CARPET COLOR PLUS®

Operational Manual

DETAIL PLUS® Car Appearance Systems

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INTRODUCTION

Welcome to the exciting world of Carpet Color Plus. As you probably know, color is an important influence on our lives. It affects how we think and even how we feel.

Today's detail professional must meet tough challenges to survive in the marketplace. Enhancing, recoloring and dyeing carpet are ways to meet this challenge and to satisfy your customers' needs.

This manual will help you solve the problems you may be confronted with and will help you to be equipped to provide professional coloring services for your customer. It will provide you with the basic how-to information.

TYPES OF FIBERS

In general, carpet care generally means cleaning or coloring the carpet's fibers. It is important to remember that all carpet fibers can be cleaned but all cannot be dyed or recolored. However, since almost all automotive carpet and fabric upholstery is nylon your job is much easier. Nylon fibers can be dyed using acid-based dye.

There are many types of fibers but this manual will focus on NYLON.

Nylon is a thermoplastic material derived from a coal-tar base. It was discovered by Wallace Carouthers of DuPont in 1938. Nylon is the most commonly used material for automotive carpet because of its soft bright fibers, resiliency, and ease of cleaning and dyeing.

TYPES OF CARPET

Woven carpet – is manufactured on a loom with face yarns interwoven with lengthwise (warp) and width yarns. Sometimes filling yarns can be used for spacing or to create a pattern. They run parallel to the weft (width) yarns. Woven styles are: **Wilton, Axminster,** and **Knitted.**

> **Wilton** is a cut-pile, multicolored style with filling yarns that float through the backing and rise to the surface, which creates the design or pattern.
> **Axminster** is a cut-pile style that is marked by double filling yarns that create a stiff rib across the back. This design allows the carpet to be rolled and stretched from only lengthwise direction.
> **Knitted** is a loop-pile style that has tight even-height loops.

Tufted Carpet is carpet produced on a tufting machine that sews face yarns into a primary backing. The yarns are secured to the backing with a latex adhesive. Secondary backings can be laminated to the primary backing.

> **Velvet Plush** is a common tufted cut-pile style with a smooth surface appearance comprised of yarns with little or no heatset.
> **NATURAL TWIST** Most automobile carpeting is natural twist.

Saxony Plush is a common cut-pile made with yarns with a heatset twist that produces a clearly defined yarn tip.
Texture or Frieze is a common cut-pile style commonly referred to as trackless carpet. An extra heatset twist makes the end of the yarn curl under to produce a nubby appearance.
Multi-Toned carpet is carpet having different shades of one color.
"Abrush" is variations of yarn shades across the width of old oriental rugs.
Shag is a low density cut-pile style with very long tufts. Popular in the 1970's, some are still in use in apartments and homes.

Level Loop is a common style with loops of even pile height. This style is commonly used in commercial applications. Styles are **Berber, Multi Level Loop,** and **Commercial Level Loop**.

Berber is a common loop pile constructed with large multi-level yarn. It is found mostly in residential applications.
Cut and Loop is a common style constructed with pile yarns of different heights and is sometimes referred to as high-low carpet. It contains looped and cut-looped yarns.
Multi Level Loop is another common style composed of varying height yarns.

INTRODUCTION TO COLOR

There is a multitude of options when a customer selects carpet. The different styles of fiber, backing and stain resistance are almost always secondary to the color of the carpet. Science has found that color influences how we feel and respond. It helps to determine the mood of a room or even a building. Sometimes little thought is given to the performance of carpet-the single most important element being color.

The main causes of color loss in carpet are sun and fume fading, chlorine bleach, pet urine and **high pH cleaners**. This is why you should **NEVER** use degreaser on carpets but only carpet shampoo.

Soiling, fading, stains and wear adversely affect the appearance of the carpet.

- An example of natural color loss is sun fading.
- An example of color loss to due to fume fading would be a yellowish colored carpet that becomes medium green under the seat.
- An example of chemical color loss is bleach discoloration. Other chemicals such as medications and food compounds can cause color loss also.

Regular carpet cleaning can remedy some of these problems. Stains are created by the addition or removal of the original carpet color. Stains caused by the addition of color can be treated by removing the foreign color with an oxidizing or a reducing agent. The difference between an oxidizing agent and a reducing agent is that an oxidizing agent adds oxygen and a reducing agent removes oxygen.

Color stains caused by the loss of color can be remedied by replacing the missing original color. In order to do so, one must be familiar with the history and theory of color.

HISTORY OF COLOR

Sir Isaac Newton, one of the greatest scientists of all time, is credited with many great accomplishments. He developed the theory of light and color in 1667 and devised the color wheel. Newton's experiments were the beginning of the history and study of color.

Newton's theory of light came about from experiments where he passed light through a prism. The prism bends the light rays into different angles and breaks the light into a band of color called a spectrum. A rainbow is an example from nature of this phenomenon. The human eye can only see colors ranging in wavelength between infrared and ultraviolet. Color blindness, sometimes called Daltonism, is the inability to tell colors apart. Generally the human eye is unable to detect color variation that is less than 3%.

Infrared rays are rays beyond the red of the visible spectrum that though similar to light rays, are invisible to the human eye. These waves are longer than those of the colors of the spectrum and are able to penetrate and heat. Ultraviolet rays are just beyond violet in the visible spectrum and have wavelengths shorter than those of the visible spectrum. Optical brighteners pick these light rays up.

One of the properties of color is that when white light shines on a red object (for example), all of the energy from all wavelengths except red is absorbed by the object, allowing only red to be reflected back to the observer and detected by the eye.

Newton soon discovered that when light was passed back through a second inverted prism the light would be restored to white, and if a single color was passed through a prism it remained the same color.

Newton concluded that all color comes from light and he developed the color wheel to explain his theory. We use this same color wheel today. In the 20th century the tools for measuring light waves were developed and were named electromagnetic energy. These are the only energy waves that we can see.

COMPONENTS OF COLOR

How we describe and measure color

As the art of color progressed, artisans began to realize that color theory actually consisted of three different dimensions and all of these dimensions had to be considered before color could be used skillfully.

These dimensions are as follows:

1. A color's **light value** (how it compares with black and white)
2. A color's **hue** (its actual color or color family)
3. A color's **chroma or intensity** (its degree of brightness and dullness)

A color's **light value** indicates its ability to reflect light rays and its overall value when compared to black and white (the two extreme light values). Two colors can have the same light value, even though they are entirely different colors, such as mauve and light green. For this reason you should not confuse the terms "light value" and "chroma." Light value refers to a color's

ability to reflect light and many different colors can have the same light value. On the other hand, chroma refers to a color's intensity (brightness) or overall degree of dullness.

A color's hue indicates its family of color and whether or not it is a natural color produced by light (a hue) or a mixture of colors (from all three hues.) Reds, yellows, blues and mixtures of any two of these colors are natural hues. Browns, grays and blacks are mixed colors obtained from mixing all three hues together in varying proportions.

A color's chroma or intensity indicates the different combinations of colors used to make that color, plus the amount of color used. For example, light pastel shades of a color indicate small amounts of colorant being mixed together and possibly even white or gray being added to the color to produce such effects as tints and tones. On the other hand, deep, dark shades of color indicate large amounts of colorant being mixed together and possibly even black being added to the color to produce such effects as shading. Undertones can also be used to make colors appear duller or to give them added traces of different colors, such as a gray with blue undertones.

When all three dimensions are considered, colors can be made much brighter, or softer, and many new colors can be added to your inventory of available colors. Some good examples of this effect are as follows:

1. The more colorant used, the greater the intensity of the color and the lower the light value.
2. Colors mixed from secondary colors are brighter than colors mixed from primary colors.
3. Gray is used to change the tone of a color (make it less bright) and black is used to shade a color (make it darker).
4. Primary, secondary and intermediate hues always produce the most intense colors because they never contain more than two hues and they do not contain browns, grays or blacks.
5. You must re-dye something to its original shade of color or a darker shade of color.

The first thing we notice about objects around us is their color or hue. Many people use the terms color and hue interchangeably, but this is not entirely correct. Color is a broad term referring to any color sensation. Hue is more specific and refers to the quality of a color that identifies it by family or color quality, such as a color with a blue hue, or a totally pure color to which nothing has been added that would alter its purity.

When we use the term "hue" we normally refer to those colors found in the artist's color wheel, which we call the primary, secondary and intermediate colors. All other colors are always darker and duller than these hues because they contain more colors than two hues and they reflect less light than the hues. These colors are often referred to as tertiary or mixed colors because they are produced by adding all three primary colors together or adding two complementary colors together. Examples of these tertiary or mixed colors are brown gray and black.

INTRODUCTION TO DYE

Color is very important to our lives, as we mentioned in the introduction. Research supports the idea that color has a tre mendous effect on our t houghts and feelings. All aspects of our lives from the ye llow caution sign and t he yellow school bus t o the color of hospital walls are influenced by color.

Man's earliest artistic expressions on the walls of caves and early ceramics were decorated with color. Most of this color came from a variety of animal, plant and mineral materials.

Early natural dyes had many problems with regard to vividness, colorfastne ss and fibe r resistance to dye. Colorfastness is dependen t on UV lig ht exposure, crocking, cleaning and chemical contaminates. In order t o increase colorfastness, natural fibers were t reated with natural acids, oxidizers and reducing agents that would fix the dyes to the fibers. These acids, oxidizers and reducing agents are called mordants.

Mordants react with the fiber and the applied dye to create an insoluble compound that bonds the dye in and onto the fibers. As the case with many discoveries, the first use of mordants was perhaps the result o f a happy accident. This may have occurred when undyed cloth was washed in a stream h igh in certa in metallic salt compounds, which improved the cloth's acceptance and retention of dye. S ome mordants were fo und to work better on animal fibers while others were best with plant fibers.

Some examples of mordants are: alum, tartaric acid, ferrous sulfate, copper sulfate, chromium sulfate, sodium carbonate and sodium hydroxide.

DYES FROM NATURE

Nature provides many sources for dyes. Veget able dye can be made from roots, leaves, bark, husks, berries, stems a nd pollen. Early popular dyes made from plants are wo ad, indigo, madder and logwood.

In Europe the woad plant was cultiva ted for its b lue color. D ye was mad e from the bark of the plant. This dye was used from the Roman Empire until the end of the Middle Ages, when indigo came into favor.

Indigo was native to India and when shipping became available it was used as an alternative to woad. Today, imitation indigo is the most popular dye in the world.

The madder plant was the fir st used to pro duce red d ye. Later when used in different combinations of mordant, dyestuffs were made to produce colors ranging from yellow to red.

Logwood is a tree native to Central America, Mexi co and the West Indies. It produ ced a black to brown dye. Mixing vegetable dyes produced green, violet and orange but a colorfast black was hard to achieve.

Mineral dyes generally were m ade from iron oxides but were much less popular t han vegetable and animal dyes.

Animals and insects produced some of the most effective early dyes.

Kermes comes from the bodies of insects that live in oak trees. It produces a brilliant red dyestuff.

Cochineal is made from the bug of the same name. It is a brilliant red with excellent dye fastness. Thought to be used initially by South American Indians, it was a popular trade item from the New World.

Tyrian purple, used from 1000 BC, is made from the fluid secreted by a small shellfish. Shellfish fluid is allowed to oxidize, where it turns from milky white, to green, to various shades of purple. This tedious process made the dye very expensive to produce, and was commonly called "royal purple."

SYNTHETIC DYES

In 1856, an English chemist, William Perkin, discovered a synthetic dyestuff made from a coal tar derivative. He found that this material, named aniline, turned white silk to mauve, a reddish-purple color. His discovery led to other research with coal tar and related compounds that produced a wide range of synthetic dyes. These dyes have virtually replaced the commercial use of natural dyes.

Various fibers react differently to synthetic dyes. Even from the earliest times it has always been very important to select the proper dye for each fiber type to ensure a successful color change or correction. Before applying dye, identify the fiber type of every repair job.

TYPES OF SYNTHETIC DYES

Contact or Direct Dyes
These dyes are water soluble and are used to dye cotton, rayon and other cellulosic fibers and sometimes to dye protein and polyamide fibers. These dyes are applied in a hot water-based solution of salt to stabilize the dyes. Relatively inexpensive, direct dyes are made colorfast by using special finishes or copper salts.

Azoic Dyes
Naphthol dyes are used to primarily dye cotton, and less frequently to dye olefin, acetate, nylon and polyester. Sometimes referred to as "ice dyes," they are highly saturated color formed by combining naphthol and diazonium salt at a low temperature. These dyes are very colorfast but they tend to give off excess dye when agitated (crocking).

Vat Dyes
Vat dyes are converted by chemical reaction into water soluble form and then applied to the fibers and allowed to oxidize where they return to their insoluble state. Indigo is the best example of vat dyes, which are commonly used to dye cotton, rayon, acrylic, modacrylic and sometimes nylon. Because they are applied in an alkaline solution, vat dyes could damage protein fibers such as wool and silk.

Sulfur Dyes
Dark blacks, browns or blues on cotton and rayon are the most common use for sulfur dyes. Because they are applied in an alkaline solution, care must be taken to prevent damage to the fibers through over-application.

Acid Dyes (CARPET COLOR PLUS uses acid dyes)
Commonly used to dye **wool and nylon**, acid dyes are very colorfast. When applied to acrylic, polyester and olefin, colorfastness is not as good. The dye solution is made up of negative ions that combine with the positive ions in the amorphous areas of the fibers called dye sites. This dye should not be used on cotton as the acid may damage the fibers. These dyes must be applied in a neutral to acid dye bath. Nylon is easily dyed using acid dyes.

Chrome or Mordant Dyes
These are similar to acid dyes but with the addition of metallic salts such as chrome, copper, aluminum and nickel. They form an insoluble dye of dense color and improved lightfastness.

Basic Dyes
Basic dyes are alkaline because they contain amino groups. The positive (cationic) color of the dye is attracted to the negatively charged ions in the fiber of acrylic, modified nylon and polyester.

Reactive Dyes
Commonly used on cellulosic fibers such as cotton, rayon, linen, wools and silks. Some wools have been chemically bleached and treated to resist shrinkage and this may make them difficult to dye and compromise their colorfastness. Reactive dye is sometimes applied to nylon and acrylic but has poor colorfastness on these fibers.

Disperse Dyes
These dyes are commonly used to dye synthetic fibers of polyester, acrylic, nylon and acetate although they were originally developed to color acetate. Insoluble in water, the dye is dispersed in special solvents without dissolving. The dye particles are encapsulated in the fiber and are colorfast, bleach resistant and resistant to sun fading and fume fading. If fume fading does occur in the presence of nitrogen dioxide gases, greens may fade to golden brown or blue may fade to pink. Also remember that household bleach will not affect dispersed dye, but it will turn nylon yellow and destroy wool and silk.

Pigment Colors
This material is not soluble and therefore cannot penetrate the fiber. It adheres to the fiber with a polymeric resin binder (much like paint). The durability of the binder determines the colorfastness of the fiber.

METHODS OF DYEING

There are two processes that can add color to synthetic carpet fibers:

1. **Pre-Dye Method** – fibers are dyed prior to the fiber being woven or manufactured into an article.
   - Solution dyeing
   - Stock dyeing of fibers
   - Yarn dyeing

2. **Post-Dye Methods** – Article is dyed after being woven
   - Piece dyeing
     - Continuous dyeing
     - Beck dyeing
     - Printing methods
       - Roller printing
       - Screen printing (silk screening)
   - Dye resist methods
     - Drip resist
     - Gum resist
   - Union or cross dyeing

ENHANCEMENT, RECOLORING & DYEING

You can make substantial money providing these services. The procedure can generate anywhere from $35 to $150, or more, on each job and increase customer satisfaction. Make sure that your customer understands that carpet enhancement, re-coloring or dyeing will vastly improve the appearance of the automobile carpet. It is up to you to inform your customer of the advantages of these processes and as your proficiency at procedure and selling your services improves, so will your income. Be sure to train your personnel in the procedures and how to educate the customer.

One of the first things to determine is whether the problem is caused by the addition or removal of a color. The difference between a “stain” and a “discoloration” is that a stain is color added to the fabric while a discoloration is color that is removed from the fabric.

Look at the stain from different light sources if possible to eliminate the possibility of Metamerism. Metamerism is a perceived variation of color of a fabric under different light sources.

You must remember that dye is not like paint that is opaque. Dye is transparent and it combines with the original color of the stain to create a new color. (Think of it as layering colored lights.) The mixture of paint and dye is very different. One example of this is that white is used to lighten a color. White dye does not exist, so the way to lighten a color is to add more water to the dye to weaken the solution. Paint has titanium dioxide which blocks out the light and covers darker colors. Dye is pure color only.

In order to protect yourself, it is advisable to have your customer sign a "Liability waiver form" before performing the color repair.

CARPET & UPHOLSTERY RECOLORING & DYE SYSTEM

This revolutionary system allows the operator to provide a needed restoration service in a matter of minutes. The *CARPET COLOR PLUS dye is not a paint and will not stick to vinyl, plastic or leather.* It is the same acid-based, heat-activated dye used by the carpet mills when producing the carpets. Just spray it on and wipe the residue off with a towel.

Carpets, Floormats, Door Panels & even most types of nylon upholstery can be recolored or dyed with a permanent, non-fade dye that will not come off.

The System

1 – Portable Rubber Cart (26"X41"X33"High)
1 – 1000 Watt In-Line Heater
1 – 100 PSI Pump
1 – High Pressure Hose with Adjustable Spray Nozzle
20 – One Gallon Containers
19 – Quick Disconnects Inserts
18 – Carpet Dyes
1 – ½ Gallon Container of Dye Penetrant/Activator
1 – 32 oz. Bleach Neutralizer

The Process

With the *CARPET COLOR PLUS System* the operator can provide the following services for carpets, floormats, door panels and upholstery:

- Enhancement - for vehicle interiors in good condition that have lost that new car look. A light spray of dye and they will have that like-new look.

- Recoloring - for vehicle interiors that have irreparable stains and fade marks. A medium spray of dye and you can cover the stains, bleach marks, etc. darkening the original color slightly.

- Dyeing - for vehicle interiors that are severely stained, faded and worn. A heavy spray of dye will completely cover the original color leaving a rich, like-new finish.

The process is so simple that a person can be self-taught after reading the manual and practicing on a few old floormats.

WHEN YOUR SYSTEM ARRIVES

1. Unpack it and inspect to insure there is no damage. If you find any damage immediately contact the trucking company to make a claim.

2. Connect YOUR extension cord to the outlet on the unit.

3. Fill each dye container with 1 gallon of hot water.

4. Add 2 ounces of activator/penetrant to each container.

5. Pour the 2 ounces of each dye color into the appropriately marked 1 gallon container. Shake well and place back on shelf.

6. Fill the remaining container marked “freshwater” with clean cold water.

   NOTE: It is IMPORTANT to mix the dyes in the order listed, as it will affect the dyes ability to perform if this is done in the wrong order.

OPERATION

When the above 6 steps have been completed the CARPET COLOR PLUS System is ready to use.

1. Plug the extension cord into a 110 volt electrical outlet.

2. Select the dye color you want to use and connect the quick disconnect to the gallon container.

3. a. Push the ON/OFF switch on the plastic box to the “UP” position and let the in-line heater warm up for 2-3 minutes.

   b. This switch also turns on the solution pump. It may take a minute or more to prime the pump.

4. Squeeze the trigger on the applicator gun to bleed all the air out of the coiled hose.

5. The system is ready to spray the dye.

6. Adjust the spray tip to the appropriate flow required. NOTE: When enhancing use a light spray. When recoloring use a light to medium spray. When dyeing us a medium to heavy spray.

7. Wipe off any overspray from vinyl, leather and plastic.

8. With the same towel, wipe the entire surface of the carpet/mat/floor panel to blend color into fibers.

9. Lightly vacuum the area to remove any residual moisture.

10. Let dry.

11. With the job completed, you are ready to clean the system.

CLEANING THE SYSTEM

1. Disconnect the solution line from the dye container.
2. Connect to one of the two freshwater containers.
3. Spray water into one of the two refuse containers until the flow is completely clear.
4. The system is now ready to use another dye.
5. ALWAYS CLEAN SYSTEM AFTER EVERY USE.
6. NEVER leave dye solution in the lines, pump or heater.

RECOLORING/DYEING TIPS

1. Always, vacuum the carpets and floormats of loose dirt, grit and sand.
2. Use appropriate stain/spot removers for stubborn stains and spots.
3. Friction shampoo as necessary.
4. Then extract with heated soil extractor (some carpets/floormats may only require a light vacuum and extraction).
5. **Color Knowledge** - To be a professional carpet dyer you need to understand the difference between what are called Cool Colors and Warm Colors and how this effects dyeing.

Cool Colors	**Warm Colors**
Greens	Yellows
Blues	Reds
Violet	Purples
Grays	Rust
Black	Browns - beiges to dark browns

With the CARPET COLOR PLUS System you receive two extra dyes a VIOLET (cool color) and a PURPLE (warm color).

If you are trying to dye a brown carpet, for example, to a black you must apply the VIOLET Dye before applying the Black Dye in order to get proper coverage. In fact, in some cases you might even have to apply some Blue Dye after the Violet to get a richer black color.

It is always better to darken Cool Colors with darker Cool Colors or darken Warm Colors with darker Warm Colors to get the best coverage results. (Call DETAIL PLUS Hot Line 1-800/284-0123 for assistance).

BLEACH SPOTS

From time to time you may encounter some carpets or mats with white spots caused by bleach of some type. You can dye over these but there is a specific process you MUST follow:

a. First clean the entire carpet and extract.
b. Spray some of the Bleach Neutralizer on the bleach spot to neutralize the bleach (which is acidic) before applying dye.
c. Then add either a Violet, if the color is a Cool Color or a Purple if the color is a Warm Color which will allow you to obtain a nice even coverage.
d. After darkening the white spot with the appropriate Cool or Warm Color dye clean out the dye system and you are ready to apply the dye for coverage.

You do not have to wait for the Violet or Purple Dye to dry; you can begin the dye process immediately.

CARPET COLOR PLUS Hot Line

If you have any questions or need any assistance please call:
1-800/284-0123 8:00am – 5:00pm West Coast Time or email detailplus@detailplus.com

INSTRUCTION SHEET
For use of
DETAIL PLUS DYES

DYE	QTY.	ACTIVATOR
2 oz. =	1 gallon (128 oz.)	2 oz.
1 oz. =	½ gallon (64 oz.)	1 oz.
½ oz. =	1 Quart (32 oz.)	½ oz.
¼ oz. =	1 Pint (16 oz.)	¼ oz.

MIXING INSTRUCTIONS

1. Place desired amount of dye powder and activator solution in an appropriate sized.
2. Add very hot water and shake until mixed.
3. Place container in sprayer and begin spraying.

HAZARD CODES: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe

CAUTION!

MAY CAUSE EYE, SKIN & NASAL IRRITATION

HEALTH	FIRE	REACTIVITY
1	0	0

Section 2: HEALTH HAZARD DATA

Routes of Entry/Signs & Symptoms of Acute Exposure:
EYES: Direct contact with eyes can cause irritation. **SKIN**: Direct contact with skin may cause irritation. **INHALATION**: May cause irritation of the nasal membranes. **INGESTION**: Not an expected route of entry. **DO NOT INGEST**. May cause gastrointestinal discomfort if swallowed.

Chronic Effects: None known. **Carcinogens**: None listed by NTP, IARC or OSHA. **Medical Conditions Aggravated by Exposure**: None known.

Emergency & First Aid Procedures:
EYES: Flush thoroughly with water for 15 minutes. Get medical attention. **SKIN**: Flush thoroughly with water, then wash with soap and water. **INHALATION**: Move to fresh air. **INGESTION**: If fully conscious, gibe 2 glasses of milk. **DO NOT INDUCE VOMITING**. Get medical attention.

Section 3: PREVENTATIVE MEASURES

Respiratory Protection: Normally not required because product is used in such small amounts.

Ventilation: General ventilation is satisfactory.

Gloves: Rubber. **Eye Protection:** Safety glasses without side shields. **Other Protective Equipment:** None.

Work/Hygienic Practices: THIS IS AN INDUSTRICAL CHEMICAL. FOLLOW GOOD HOUSEKEEPING AND HYGIENIC PRACTICES TO HELP PREVENT ACCIDENTAL EXPOSURE OR INGESTION.

Handling and Storing: No special procedures required.

KEEP OUT OF THE REACH OF CHILDREN AND ANIMALS
N/A=Not Applicable N/E=Not Established/Evaluated T/S=Trade Secret

Section 4: HAZARDOUS COMPONENTS & EXPOSURE LIMITS

Hazardous Component Name	CAS#	OSHA PEL	ACGIH-TLV	Other Limit	% Wt
Not an OSHA Hazardous substance per 29 CFR 1910.1200	/A	N/A	N/A	N/A	N/A

Section 5: PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point	N/A	**Specific Gravity:**	1.0
Vapor Pressure:	N/A	**Percent Volatile:**	Nil
Vapor Density (Air=1)	N/A	**Evaporation Rate:**	N/A
Solubility in Water:	Moderate	**pH:**	Slightly acid (diluted)
Appearance/Odor:	Various colors of powder/No odor.		

Section 6: FIRE & EXPLOSION HAZARD DATA

Flash Point (Method): None **Flammable Limits, LEL:** N/A **UEL:** N/A

Extinguishing Media: Use media appropriate for the materials fueling the fire.

Special Firefighting Procedures: None

Unusual Fire and Explosion Hazard: None expected

Section 7: REACTIVITY DATA

Stability: Stable und er normal conditions. **Hazardous Polymerization**: Will not occur. Conditions **to Avoid**: None kno wn. **Incompability**: None known. **Hazardous Decomposition Products**: Normal products of combustion.

Section 8: SPILLS, DISPOSAL & SPECIAL CONSIDERATIONS

Spill/Leak Procedures: Small spill: Mop up or absorb on inert material. Large spill: Confine and collect.

Water Disposal: Disposal of this material, its mixtures and any spill residues must be in accordance with local, state and federal requirements.

FOR MORE INFORMATION CALL: 1-800/284-0123

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