

Subject: REACH Compliance

Dear Customer,

This letter concerns Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) compliance of MG Chemicals (MG) products.

SVHC-191 Statement

As of June 07, 2018, the only MG products known to contain Substances of Very High Concern (SVHC's) candidates are listed in Table 1. In the unlikely event that obsolete products exist at customer or distributor sites, a list of discontinued products containing SVHC ingredients are also given in Appendix I.

Table 1. Substance of Very High Concern Candidate or Listed Products

<i>MG Part Number</i>	<i>Product Name</i>	<i>Substance</i>
832HD Part B	1:1 Epoxy Potting and Encapsulating Compound	41% 4-nonylphenol, branched CAS# 84852-15-3
832TC Part A and Part B	Thermal Conductive Epoxy	0.1% 1-methyl-2-pyrrolidinone CAS# 872-50-4
833FRB Part A and Part B	Flame Retardant Epoxy	0.1% 1-methyl-2-pyrrolidinone CAS# 872-50-4
841WB-liquid ^{a)}	Super Shield Water Based Nickel Conductive Coating	0.2% 1-methyl-2-pyrrolidinone CAS# 872-50-4
842WB-liquid ^{a)}	Super Shield Water Based Silver Conductive Coating	0.3% 1-methyl-2-pyrrolidinone CAS# 872-50-4
843WB-liquid ^{a)}	Super Shield Water Based Silver Coated Copper Conductive Coating	0.2% 1-methyl-2-pyrrolidinone CAS# 872-50-4
4140A-P	Flux Remover Pen	0.3% octamethylcyclotetrasiloxane CAS# 556-67-2
4860-4867	Sn63Pb37 No Clean Solder Wire	36.2% lead CAS# 7439-92-1
4860P	Sn63Pb37 No Clean Solder Paste	33% lead CAS# 7439-92-1
4870-4877	Sn60Pb40 No Clean Solder Wire	38.8% lead CAS# 7439-92-1
4880-4888	Sn63Pb37 RA Solder Wire	36.2% lead CAS# 7439-92-1
4885WS	Sn63Pb37 Water Soluble Solder Wire	36.0% lead CAS# 7439-92-1
4890-4898	Sn60Pb40 RA Solder Wire	39.5% lead CAS# 7439-92-1

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a) The 841WB, 842WB, and 843WB were reformulated to remove the 1-methyl-2-pyrrolidinone. The reformulated product will be available soon.

Table 1. (continued) Substance of Very High Concern Candidate or Listed Products

<i>MG Part Number</i>	<i>Product Name</i>	<i>Substance</i>
8310	Conformal Coating Stripper	20% 1-methyl-2-pyrrolidinone CAS# 872-50-4
8311	Conformal Coating Stripper Gel	68% 1-methyl-2-pyrrolidinone CAS# 872-50-4
8312	Conformal Coating Stripper Liquid	70% 1-methyl-2-pyrrolidinone CAS# 872-50-4
8329TCM Part B	Medium Cure Thermally Conductive Adhesive	10% 4-nonylphenol, branched CAS# 84852-15-3
8329TFM Part B	Medium Cure Thermally Conductive Adhesive, flowable	12% 4-nonylphenol, branched CAS# 84852-15-3
8330 Part B	Medium Cure Silver Conductive Adhesive	18% 4-nonylphenol, branched CAS# 84852-15-3 0.4% bisphenol A; 4,4'-isopropyl CAS# 80-05-7

NOTE: The candidate list can be checked online at

http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp#download

REACH Annex XIV (Authorization List)

The products in Table 2 contain substances listed in Annex XVII Authorization list. The 4-nonylphenol, branched was listed because it is an endocrine disruptor.

Table 2. Products requiring authorization due to endocrine disruption effects

<i>MG Part Number</i>	<i>Product Name</i>	<i>Substance</i>	<i>Latest application date ¹⁾</i>	<i>Sunset Date ²⁾</i>
832HD Part B	1:1 Epoxy Potting and Encapsulating Compound	41% 4-nonylphenol, branched CAS# 84852-15-3	04-Jul-2019	04-Jan-2021
8329TCM Part B	Medium Cure Thermally Conductive Adhesive	10% 4-nonylphenol, branched CAS# 84852-15-3	04-Jul-2019	04-Jan-2021
8329TFM Part B	Medium Cure Thermally Conductive Adhesive, flowable	12% 4-nonylphenol, branched CAS# 84852-15-3	04-Jul-2019	04-Jan-2021
8330 Part B	Medium Cure Silver Conductive Adhesive	18% 4-nonylphenol, branched CAS# 84852-15-3	04-Jul-2019	04-Jan-2021
8331 Part B	Silver Conductive Adhesive, Moderate Cure / High Conductivity	25% 4-nonylphenol, branched CAS# 84852-15-3	04-Jul-2019	04-Jan-2021

1) Latest authorization application date

2) Date upon which the use of the substance shall be prohibited unless an authorization is granted

REACH Annex XVII Restriction

No MG products are known to contain substances listed in Annex XVII.

REACH Registration

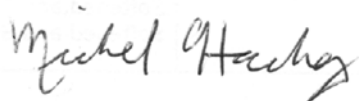
MG currently does not export one ton of any individual substance to the European market and is, therefore, neither required nor eligible to register any substances under REACH at this time. European customers of MG can continue to use our products as long as their total usage of any particular substance contained in these products remains under the one-ton threshold.

If you are a user or potential user of an MG product in Europe and you feel your future consumption of a substance may exceed the one ton threshold, please contact us as soon as possible so that we have adequate time to register our substances to meet your needs.

It is important to note that polymers are exempt from REACH registration, so if MG's epoxies are used in a manufacturing process outside of Europe and then the cured product is shipped into Europe, the cured product is exempt from REACH registration requirements (although the restrictions on SVHC's remains).

MG is a reporting downstream user for many substances. For example, many of our epoxy resins and hardeners also contain components that are pre-registered by our suppliers, allowing downstream reporting. Other products will be dealt with on an "as need" basis.

European customers should take note that the ultimate responsibility for registration may fall on them where MG hasn't yet met the one ton threshold. Customers must calculate the total quantities of individual substances used from different suppliers to determine if their usage exceeds the one ton threshold, triggering registration requirements.

A handwritten signature in black ink that reads 'Michel Hachey'.

Michel Hachey, Ph.D.

Regulatory and Scientific Affairs Manager, MG Chemicals
michel-h@mgchemicals.com

Appendix I. Discontinued product declaration

MG Chemicals no longer produces nor sells the products listed in Table 3 that contained substances of very high concern.

Table 3. Discontinued Products with Substance of Very High Concern Candidate or Listed Products

<i>MG Part Number</i>	<i>Product Name</i>	<i>Substance</i>
703	Negative Resist Type 3	15% 2-ethoxyethanol CAS# 110-80-5
721	Negative Photo Resist Dye (Blue)	4% 2-ethoxyethanol CAS# 110-80-5
832FRB Part A	Flame Retardant Epoxy	20% Decabromodiphenyl oxide CAS# 1163-19-5
841-Aerosol	Super Shield Nickel Conductive Coating	0.05% 1-methyl-2-pyrrolidinone CAS# 872-50-4
4112	Cleaner Degreaser—NPG Heavy Duty	95% n-propyl bromide CAS# 106-94-5
8321C Part A	Optically Clear Epoxy	10% Dibutyl Phthalate CAS# 84-74-2

NOTE: The candidate list can be checked online at

http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp#download