°F (204°C)	110°F (43°C)	400°F (204°C) - RS-1.1	110°F (43°C) - MB-3.1	110°F (43°C) - MB-3.1
Sodium Hypochlorite (Bleach)					
6%	120°F (49°C)	120°F (49°C)	300°F (149°C) - RS-2.1	120°F (49°C) - MB-3.1	120°F (49°C) - MB-3.1

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	Intended Use (Maximum Temperature Listed)				
Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
13%	100°F (38°C)	100°F (38°C)	300°F (149°C) - RS-2.1	NR	NR
15%	100°F (38°C)	100°F (38°C)	300°F (149°C) - RS-2.1	NR	NR
Sodium Lauryl Sulfate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-3.1	130°F (54°C) - MB-3.1
Sodium Nitrate					
40%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-3.1	130°F (54°C) - MB-3.1
Sodium Nitrate (dry)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-2.1	140°F (60°C) - MB-2.1
Sodium Oxalate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-3.1	130°F (54°C) - MB-3.1
Sodium Phosphate					
10%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Sodium Silicate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	120°F (49°C) - MB-4.1	120°F (49°C) - MB-4.1
Sodium Sulfate					
6%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-3.1	140°F (60°C) - MB-3.1
Sodium Sulfide (all)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-1.1	140°F (60°C) - MB-1.1
Sodium Sulfite	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-1.1	140°F (60°C) - MB-1.1
Sodium Thiosulfate					
30%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	120°F (49°C) - MB-3.1	120°F (49°C) - MB-3.1
Soy Sauce (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	120°F (49°C)	120°F (49°C)
Soybean Oil (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NR	NR
Soybean Oil (ESO) (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NR	NR
Spearmint Oil (1)	NR	NR	NR	NR	NR
Stannic Chloride (all)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-1.1	140°F (60°C) - MB-1.1
Stannous Chloride (all)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	140°F (60°C) - MB-1.1	140°F (60°C) - MB-1.1

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Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
Stearic Acid (conc)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Stoddard Solvent	NR	NR	NR	NR	NR
Styrene	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
Sugars (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-3.1	130°F (54°C) - MB-3.1
Sulfite Liquor (paper industry)	PC	PC	PC	PC	PC
Sulfur Dioxide (dry)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
Sulfur Dioxide (wet)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
Sulfuric Acid (Sulphuric Acid)					
5%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
10%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
30%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
50%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
70%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
98%	120°F (49°C)	NR	NR	NR	NR
Sulfurous Acid					
10%	100°F (38°C)	100°F (38°C)	NE	NE	NE
Tall Oil	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
Tannic Acid	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
Tartaric Acid (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NE	NE
Tetrahydrofuran	120°F (49°C)	NR	NR	NR	NR
Toluenesulfonic Acid	NR	NR	NR	NR	NR
Tomato Sauce (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Transmission Fluid	NR	NR	NR	NR	NR

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Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
Trichloroethylene (Vinyl Trichloride)	NR	NR	NR	NR	NR
Trichlorofluoroethane	NR	NR	NR	NR	NR
Triethanolamine (TEA)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-1.1	120°F (49°C) - MB-1.1
Triethylamine	100°F (38°C)	100°F (38°C)	NR	NR	NR
Triethylenetetramine	100°F (38°C)	100°F (38°C)	NR	NR	NR
Trisodium Phosphate (Sodium Phosphate (Tribasic))					
20%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	130°F (54°C) - MB-1.1	130°F (54°C) - MB-1.1
Turpentine	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	120°F (49°C) - MB-3.1	120°F (49°C) - MB-3.1
Urea					
50%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-3.1	140°F (60°C) - MB-3.1
Urea Ammonium Nitrate					
32%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-3.1	140°F (60°C) - MB-3.1
Vanillan (Black Liquor) (1)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-2.1	NR	NR
Vegetable Oil (1)	NE	NE	NE	NE	NE
Vinegar (1)	140°F (60°C)	140°F (60°C)	NR	NR	NR
Water (deionized, non-potable) (1) (3) (Water (Demineralized, Non-potable))	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	150°F (66°C) - RS-4.1	150°F (66°C) - RS-4.1
Water (distilled, non-potable) (1) (3)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	150°F (66°C) - RS-4.1	150°F (66°C) - RS-4.1
Water (fresh, non-potable) (3)	400°F (204°C)	400°F (204°C)	140°F (60°C) - RS-1.1	150°F (66°C) - RS-4.1	150°F (66°C) - RS-4.1
White Liquor (3)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	140°F (60°C) - MB-3.1	140°F (60°C) - MB-3.1
Xylene	100°F (38°C)	100°F (38°C)	NR	NR	NR
Zinc Bromide	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	120°F (49°C) - MB-3.1	120°F (49°C) - MB-3.1
Zinc Chloride					
40%	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	120°F (49°C) - MB-3.1	120°F (49°C) - MB-3.1

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	Intended Use (Maximum Temperature Listed)				
Chemical	**Occasional Contact**	**Frequent Contact**	**Secondary Containment**	**Cargo Immersion**	**Immersion Service**
Zinc Phosphate (dry)	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NE	NE
Zinc Sulfate	400°F (204°C)	400°F (204°C)	400°F (204°C) - RS-1.1	NE	NE

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