

# Reflective Decal Film for Model Trains and more ...



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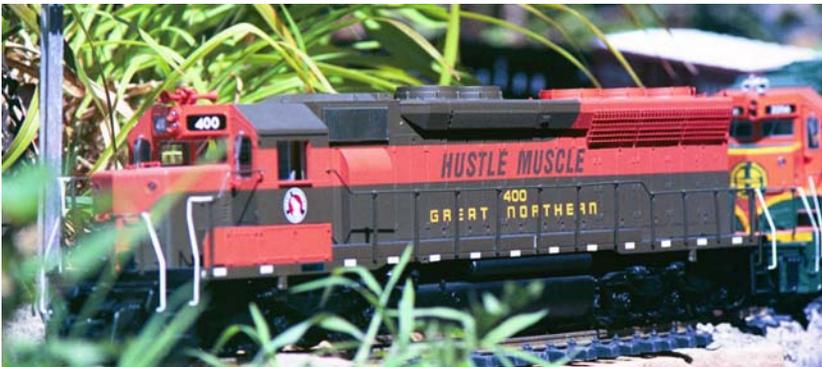


Reflective decals on Large Scale SD 45 and GP 38-2 models, shown during daylight in Garden Railway setting.

# REFLECTIVE DECAL FILM

Reflective decal film, unlike 'day-glow' decals, reflects light, mainly artificial light, like car headlights or streetlights, but even during daytime you can clearly identify the reflective material. You may look at your finished model and see no difference what so ever, but wait until the model is on your layout and the light shines in the right angle. Remember, the main reason reflective decals are applied, is for safety. They make the train, or any other application, 'stand out'. Reflective decal film does not turn your model into a rolling billboard that lights up, they enhance the overall appearance and prototypical look of your model, not to mention the increased value and the envy of your fellow modelers still 'running in the dark'.

Reflective decal film can be found on almost all newly delivered diesel electric engines owned by the major Class I railroads as well as an increasing number of freight and passenger cars. Some railroads, like the Great Northern, Northern Pacific and Burlington had white squares painted on their freight cars and on their engines as far back as the 60ies.



## A word about the pictures:

All model pictures are taken in our facility and show the models with or without the reflective film. The pictures are taken either with a digital camera or a 35 mm camera and the pictures are transferred into this file. The pictures are only formatted in size to fit the layout of this file. None of the pictures has been digitally enhanced and / or edited in any other way. We are trying to show the reflective material, not the models. We show the models and the difference with the reflective

film in an as 'true as possible' setting. Even so most of the pictures shown are taken on a special set up, some of the Large Scale and N scale pictures are taken on a layout. We are aware that some pictures are a bit 'blurry', but we decided to use them nevertheless as they show the reflective material on the model.

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Reflective decal on scales from 1:29 to 1:160



Another example this HO scale Fire Truck with white and yellow stripes



Below a truck with red and white decal film applied:

There are two ways to apply the decal film and to make the trucks look sharp.

**One:** You cut decals strips, depending on scale, as small and narrow as you can. This is quite complicated, especially for HO and N scales. Then you have to 'splice' the red and white film side by side.

**Two:** The easier and faster way is a little 'cheating'. Use a strip of white decal film and with a red permanent marker, you add the red part. Then, one cut and you have the white/red decals ready to apply to your trucks. Depending how "thick" you added the red marker ink, you may have the red reflect just as nice as the white. Less red is more. Practice with some scrap decal material. We found different brands of markers have different color density.



The Santa Fe had white round markings with a cross in the center. Other major railroads are upgrading their equipment, as it is re-painted. Did you know that many of the new engines delivered to the major North American railroads use reflective Decals for stripes and lettering? Have a close look next time.



This pair of AMD-103's was photographed outside of Woodbridge, VA, pulling a 38 car Autotrain™ to sunny Florida. From the engineer's door to the front, the red, white and blue are reflective stripes on the engines shown on the left.

Photo: C. Alexander Beck

**To apply the decals you will need the following tools to make the job easier for you:**

**Hobby Knife with # 11 blade;  
steel ruler with markings in 'mm';  
clean piece of fabric;  
and a Hair Dryer.**

**Last but not least, a steady hand, patience and imagination –  
unless you have prototype pictures on hand.**

The application of the decals requires the use of sharp cutting knives and it is not recommended to have small children use these tools without adult supervision.

**This product is for the experienced modeler.**

**REFLECTIVE DECAL  
INSTALLATION**

Our reflective decal film is available in five colors: white, red, yellow, green and blue. While the red, yellow, blue and green are 'true' colors, the white film has a silver appearance.

The application, in general is the same for every scale, however, due to the size, many decals are not pre-cut and must be cut by the modeler. This is true for all decals in HO and N scale. Large scale und O scale decal stripes are pre-cut, with some exceptions.

Before you begin to work with any of our decal film, make sure the film is at room temperature. Cold decal film will break into small pieces and/or the adhesive will not stick. To hot, you will not be able to cut it. Have your model ready and disassembled, note, some models can be done fully assembled. Clean the area where the decals go so that there are no fingerprints or any kind of dirt that may prevent the decal from sticking. Make sure that the painted surface is in good condition and the paint is not peeling, or you do not have a decal there, which will not hold the reflective film. Do not, under any circumstance, touch the adhesive on the back of the decal with your hand. Use your # 11 Hobby Knife to separate the decal from the carrier sheet and transfer it to your model.



Got kids? Well, then you certainly have to get them to and from school. With our yellow decal film you can get your local school bus up to the latest safety standards. Cut thin, about 1/2 mm strips of decal film and place them around the exit doors, emergency windows and along the side of the bus. Look at the buses in your neighborhood, and you will have all the information needed.



**Above a school bus from a local district showing the reflective stripes.**

Trucks, Buses and big tractor trailer rigs have been out there for many years. Have you looked at them lately? Most of them now have reflective red/white decals applied to the sides. Some are short strips, with just the red/white, others are continuing stripes for the total lengths of the vehicle.



On this highway coach we hand cut the lettering and logo.





from this ... to this



This police cruiser is ready to be placed in service and to keep your 'miniature people' safe.

**We will replace the printed white stripe with a reflective stripe, leaving the lettering open.** With the # 11 Hobby Knife cut a narrow stripe off the white decal film. Measure the length of the stripe you need to cover the area from the headlights to the police logo, and from the police logo to the beginning of the writing towards the rear fender. Apply the stripes and activate the glue with the hairdryer.

Simple enough, the finished product took less than 10 minutes.



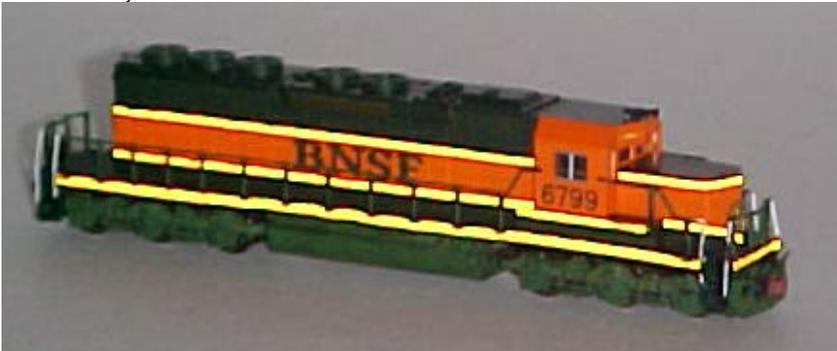
The picture above shows our 'work station', which is a large 'self healing' cutting board. A large metal ruler, the knife with the # 11 blade and the model, in this case, the SD 40-2 in N scale are ready. The model has been disassembled for easier application of the stripes.

Follow prototype information for the decal application. You must cut the film yourself using a sharp # 11 Hobby Blade and a steel ruler. Many of the stripes are 1mm or less thick. First gently pre-cut the film and then with the second cut, cut thru the film, but not the carrier sheet. Any film that lifts off the carrier sheet, just gently press back on. The material is very flexible and can – within limitations - be bend into curves and shapes. Do not use scissors as they will cut thru the carrier film and the decal will lift off, making it harder to control. Cut the stripe into the desired lengths and apply the decal on your model. Use the cloth and press the decal into location. Don't worry about rivets or other details covered, that's where the hair dryer comes in. Gently heat up the decal, this will soften the film and activate the adhesive. Now press the decal – with the cloth, paying special attention to the surface, like rivets or handrails – into place and you're done. You will notice that any rivet or gap will 'snug' around the film.

On HO and N scale models you can apply the full lengths of the side frame with one decal. In large scale the decals are split into shorter strips. When applying short strips, you must overlap the Many railroads have been adding reflective decals to their **freight**, Atchison film when exposed to continuing outdoor use.



Here are some models we prepared with reflective decals to give the modelers some ideas and to show how easy it is to work with the decal film. This SD 40-2 is in N scale!



so is this SD 60



It's a very easy and simply application, even in N scale. Just be very careful when applying heat to the decals, don't melt the fine plastic handrails. Less heat is better.

Atchison, Topeka and Santa Fe was one of the first to add these decals to their freight cars. Caboose of many railroads spotted reflective decals on the sides as well as safety stripes on the ends. Coal and Grain Hoppers in 'modern' railroading carry most of the reflective decals with Box

Cars closely followed. AT&SF / BN, now BNSF had always applied reflective material to their fleet. Other railroads are following suit.



BN Freight car in HO scale without reflective decals

Decals for this particular car are easily created. Carefully cut the decal film into a stripe of approximately 1mm width. Don't panic, the decal film will separate from the carrier sheet. Just press it back onto the carrier sheet without touching the adhesive side. Then cut short sections and stick the film on the printed white squares. Once both sides are done, heat up the film with the hairdryer to activate the glue and you're done, the effect speaks for itself and it takes just minutes.



BN freight car in HO scale with reflective decals

Somewhat challenging is the application of decals on engines or cars that have only very small reflective areas to cover. You have the choice of trying to cut decals as small as 1mm x 1mm square, which we have tried. It works, but it is not recommended. We found a way to "cheat" getting the total effect.

As an example we chose a model of the N scale SD 90/43 MAC in CP Rail livery.



On the top picture – on the right - and below is the engine with the reflective decal film applied. Cutting almost 100 of these small decals was something we chose not to do. Incidentally, we added the black walkway to the engine, in case somebody noticed.

From the 'white' decal film stripe package we cut a piece of film needed to cover the side of the engine. We applied, heat and 'shrunk' the decal into position. From a local Hobby Shop we purchased red decal stripes. Instead of using the stripes we cut across and received a stripe of red and clear decals, placed them into water and applied them over the reflective decal film, you're done.



It is important to mention that in the beginning many of the railroads have applied reflective decal film only to selective parts of their equipment. Mainly these are the side frames as well as the front and rear representing reflective stripes or dots. More and more lettering and company logos are also on reflective film.



Large Scale SD 45 and GP 38-2 with reflective decal film applied.  
Photo taken under extreme lighting conditions to show effect.



Here our large scale GP 38-2 showing off the reflective stripes with a short freight train. Check the police car, do you see the white and red reflective decals?



Two BNSF, N scale and HO showing off their reflective stripes.

There is no problem 'bending' the decal to cover the 'nose' stripe of the engine. As explained, the decal film is flexible and the shape could easily be reproduced, just press the decal into place, one small section at a time. Once in place, activate the glue and press on to stick.



This is a SD 60M custom painted in O Scale brass.  
(For copyright reasons, we omitted the company logo)



A group photo with HO scale engines



G Scale SD 45



full scale SD 45



custom painted N scale SD 40-2