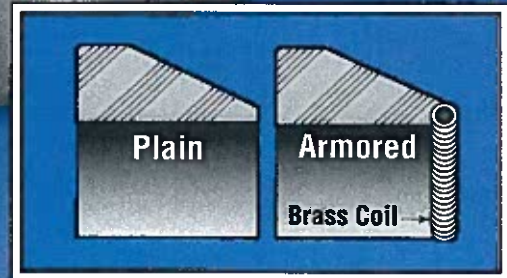




Gaskets & Wetted Components

BUNA S, BUNA N, Armored and High-Temp Gaskets



Includes Compatibility Charts for Corrosive or Chemical Line Contents

For Dresser Gas & Water Market Product Applications



Gasket Overview



Dresser® Compounded Rubber Gaskets

Pipe joints must be able to absorb pipe stress caused by natural forces and allow for expansion, contraction, vibration and deflection while the line is in service.

The sealing capabilities and the extreme flexibility of a Dresser coupled joint is made possible by the resilience of the rubber-compounded gaskets. Resiliency is the property that enables the gaskets to maintain pressure against the followers that confine it and, at the same time, allow for flexibility not found in rigid piping connections. Without it, a flexible joint is not possible! Simply put, the absorption of pipeline stress permits each section of the pipeline to "float" in the joint ensuring a flexible piping system while avoiding leakage, line breaks, costly repairs and service interruptions.

The information below is provided as a general review of various gaskets available when installing Dresser products. Please consult Dresser engineering department for proper recommendations pertaining to your particular requirements.

WARNING: Temperature recommendations are for reference purposes only. Please consult Dresser Inside Sales for specific recommendations, product style, line content, working pressure and temperature ranges.

Armored® Gaskets

Armored gaskets can be used to great advantage where low electrical-resistant joints are desired. The armor "bites" into the pipe providing metal to metal contact allowing easy passage of current where cathodic protection is a necessity.

The armor—an elastic, practically indestructible brass coil or helix—is molded into the gasket tip becoming an integral part of the gasket. When used with the proper grade/compound rubber, the armor shields the gasket material from the line content without interfering with the sealing efficiency of the gasket.

Buna N (Grade 42 - Nitrile) - Max. Temp. 212°F*

Buna N (Grade 42) gaskets are resistant to oil, most aromatic and aliphatic hydrocarbons, natural gas fogging oil, condensates and gasolines.

Buna S (Grade 27) - Max. Temp. 212°F*

The compound most generally used for plain gaskets is Buna S (Grade 27). This gasket has wide applications and is accepted as standard for most pipeline use. It is recommended for use on lines transporting both fresh water and salt water, natural and other gases, air, most acids, alkaline and sugar solutions and some refrigerants.

Fluorocarbon - Max. Temp. 350°F

Fluorocarbon gaskets are resistant to hydrocarbons, aromatic hydrocarbons, alcohols, organic acids, nitrogen-containing compounds, vegetable oils and greases.

Butyl - Max. Temp. 250°F

Butyl gaskets are resistant to hot air service, steam, hot water and miscellaneous aqueous solutions. They are also suitable for vegetable oils, organic chemicals, oxidizing acids and alkalies.

EPDM - Max. Temp. 300°F

EPDM gaskets provide excellent resistant to aging factors such as ozone, oxygen and elevated temperatures. This includes service in hot water, steam and dry heat. They are also suitable for handling popular chemicals such as ketones, alcohols, phosphate ester hydraulic fluids, glycols, dilute acids and alkalies.

High Temperature - Max. Temp. 1200°F

These braided flexible gaskets are designed specifically for the high temperature and abrasive atmospheres associated with services such as fly ash handling systems. As a replacement for asbestos, these gaskets are manufactured of a pure homogenous graphite bonded to a fiberglass carrier for strength and thermal durability. The braid over braid construction is die-formed and cut to length to fit proper coupling configurations resulting in a uniform tolerance which has proven itself as a reliable asbestos replacement.

Note: The non-resilient characteristic of this particular gasket material may result in a non leak-proof seal. This should be taken into consideration for this application.

Gasket Recommendations for SEVERE Service Conditions

LINE CONTENT	DRESSER GASKET	LINE CONTENT	DRESSER GASKET	LINE CONTENT	DRESSER GASKET
Acetic Acid (10% concentration)	Plain Gr. 27	Ethylene Dichloride	Armored Gr. 27	Sodium Metaphosphate	Plain Gr. 27
Ammonium Chloride	Plain Gr. 27	Ethylene Glycol	Plain Gr. 27	Sodium Perborate	Plain Gr. 27
Ammonium Phosphate (diabasic)	Plain Gr. 27	Ferric Chloride	Plain Gr. 27	Sodium Phosphate (monobasic, dibasic, tribasic)	Plain Gr. 27
Ammonium Phosphate (monobasic)	Plain Gr. 27	Ferric Sulfate	Plain Gr. 27	Sodium Sulfate	Plain Gr. 27
Barium Chloride	Plain Gr. 27	Formaldehyde	Plain Gr. 27	Sodium Thiosulfate (hypo)	Plain Gr. 27
Barium Hydroxide	Plain Gr. 27	Formic Acid	Plain Gr. 27	Soybean Oil	Plain Gr. 42
Benzene	Armored Gr. 42	Gelatin	Plain Gr. 27	Stearic Acid	Plain Gr. 42
Boric Acid	Plain Gr. 27	Hydrogen Peroxide	Plain Gr. 42	Styrene	Fluorocarbon
Butyl Acetate	Armored Gr. 42	Lacquers	Armored Gr. 42	Tannic Acid	Plain Gr. 27
Calcium Bisulfite	Plain Gr. 27	Magnesium Chloride	Plain Gr. 27	Tartaric Acid	Plain Gr. 27
Calcium Chloride	Plain Gr. 27	Nickel Sulfate	Plain Gr. 27	Trichloroethylene	Armored Gr. 42
Carbolic Acid, Phenol	Plain Gr. 27	Oxalic Acid	Plain Gr. 42	Vinegar	Plain Gr. 27
Carbon Dioxide, Wet	Plain Gr. 27	Phosphoric Acid	Plain Gr. 27	Vinyl Chloride	Plain Gr. 27
Carbon Tetrachloride	Plain Gr. 42	Picric Acid	Plain Gr. 42	Zinc Chloride	Plain Gr. 27
Citric Acid	Plain Gr. 27	Potassium Hydroxide	Plain Gr. 42		
Copper Cyanide	Plain Gr. 27	Potassium Sulfate	Plain Gr. 27		
Copper Sulfate	Plain Gr. 27	Puric Acid	Plain Gr. 42		
		Sodium Bicarbonate (baking soda)	Plain Gr. 27		

DRESSER® Gasket And Wetted Component Combinations

For Use With Chemical Or Corrosive Line Content

LINE CONTENT	DRESSER® GASKET	WETTED COMPONENTS
Acetic Acid (10% concentration) Acetic Anhydride Acetone Acetylene Air	Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27	Plastic or Rubber-lined, Stainless Aluminum, Monel Standard Standard Standard
Aluminum Chloride Aluminum Fluoride Aluminum Sulfate Alums Ammonium Gas Ammonium Chloride	Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27	Monel, Rubber-lined or Plastic Rubber-lined or Plastic Standard Rubber-lined or Plastic Standard Plastic or Rubber-lined, Monel, Stainless
Ammonium Hydroxide Ammonium Nitrate Ammonium Phosphate(diabasic) Ammonium Phosphate(monobasic) Ammonium Phosphate(tribasic) Ammonium Sulfate	Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27	Standard Plastic or Rubber-lined Monel, Stainless Stainless Standard Standard
Amyl Alcohol Aniline, Aniline Oil Asphalt Barium Chloride Barium Hydroxide Barium Sulfide	Plain Gr. 27 Armored Gr. 42 Armored Gr. 42 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27	Monel, Plastic or Rubber-lined Standard Standard Plastic or Rubber-lined, Stainless Plastic or Rubber-lined, Stainless Monel, Plastic or Rubber-lined, Stainless
Beet Sugar Liquors Benzene Blast-furnace Gas Borax Boric Acid Butane	Plain Gr. 27 Armored Gr. 42 Plain Gr. 42 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27	Standard Stainless Standard Standard Monel, Plastic or Rubber-lined, Stainless Standard
Butyl Acetate Butyl Alcohol Calcium Bisulfite Calcium Chloride Calcium Hydroxide Calcium Hypochlorite	Armored Gr. 42 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27	Stainless Standard Plastic, Stainless Stainless Standard Plastic or Rubber-lined
Calcium Phosphate Caliche Liquors(sodium nitrate) Cane Sugar Liquors Carbolic Acid, Phenol Carbon Bisulfide Carbon Dioxide, Dry	Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27	Standard Standard Standard Aluminum, Monel, Stainless Standard Standard
Carbon Dioxide, Wet Carbon Monoxide Carbon Tetrachloride Castor Oil China Wood Oil, Tung Oil Chloracetic Acid	Plain Gr. 27 Plain Gr. 27 Plain Gr. 42 Plain Gr. 42 Plain Gr. 42 Plain Gr. 42	Stainless, Monel, Plastic or Rubber-lined Standard Stainless Standard Standard Plastic
Chlorinated Solvents, Dry Chlorinated Solvents, Wet Chlorine Gas, Dry Chlorine Gas, Wet Citric Acid	Plain Gr. 42 Plain Gr. 42 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27	Standard Monel Standard Plastic or Hard Rubber-lined Aluminum, Monel, Plastic or Rubber-lined, and Stainless
Coke-oven Gas	Plain Gr. 42	Standard
Copper Chloride Copper Cyanide Copper Sulfate	Plain Gr. 27 Plain Gr. 27 Plain Gr. 27	Plastic or Rubber-lined Plastic or Rubber-lined, Stainless Monel, Plastic or Rubber-lined, Stainless

NOTE: The information in this chart is based on service at ambient temperature and is offered only as a guide.

LINE CONTENT	DRESSER® GASKET	WETTED COMPONENT
Corn Oil Cottonseed Oil Creosote, Coal Tar Creosote, Wood Tar	Plain Gr. 42 Plain Gr. 42 Armored Gr. 27 Armored Gr. 27	Standard Standard Standard Standard
Ethers Ethyl Acetate Ethyl Alcohol Ethyl Cellulose Ethyl Chloride Ethylene Dichloride	Armored Gr. 42 Armored Gr. 27 Plain Gr. 27 Plain Gr. 27 Armored Gr. 27	Standard Standard Standard Monel, Rubber-lined Standard Monel, Rubber-lined, Stainless
Ethylene Glycol Ferric Chloride Ferric Sulfate Formaldehyde Formic Acid	Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27	Standard Plastic or Rubber-lined Plastic, Stainless Rubber-lined, Monel, Stainless Plastic or Rubber-lined, Stainless
Freon (11) Trichloromonofluoromethane (12) Dichlorodifluoromethane (13) Monochlorotrifluoromethane (21) Dichloromonofluoromethane (22) Monochlorodifluoromethane (113) Trichlorotrifluoroethane (114) Dichlorotetrafluoroethane	Armored Gr. 42 Armored Gr. 27 Armored Gr. 27 Armored Gr. 27 Armored Gr. 27 Armored Gr. 27 Armored Gr. 27	Standard Standard Standard Standard Standard Standard Standard
Fuel Oil Gas, By-product, Manufactured (sour) Gas, By-product, Manufactured (except highly sour) Gasoline	Plain Gr. 42 Plain Gr. 42 Armored Gr. 27 Armored Gr. 42	Standard Standard Standard Standard
Gelatin Glucose Glue Glycerin Hexane Hydraulic Fluid Hydrobromic Acid to 40% Concentration	Plain Gr. 27 Plain Gr. 27 Plain Gr. 42 Plain Gr. 27 Plain Gr. 42 Armored Gr. 42 Plain Gr. 42	Monel, Stainless, Rubber-lined or Plastic Standard Standard Standard Standard Standard Plastic or Rubber-lined
Hydrochloric Acid (up to 37% Conc.) Hydrofluorosilicic Acid Hydrogen Gas Hydrogen Peroxide Hydrogen Sulfide (cold dry)	Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 42 Plain Gr. 42	Plastic or Rubber-lined Monel, Plastic or Rubber-lined Standard Plastic or Rubber-lined, Stainless Standard
Isopropyl Alcohol Jet Fuel Kerosene Lacquers Lactic Acid (cold) Linseed Oil Lubricating & Refined Oil	Plain Gr. 27 Armored Gr. 42 Plain Gr. 42 Armored Gr. 42 Armored Gr. 42 Plain Gr. 42 Plain Gr. 42	Standard Standard Standard Stainless, Monel Monel, Plastic or Rubber-lined Standard Standard
Magnesium Chloride Magnesium Hydroxide Magnesium Sulfate Mercuric Chloride Mercury	Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27	Plastic or Rubber-lined, Stainless Standard Standard Plastic or Rubber-lined Standard
Methane Methyl Alcohol (methanol) Methyl Chloride Methyl Ethyl Ketone Methyl Isobutyl Ketone Milk	Armored Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27	Standard Standard Standard Standard Standard Standard
Mineral Oil Mineral Spirits MTBE Natural Gas (including fogged) Nickel Chloride Nickel Sulfate Nitrobenzene	Plain Gr. 42 Armored Gr. 27 Armored Gr. 42 or 29 Armored Gr. 27 Plain Gr. 27 Plain Gr. 27 Armored Gr. 42	Standard Standard Standard Standard Plastic or Rubber-lined Monel, Plastic or Rubber-lined, Stainless Standard

NOTE: The information in this chart is based on service at ambient temperature and is offered only as a guide.



WARNING Selection of the proper materials and product style must be made by a qualified person. Improper materials could result in leaking line content and cause property damage, serious injury or death.

LINE CONTENT	DRESSER GASKET	TYPE MIDDLE RING OR FITTING BODY
Nitrogen Gas Oil, Crude, Sour Oleic Acid Oxalic Acid Oxygen, Cold	Plain Gr. 27 Plain Gr. 42 Plain Gr. 42 Plain Gr. 42 Armored Gr. 42	Standard Standard Aluminum, Monel, Plastic or Rubber-lined Plastic or Rubber-lined, Stainless Standard
Palmitic Acid Perchloroethylene Petroleum Ether Naptha Petroleum Oils (general) Phosphoric Acid Picric Acid	Plain Gr. 27 Armored Gr. 42 Armored Gr. 42 Armored Gr. 42 Plain Gr. 27 Plain Gr. 42	Standard Standard Standard Standard Plastic, Stainless, Monel, Rubber-lined Rubber-lined, Stainless
Potassium Chloride Potassium Cyanide Potassium Hydroxide Potassium Sulfate Producer Gas	Plain Gr. 27 Plain Gr. 27 Plain Gr. 42 Plain Gr. 27 Plain Gr. 42	Standard Standard Monel, Plastic, Stainless Aluminum, Plastic or Rubber-lined, and Stainless Standard
Propane, Saturated Propane (100% Vapor) Puric Acid Secondary Butyl Alcohol Sewage Soap Solutions	Armored Gr. 42 Armored Gr. 27 Plain Gr. 42 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27	Standard Standard Rubber-lined, Stainless Plastic Monel, Standard Standard
Sodium Bicarbonate (baking soda) Sodium Bisulfate Sodium Carbonate (soda ash) Sodium Chloride Sodium Cyanide Sodium Dichromate (not over 10%) Sodium Hydroxide (caustic soda, 50% concen.)	Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27	Monel, Plastic or Rubber-lined, Stainless Monel, Plastic Standard Standard Standard Standard Plastic Standard
Sodium Hypochlorite Sodium Metaphosphate Sodium Nitrate Sodium Perborate Sodium Peroxide Sodium Phosphate (monobasic, dibasic, tribasic)	Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27	Plastic Aluminum, Monel, Stainless Standard Monel, Stainless Standard Standard, Monel, Plastic, Stainless, or Rubber-lined
Sodium Silicate Sodium Sulfate Sodium Sulfide Sodium Thiosulfate (hypo) Soybean Oil	Plain Gr. 27 plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Plain Gr. 42	Standard Aluminum, Plastic, Monel, Stainless Plastic Plastic, Stainless Stainless, Rubber-lined
Stannic Chloride Stearic Acid Styrene Sulfurous Acids Sulphur Sulphur Chloride	Plain Gr. 27 Plain Gr. 42 Fluorocarbon Plain Gr. 27 Plain Gr. 27 Plain Gr. 27	Plastic or Rubber-lined Monel, Plastic or Rubber-lined, Stainless Monel, Plastic, Rubber-lined, Stainless Standard Standard, Plastic or Rubber-lined Rubber-lined
Sulphur Trioxide Sulphuric Acids (up to 40% Concen.) Tannic Acid Tar Tartaric Acid Toluene Trichloroethylene	Plain Gr. 27 Plain Gr. 27 Plain Gr. 27 Armored Gr. 27 Plain Gr. 27 Fluorocarbon Armored Gr. 42	Standard Standard Monel, Plastic or Rubber-lined, Stainless Standard Standard Aluminum, Plastic, Stainless Standard Monel, Stainless
Turpentine Vinegar Vinyl Chloride Water (sea water, acidic basic chlorinated)	Armored Gr. 42 Plain Gr. 27 Plain Gr. 27 Plain Gr. 27	Standard Monel, Plastic, Stainless Standard, Stainless, Monel Monel, Plastic or Rubber-lined
Zinc Chloride Zinc Sulfate	Plain Gr. 27 Plain Gr. 27	Monel, Plastic or Rubber-lined, Stainless Monel, Plastic or Rubber-lined

NOTE: The Information in this chart is based on service at ambient temperature and is offered only as a guide.

Specifying Dresser Gaskets

For corrosive or chemical line contents and/or adverse conditions

For those who may need gasket selection assistance with corrosive or chemical line contents, or adverse conditions, Dresser engineers require the submittal of the following data specifications particular to your piping system. Please fill out data below, copy and Fax to: 1-800-362-9363

- 1.) Line Content _____
- 2.) Chemical Name _____
- 3.) Concentration _____
- 4.) PH Reading and Moisture Percentage _____
- 5.) Piping Material Being Joined _____
- 6.) Piping System Pressure Rating _____
- 7.) Piping System Temperature Rating _____
- 8.) Atmospheric Conditions - Is product submerged? _____
- 9.) Operating Pressure _____
- 10.) Operating Temperature _____
- 11.) Size _____
- 12.) Type (Style) of Product Being Used _____
- 13.) Other Special Conditions _____

Name _____ Phone: _____

Company _____

Questions?

Call Dresser Customer Service in Bradford, PA at 814-362-9200

! WARNING

Selection of the proper materials and product style must be made by a qualified person. Improper materials could result in leaking line content and cause property damage, serious injury or death!

! WARNING

Temperature recommendations are for reference purposes only. Product style, line content and temperature ranges should be submitted to Dresser Engineering Department for specific recommendations.

Piping Specialties

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