

1 Identification

- **Product number:** CW409
- **Product name:** **Satin Armor 2k - PART B (Hardener)**
- **Relevant identified uses of the substance or mixture and uses advised against**
Relevant identified uses :
Manufacture of substances:
Formulations:
Manufacture of paints and varnishes
Industrial use:
Professional use:
Uses advised against:
Consumer use:
For further information, refer to section 16.
- **Application of the substance / the mixture**
For further information, refer to the product technical data sheet.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Classic Coatings Systems
255 Citation Circle
Corona, CA 92881
USA
Tel.: +1 951 279 2600
Fax: +1 714 276 9696
www.ClassicCoatingsSystems.com
- **Information department:** carlos@classiccoatingssystems.com
- **Emergency telephone number:**
FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT CONTACT:
Emergency Response Service: (800) 535-5053

2 Hazard(s) identification

- **Classification of the substance or mixture**
Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Acute Tox. 4 H332 Harmful if inhaled.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS07 GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
Hexamethylene diisocyanate oligomers, Isocyanurate
hexamethylene-di-isocyanate

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- **Hazard statements**

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

- **Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P284 In case of inadequate ventilation wear respiratory protection.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P302+P352 If on skin: Wash with plenty of water.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

- **Hazard description:**

CAUTION! HARMFUL IF INHALED. MAY CAUSE SKIN, EYE AND RESPIRATORY TRACT IRRITATION.

POSSIBLE SENSITIZER. REACTS WITH COMMON MATERIALS INCLUDING WATER, ALCOHOLS, BASES AND AMINES RELEASING LARGE AMOUNTS OF CARBON DIOXIDE.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 1

Reactivity = 1

- **HMIS-ratings (scale 0 - 4)**

HEALTH	2
FIRE	1
REACTIVITY	1

Health = 2

Fire = 1

Reactivity = 1

- **Other hazards**

Combustible liquid.

On contact with water carbon dioxide is released.

This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens. Asthmatic sensitization can occur from a single large inhalation exposure or from repeated lower inhalation exposures. Strict observation of exposure limits is essential (see Section 8).

- **Results of PBT and vPvB assessment**

- **PBT:** No.

- **vPvB:** No.

3 Composition/information on ingredients

- **Chemical characterization: Substances**

Chemical components:

-	Hexamethylene diisocyanate oligomers, Isocyanurate	100%
-	hexamethylene-di-isocyanate	< 0.2%

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4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Use appropriate protective equipment when treating a contaminated person.
Place contaminated clothing in a sealed bag for disposal.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Move the person away from the contaminated area.
Fresh air and rest.
Seek immediate medical advice.
Show this sheet to the doctor.
- **After skin contact:**
Wash with soap and water.
Wash immediately and thoroughly for a prolonged period (at least 15 minutes).
In case of inflammation (redness, irritation, ...) obtain medical attention.
- **After eye contact:**
Immediately rinse with plenty of running water for a prolonged period, (at least 15 minutes) while keeping the eyes wide open.
If irritation persists, consult a doctor.
Show this sheet to the doctor.
- **After swallowing:**
NEVER attempt to induce vomiting. Rinse mouth out with water.
Do not give anything to drink.
If necessary seek medical advice.
Show this sheet to the doctor.
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Danger**
Skin contact may aggravate existing skin disease. Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis.
- **Indication of any immediate medical attention and special treatment needed**
All treatments should be based on observed signs and symptoms of distress in the patient.
Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.
Treat symptomatically. No specific antidote available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
Foam
Powders
Carbon dioxide
Dry chemical
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture**
Combustible.
During combustion toxic vapors are released.
Under fire conditions, corrosive fumes are emitted: oxides of nitrogen oxides of carbon.
Reacts with water releasing large amounts of carbon dioxide which may cause pressure build-up in confined spaces.
- **Advice for firefighters**
- **Protective equipment:**
Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

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- **Additional information**

Stay upwind.

Evacuate the personnel away from the fumes.

In case of fire close by:

Cool down the containers/equipment exposed to heat with a water spray. Ensure that there is NO direct contact between the water and the product.

Do not breathe fumes.

Do NOT attempt to fight the fire without suitable protective equipment.

If there is a fire close by and if packaging has not been damaged:

Use suitable extinguishers.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Do not breathe gas.

Avoid any direct contact with the product.

Do NOT approach from DOWNWIND.

Do NOT attempt to take action WITHOUT suitable protective equipment.

Self-contained breathing apparatus.

Wear fully protective suit.

Keep people at a distance and stay upwind.

Mark out the contaminated area with signs and prevent access to unauthorized personnel.

- **Environmental precautions:**

Contain the spilled material by binding.

Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up:**

Pump up the product into a spare container suitably labelled.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).

Wash contaminated area with large amounts of water.

Recover the cleaning water for subsequent disposal.

Dispose contaminated material as waste according to item 13.

Do not flush to drain. Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling**

Ensure good ventilation/aspiration at the workplace.

Avoid contact with water or humidity.

Avoid any direct contact with the product.

Any measure to eliminate exposure should be considered.

Very high level of containment required, except for short term exposures e.g. taking samples (industrial use condition).

Comply with instructions for use (refer to technical sheet).

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

The floor of the depot should be impermeable and designed to form a water-tight basin.

Store in cool, dry conditions in well sealed receptacles.

Store receptacle in a well ventilated area.

Store away from incompatible materials.

- **Requirements to be met by storerooms and receptacles:**

Suitable material for receptacle and pipe: epoxy-coated steel.

Unsuitable material for receptacle: Polystyrene.

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Store only in unopened original receptacles.

- Metallic drums.
- Storage tank with a dry nitrogen blanket.

Packaging materials recommended :

Aluminium.

Steel.

Unsuitable material for receptacle: Copper.

Unsuitable material for receptacle: Tin

- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

The recommended limits SHOULD NOT be exceeded.

Exposure limits represent regulated or recommended worker breathing zone concentrations measured by validated sampling and analytical methods, meeting the regulatory requirements.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Ensure good ventilation of the work station.

Safety shower.

Eye wash.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Shower or take a bath at the end of work.

- **Breathing equipment:**

When using a spray-gun, wear: Self-contained breathing apparatus.

In the event of insufficient ventilation: Self-contained breathing apparatus.

When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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- **Material of gloves**

Suitable materials also with prolonged, direct contact (protective index 6, corresponding > 480 minutes of permeation time):

Nitrile rubber, NBR

Fluorocarbon rubber (Viton)

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Eye protection:**

Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

Eye contact should be prevented through use of chemical safety glasses with side shields or splash proof goggles. An emergency eye wash must be readily accessible to the work area.



Safety glasses

- **Body protection:** Protective work clothing

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:

Liquid

Color:

Colourless to pale yellow.

- **Odor:**

Odorless

- **pH-value:**

Not applicable (reacts with water).

- **Change in condition**

Melting point/Melting range:

< - 20 °C

Boiling point/Boiling range:

>220 °C (>428 °F) (at 1.33hPa)

> 203 C (397 F) at 1 mmHg

- **Flash point:**

137 °C (279 °F) (EN 22719)

Flammability Class: WILL BURN

- **Ignition temperature:**

460 °C (860 °F) (Spontaneous ignition temp)

- **Danger of explosion:**

Not explosive.

- **Explosion limits:**

Oxidizing properties

Not oxidizing.

- **Density at 25 °C (77 °F):**

1.16 g/cm³ (9.68 lbs/gal)

- **Solubility in / Miscibility with**

Water:

Reacts.

- **Ketones:**

Soluble

- **aromatic hydrocarbons:**

Soluble

- **esters :**

Soluble

- **Segregation coefficient (n-octanol/water):** Not applicable (reacts with water and/or octanol)

- **Viscosity:**

Dynamic at 25 °C (77 °F):

1200 mPas

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· **Other information**

No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Stable at ambient temperature.
- **Possibility of hazardous reactions**
 Reacts with:
 - alcohols.
 - amines.
 - bases.
 - protic solvents.
 - water and aqueous solutions.
 with a great release of CO₂, and hence a risk of a pressure build-up in confined areas, and forms an insoluble solid precipitate.
 Reacts with strong acids
 Reacts with strong oxidizing agents
- **Conditions to avoid**
 extreme heat
 open flame
 moisture
 ignition sources
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**
 On thermal decomposition (pyrolysis) releases:
 - Toxic gases.
 - Carbon dioxide
 - Nitrogen oxides
 - Oxides of carbon

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values:**
 Harmful by inhalation.
 To comply with regulatory guidelines, the substance was tested in a form (i.e. specific particle size distribution) that is different from the form in which the substance is placed on the market and in which it can reasonably be expected to be used. The acute inhalation toxicity of the substance is due to its local action on the distal part of the respiratory tract. As, in the conditions in which the product can reasonably be expected to be used, only a small fraction of the aerosols formed may reach this part of the respiratory tract, a correction has been made to take this difference into consideration. Based on our Expert judgment, the classification Acute inhalation toxicity category 4 is justified.
 Not harmful by skin contact.
 Not harmful if swallowed.

Hexamethylene diisocyanate oligomers, Isocyanurate

Oral	LD0	> 2500 mg/kg (rat) (OECD 423 (female))
Dermal	LD0	> 2000 mg/kg (rabbit) (OECD 402)
		> 2000 mg/kg (rat) (OECD 402)
Inhalative	LC50/4h	0.390 mg/l (rat) (OECD 403 (female))

hexamethylene-di-isocyanate

Oral	LD50	746 mg/kg (rat) (OECD 401)
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Dermal	LD50	> 7000 mg/kg (rat) (OECD 402)
Inhalative	LC50/4h	0.124 mg/l (rat) (OECD 403)

- **Primary irritant effect:**

- **on the skin:**

Not classified as irritating to skin.
(OECD 404)
(rabbit)

- **on the eye:**

Not classified as irritating to eyes
(OECD 405)
(rabbit)

- **Inhalation:**

May cause respiratory irritation.

28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate		
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Inhalative	NOAEC/6h	3 mg/m ³ (rat) ((OECD TG 403) (TRGS))
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- **Additional toxicological information:**

- **Carcinogenic categories**

- **OSHA-Ca (Occupational Safety & Health Administration)**

Not listed.

- **Sensitization**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause sensitisation by skin contact.

- **Carcinogenicity:**

Not considered to be carcinogen.

822-06-0 hexamethylene-di-isocyanate		
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Inhalative	NOAEC Carc	0.164 ppm (rat) (OECD 453)
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- **Mutagenicity:** Is not considered genotoxic.

- **Reproductive toxicity:**

Is not considered hazardous to the reproduction.

822-06-0 hexamethylene-di-isocyanate		
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Inhalative	NOAEC Dvlp/Tera Tox	0.3 ppm (rat) (OECD 414)
	NOAEC Maternal Tox	0.005 ppm (rat) (OECD 414)
	NOEC Fert	0.3 ppm (rat) (OECD 422)

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

The product does not have any known adverse effects on the aquatic organisms tested.

28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate	
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EC10/72h (static)	370 mg/l (Desmodesmus subspicatus) (EU C.3)
EL50/48h (static)	127 mg/l (Daphnia magna) (EU C.2)
ErC50(0-72h) (static)	> 1000 mg/l (Desmodesmus subspicatus) (EU C.3)
LL0/96h	≥ 82.8 mg/l (Brachydanio rerio) (EU C.1)

822-06-0 hexamethylene-di-isocyanate	
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EC0/48h (static)	≥ 89.1 mg/l (Daphnia magna) (EU C.2)
ErC50(0-72h) (static)	> 77.4 mg/l (Desmodesmus subspicatus) (EU C.3)
LC0/96h (static)	≥ 82.8 mg/l (Brachydanio rerio) (EU C.1)
NOEC/72h (static)	11.7 mg/l (Desmodesmus subspicatus) (EU C.3)

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- **Persistence and degradability**

The product is not readily biodegradable.

28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate	
BOD28	1 % (bacteria) ((EU C.4-E) (Unpublished report))
DT50	3 h (Photolysis) ((25 °C) (AOPWIN v1.92) (Internal evaluation))
	7.7 h (Hydrolysis) ((23 °C) (ASTM D4666) (Internal evaluation))
822-06-0 hexamethylene-di-isocyanate	
BOD28	42 % (bacteria) (EU C.4-D)
DT50	25 °C, 48.44 h (Photolysis) (AOPWIN v1.92)
	23 °C, 0.23 h (Hydrolysis) (ASTM D4666)

- **Behavior in environmental systems:**

- **Components:** No information available.

- **Bioaccumulative potential**

Not potentially bioaccumulable.

Log Pow, see section 9.

28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate	
BCF	3.2 (fish) (BCFWIN v. 2.17)
822-06-0 hexamethylene-di-isocyanate	
BCF	58 (fish) (BCFWIN v.2.17)

- **Mobility in soil**

28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate	
Log Koc	7.8 (.) (PCKOC v1.66)
822-06-0 hexamethylene-di-isocyanate	
Log Koc	5861 (.) (PCKOC v1.66)

- **Other information:** Formation of insoluble polyurea and/or amine derivative.

- **Ecotoxicological effects:**

- **Behavior in sewage processing plants:**

28182-81-2 Hexamethylene diisocyanate oligomers, Isocyanurate	
EC50/3h (static)	3828 mg/l (activated sludge) (OECD 209)
822-06-0 hexamethylene-di-isocyanate	
EC50/3h (static)	842 mg/l (bacteria) (OECD 209)

- **Results of PBT and vPvB assessment**

- **PBT:** No.

- **vPvB:** No.

- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

Discharging waste into rivers and drains is forbidden.

Incinerate at a licensed installation.

Disposal must be made according to federal, state and local regulations.

- **Waste disposal key:** EPA Hazardous Waste - NO

- **Uncleaned packagings:**

Contaminated packaging materials must be disposed of in the same manner as the product.

- **Recommendation:**

Allow it to drain thoroughly.

Thoroughly emptied and clean packagings may be recycled.

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Disposal must be made according to official regulations.

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14 Transport information

· UN Number	NOT regulated.
· DOT, ADR, ADN, IMDG, IATA	-
· Proper shipping name (Technical Name)	NOT regulated.
· DOT, ADR, ADN, IMDG, IATA	-
· Transport hazard class(es)	
· DOT, ADN	
· Class	-
· ADR, IMDG, IATA	
· Class	-
	Not regulated.
· Packing group	
· DOT, ADR, IMDG, IATA	-
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	The above regulatory prescriptions are those valid on the date of publication of this sheet. However, given the possible evolution of transport regulations for hazardous materials and in the event of the SDS in your possession dating back more than 12 months, it is advisable to check their validity with your sales office.

15 Regulatory information

- **National legislation**
- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara Section 312**
 - Fire Hazard - NO
 - Reactive Hazard - YES
 - Release of Pressure - NO
 - Acute Health Hazard - YES
 - Chronic Health Hazard - YES

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

CERCLA RQ 100 lbs for 822-06-0

822-06-0 | hexamethylene-di-isocyanate

· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

Not listed.

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· IARC (International Agency for Research on Cancer)

Not listed.

· NTP (National Toxicology Program)
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Not listed.

· Inventory status:

· Australian Inventory of Chemical Substances (AICS)

All ingredients are listed.

· Canadian Domestic Substance List (DSL)

All ingredients are listed.

· Canadian Non Domestic Substance List (NDSL)
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Not listed.

· Chinese Chemical Inventory of Existing Chemical Substances (CIECS)

All ingredients are listed.

· European EINECS/ELINCS Listing

All ingredients are listed.

· Japan Existing and New chemical Substance List (ENCS)
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All ingredients are listed.

· Korea Existing Chemical Inventory (KECI)

All ingredients are listed.

· Philippines Inventory of Chemicals and Chemical Substances (PICCS)

All ingredients are listed.

· TSCA listing

All ingredients are listed.

· Other regulations, limitations and prohibitive regulations

· State of California, Proposition 65:

· Chemicals known to cause cancer:

Not listed.

· Chemicals known to cause reproductive toxicity for females:
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Not listed.

· Chemicals known to cause reproductive toxicity for males:
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Not listed.

· Chemicals known to cause developmental toxicity:

Not listed.

16 Other information

- **Department issuing SDS:** Classic Coatings Systems
- **Date of preparation / last revision:** 01/06/18 **REVISION:** 07/18/18
- **MANUFACTURER DISCLAIMER :** THE INFORMATION OR RECOMMENDATIONS CONTAINED HEREIN ARE BASED ON INFORMATION OBTAINED FROM SOURCES WHICH WE BELIEVE ARE RELIABLE AND ARE PROPRIETARY AND ARE FURNISHED SOLELY FOR THE USE OF OUR CUSTOMERS. SINCE IT IS IMPOSSIBLE FOR US TO DETERMINE THE PRECISE CONDITIONS UNDER WHICH OUR PRODUCTS WILL BE USED, NEITHER CLASSIC COATINGS SYSTEMS NOR ITS AFFILIATES CAN ACCEPT RESPONSIBILITY FOR LOSS, INJURY OR OTHER DAMAGES RESULTING FROM THE USE OF THE PRODUCT OR THIS OR ANY OTHER INFORMATION PROVIDED BY US. USERS ARE ADVISED TO MAKE THEIR OWN TESTS TO DETERMINE THE SAFETY, SUITABILITY, AND RELEVANCE OF FEDERAL AND LOCAL LAW TO THE PRODUCT AS IT IS TO BE USED BY THEM. THEREFORE NO GUARANTEE OF ANY KIND EXPRESSED OR IMPLIED, INCLUDING THOSE OF FITNESS OR MERCHANTABILITY, ARE MADE BY CLASSIC COATINGS SYSTEMS OR ITS AFFILIATES WITH REGARD TO ANY OF THEIR PRODUCTS.