Safety Data Sheet
acc. to OSHA HCS

Printing date 10/08/2018 *Version number 1* *Reviewed on 10/08/2018*

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1 Identification

· **Product identifier**

· **Trade name: 52008 2K Chip Guard**

· **Article number:** 52008
· **Application of the substance / the mixture** Coating

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
SEM Products Inc.
1685 Overview Drive
Rock Hill, SC 29730
803 207 8225

· **Information department:**
cust_care@semproducts.com : SEM Products,Inc. 1685 Overview Dr. Rock Hill, SC 29730 : phone 1-800-831-1122, M - TH 7am - 4pm EDT
· **Emergency telephone number:** CHEMTREC 1-800-424-9300

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2 Hazard(s) identification

· **Classification of the substance or mixture**

GHS02 Flame

Flam. Liq. 2	H225	Highly flammable liquid and vapor.

GHS08 Health hazard

Carc. 1A	H350	May cause cancer.
Repr. 1A	H360	May damage fertility or the unborn child.

GHS07

Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2A	H319	Causes serious eye irritation.
STOT SE 3	H335-H336	May cause respiratory irritation. May cause drowsiness or dizziness.

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

GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
methyl acetate
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52008 2K Chip Guard

(Contd. of page 1)

4-chloro-alpha,alpha,alpha-trifluorotoluene
dibutyltin dilaurate

· **Hazard statements**

H225 Highly flammable liquid and vapor.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H350 May cause cancer.
H360 May damage fertility or the unborn child.
H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

· **Precautionary statements**

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P312 Call a poison center/doctor if you feel unwell.
P321 Specific treatment (see on this label).
P362+P364 Take off contaminated clothing and wash it before reuse.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P370+P378 In case of fire: Use for extinction: CO2, powder or water spray.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**

Health = 2
Fire = 3
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *2
Fire = 3
Reactivity = 0

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52008 2K Chip Guard

(Contd. of page 2)

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:**
Mixture: consisting of the following components.
Weight percentages

· **Dangerous components:**		
79-20-9	methyl acetate	13-30%
98-56-6	4-chloro-alpha,alpha,alpha-trifluorotoluene	13-30%
14807-96-6	Talc	10-13%
67-64-1	acetone	5-7%
	POLYESTER RESIN	5-7%
110-43-0	heptan-2-one	1.5-5%
123-86-4	n-butyl acetate	1.5-5%
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	≥1.5-<3%
7631-86-9	silicon dioxide, chemically prepared	1-1.5%
763-69-9	ethyl 3-ethoxypropionate	1-1.5%
77-58-7	dibutyltin dilaurate	≥0.1-<1%

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4 First-aid measures

· **Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:** If symptoms persist consult doctor.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

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5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **Special hazards arising from the substance or mixture** No further relevant information available.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52008 2K Chip Guard

(Contd. of page 3)

· ***Advice for firefighters***
· ***Protective equipment:*** *No special measures required.*

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6 Accidental release measures

· ***Personal precautions, protective equipment and emergency procedures***
Wear protective equipment. Keep unprotected persons away.
· ***Environmental precautions:*** *Do not allow to enter sewers/ surface or ground water.*
· ***Methods and material for containment and cleaning up:***
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· ***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.
· ***Protective Action Criteria for Chemicals***

· **PAC-1:**		
79-20-9	methyl acetate	250 ppm
67-64-1	acetone	200 ppm
110-43-0	heptan-2-one	150 ppm
123-86-4	n-butyl acetate	5 ppm
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	9.3 mg/m³
7631-86-9	silicon dioxide, chemically prepared	18 mg/m³
763-69-9	ethyl 3-ethoxypropionate	1.6 ppm
1330-20-7	xylene	130 ppm
77-58-7	dibutyltin dilaurate	1.1 mg/m³
111-76-2	2-butoxyethanol	60 ppm
108-88-3	toluene	67 ppm
100-41-4	ethylbenzene	33 ppm
108-83-8	2,6-dimethylheptan-4-one	75 ppm
67-63-0	propan-2-ol	400 ppm
91-20-3	naphthalene	15 ppm

· **PAC-2:**		
79-20-9	methyl acetate	1,700 ppm
67-64-1	acetone	3200* ppm
110-43-0	heptan-2-one	670 ppm
123-86-4	n-butyl acetate	200 ppm
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	100 mg/m³
7631-86-9	silicon dioxide, chemically prepared	740 mg/m³
763-69-9	ethyl 3-ethoxypropionate	18 ppm
1330-20-7	xylene	920* ppm
77-58-7	dibutyltin dilaurate	8 mg/m³
111-76-2	2-butoxyethanol	120 ppm

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52008 2K Chip Guard

(Contd. of page 4)

108-88-3	toluene	560 ppm
100-41-4	ethylbenzene	1100* ppm
108-83-8	2,6-dimethylheptan-4-one	330 ppm
67-63-0	propan-2-ol	2000* ppm
91-20-3	naphthalene	83 ppm

· **PAC-3:**

79-20-9	methyl acetate	10000* ppm
67-64-1	acetone	5700* ppm
110-43-0	heptan-2-one	4000* ppm
123-86-4	n-butyl acetate	3000* ppm
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	230 mg/m³
7631-86-9	silicon dioxide, chemically prepared	4,500 mg/m³
763-69-9	ethyl 3-ethoxypropionate	110 ppm
1330-20-7	xylene	2500* ppm
77-58-7	dibutyltin dilaurate	48 mg/m³
111-76-2	2-butoxyethanol	700 ppm
108-88-3	toluene	3700* ppm
100-41-4	ethylbenzene	1800* ppm
108-83-8	2,6-dimethylheptan-4-one	2000* ppm
67-63-0	propan-2-ol	12000** ppm
91-20-3	naphthalene	500 ppm

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7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
No special measures required.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store in a cool location.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **Specific end use(s)** No further relevant information available.

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52008 2K Chip Guard

(Contd. of page 5)

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8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

79-20-9 methyl acetate	
PEL	Long-term value: 610 mg/m³, 200 ppm
REL	Short-term value: 760 mg/m³, 250 ppm Long-term value: 610 mg/m³, 200 ppm
TLV	Short-term value: 757 mg/m³, 250 ppm Long-term value: 606 mg/m³, 200 ppm
67-64-1 acetone	
PEL	Long-term value: 2400 mg/m³, 1000 ppm
REL	Long-term value: 590 mg/m³, 250 ppm
TLV	Short-term value: 1187 mg/m³, 500 ppm Long-term value: 594 mg/m³, 250 ppm BEI
110-43-0 heptan-2-one	
PEL	Long-term value: 465 mg/m³, 100 ppm
REL	Long-term value: 465 mg/m³, 100 ppm
TLV	Long-term value: 233 mg/m³, 50 ppm
123-86-4 n-butyl acetate	
PEL	Long-term value: 710 mg/m³, 150 ppm
REL	Short-term value: 950 mg/m³, 200 ppm Long-term value: 710 mg/m³, 150 ppm
TLV	Short-term value: 712 mg/m³, 150 ppm Long-term value: 238 mg/m³, 50 ppm
77-58-7 dibutyltin dilaurate	
PEL	Long-term value: 0.1 mg/m³ as Sn
REL	Long-term value: 0.1 mg/m³ as Sn, Skin
TLV	Short-term value: 0.2 mg/m³ Long-term value: 0.1 mg/m³ as Sn; Skin

· **Ingredients with biological limit values:**	
67-64-1 acetone	
BEI	50 mg/L Medium: urine Time: end of shift Parameter: Acetone (nonspecific)

· **Additional information:** The lists that were valid during the creation were used as basis.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52008 2K Chip Guard

(Contd. of page 6)

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
· **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· **Protection of hands:**
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation


Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· **Material of gloves**
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.
· **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:**


Tightly sealed goggles

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Liquid
Color:	According to product specification
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	57 °C
· **Flash point:**	-18 °C

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52008 2K Chip Guard

(Contd. of page 7)

· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	370 °C
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	In use, may form flammable/explosive vapour-air mixture.
· **Explosion limits:**	
Lower:	2.6 Vol %
Upper:	13 Vol %
· **Vapor pressure at 20 °C:**	233 hPa
· **Density at 20 °C:**	1.21685 g/cm³
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	43.1 %
VOC content:	8.14 % 169.9 g/l / 1.42 lb/gal
Solids content:	56.7 %
· **Other information**	No further relevant information available.

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10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

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11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** Irritating effect.

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52008 2K Chip Guard

(Contd. of page 8)

· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
14807-96-6	Talc	3
7631-86-9	silicon dioxide, chemically prepared	3
1330-20-7	xylene	3
111-76-2	2-butoxyethanol	3
108-88-3	toluene	3
100-41-4	ethylbenzene	2B
67-63-0	propan-2-ol	3
91-20-3	naphthalene	2B

· **NTP (National Toxicology Program)**		
91-20-3	naphthalene	R

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

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12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

(Contd. on page 10)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52008 2K Chip Guard

(Contd. of page 9)

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14 Transport information

· **UN-Number**	
· **DOT, ADR, IMDG, IATA**	UN1263
· **UN proper shipping name**	
· **DOT**	Paint
· **ADR**	1263 Paint, special provision 640D
· **IMDG, IATA**	PAINT
· **Transport hazard class(es)**	
· **DOT**	

· **Class**	3 Flammable liquids
· **Label**	3
· **ADR, IMDG, IATA**	

· **Class**	3 Flammable liquids
· **Label**	3
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	II
· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special precautions for user**	Warning: Flammable liquids
· **EMS Number:**	F-E,S-E
· **Stowage Category**	B
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **DOT**	
· **Quantity limitations**	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· **Remarks**	ORM-D 49CFR 173-150,156,306
· **ADR**	
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **IMDG**	
· **Limited quantities (LQ)**	5L

(Contd. on page 11)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52008 2K Chip Guard

(Contd. of page 10)

· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":**	UN 1263 PAINT, SPECIAL PROVISION 640D, 3, II

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15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

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

None of the ingredient is listed.

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

	Acrylic Resin
14807-96-6	Talc
1330-20-7	xylene
111-76-2	2-butoxyethanol
108-88-3	toluene
100-41-4	ethylbenzene
67-63-0	propan-2-ol
91-20-3	naphthalene

· **TSCA (Toxic Substances Control Act):**

79-20-9	methyl acetate
98-56-6	4-chloro-alpha,alpha,alpha-trifluorotoluene
1317-65-3	GROUND CALCIUM CARBONATE
14807-96-6	Talc
67-64-1	acetone
110-43-0	heptan-2-one
123-86-4	n-butyl acetate
2530-83-8	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane
7631-86-9	silicon dioxide, chemically prepared
763-69-9	ethyl 3-ethoxypropionate
1330-20-7	xylene
77-58-7	dibutyltin dilaurate
4083-64-1	4-isocyanatosulphonyltoluene
9038-95-3	OXIRANE,ME, POLYMER
111-76-2	2-butoxyethanol
108-88-3	toluene
100-41-4	ethylbenzene
108-83-8	2,6-dimethylheptan-4-one
19549-80-5	4,6-dimethylheptan-2-one
64742-94-5	Solvent naphtha (petroleum), heavy arom.

(Contd. on page 12)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52008 2K Chip Guard

(Contd. of page 11)

25322-17-2	napthalenesulfonic acid, dinonyl
67-63-0	propan-2-ol
91-20-3	naphthalene
61789-77-3	Quaternary ammonium compounds, dicocoalkyldimethyl, chlorides

· **TSCA new (21st Century Act) (Substances not listed)**

POLYESTER RESIN

· **Proposition 65**

· **Chemicals known to cause cancer:**

100-41-4	ethylbenzene
91-20-3	naphthalene

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

108-88-3	toluene

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

67-64-1	acetone	I
1330-20-7	xylene	I
111-76-2	2-butoxyethanol	NL
108-88-3	toluene	II
100-41-4	ethylbenzene	D
91-20-3	naphthalene	C, CBD

· **TLV (Threshold Limit Value established by ACGIH)**

14807-96-6	Talc	A4
67-64-1	acetone	A4
1330-20-7	xylene	A4
77-58-7	dibutyltin dilaurate	A4
111-76-2	2-butoxyethanol	A3
108-88-3	toluene	A4
100-41-4	ethylbenzene	A3
67-63-0	propan-2-ol	A4
91-20-3	naphthalene	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 13)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52008 2K Chip Guard

(Contd. of page 12)

· **Hazard pictograms**

GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
methyl acetate
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane
4-chloro-alpha,alpha,alpha-trifluorotoluene
dibutyltin dilaurate

· **Hazard statements**

H225	Highly flammable liquid and vapor.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H350	May cause cancer.
H360	May damage fertility or the unborn child.
H335-H336	May cause respiratory irritation. May cause drowsiness or dizziness.

· **Precautionary statements**

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a poison center/doctor if you feel unwell.
P321	Specific treatment (see on this label).
P362+P364	Take off contaminated clothing and wash it before reuse.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use for extinction: CO2, powder or water spray.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 14)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52008 2K Chip Guard

(Contd. of page 13)

· **National regulations:**
· **Additional classification according to Decree on Hazardous Materials:**
Carcinogenic hazardous material group III (dangerous).

· **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.
Exceptions can be made by the authorities in certain cases.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Environment protection department.
· **Contact:** Rita Joiner (rjoiner@semproducts.com)
· **Date of preparation / last revision** 10/08/2018 / -
· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Carc. 1A: Carcinogenicity – Category 1A
Repr. 1A: Reproductive toxicity – Category 1A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
· ***** Data compared to the previous version altered.**

Safety Data Sheet
acc. to OSHA HCS

Printing date 10/08/2018 *Version number 1* *Reviewed on 10/08/2018*

*

1 Identification

· **Product identifier**

· **Trade name: 52004 2K Chip Guard Activator**

· **Article number:** 52004
· **Application of the substance / the mixture** Coating

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
SEM Products Inc.
1685 Overview Drive
Rock Hill, SC 29730
803 207 8225

· **Information department:**
cust_care@semproducts.com : SEM Products,Inc. 1685 Overview Dr. Rock Hill, SC 29730 : phone 1-800-831-1122, M - TH 7am - 4pm EDT
· **Emergency telephone number:** CHEMTREC 1-800-424-9300

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2 Hazard(s) identification

· **Classification of the substance or mixture**

GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.

GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Carc. 2 H351 Suspected of causing cancer.
STOT SE 2 H371 May cause damage to organs.
STOT RE 2 H373 May cause damage to the hearing organs through prolonged or repeated exposure.

GHS07

Acute Tox. 4 H302 Harmful if swallowed.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.

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

GHS02 GHS07 GHS08

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52004 2K Chip Guard Activator

(Contd. of page 1)

· **Signal word** Danger

· **Hazard-determining components of labeling:**
HDI Prepolymer
ethylbenzene
n-butyl acetate
hexamethylene-di-isocyanate

· **Hazard statements**
H226 Flammable liquid and vapor.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H371 May cause damage to organs.
H373 May cause damage to the hearing organs through prolonged or repeated exposure.

· **Precautionary statements**

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing must not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	[In case of inadequate ventilation] wear respiratory protection.
P301+P312	If swallowed: Call a poison center/doctor if you feel unwell.
P330	Rinse mouth.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304+P341	If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P362+P364	Take off contaminated clothing and wash it before reuse.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P321	Specific treatment (see on this label).
P337+P313	If eye irritation persists: Get medical advice/attention.
P342+P311	If experiencing respiratory symptoms: Call a poison center/doctor.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use for extinction: CO2, powder or water spray.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52004 2K Chip Guard Activator

(Contd. of page 2)

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 2
Fire = 3
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *2
Fire = 3
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:**
Mixture: consisting of the following components.
Weight percentages

· **Dangerous components:**		
28182-81-2	HDI Prepolymer	70-100%
123-86-4	n-butyl acetate	10-13%
1330-20-7	xylene	10%
100-41-4	ethylbenzene	1-1.5%
822-06-0	hexamethylene-di-isocyanate	≥0.5-<1%

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4 First-aid measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:** Immediately call a doctor.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52004 2K Chip Guard Activator

(Contd. of page 3)

· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

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5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
· **Advice for firefighters**
· **Protective equipment:** Mouth respiratory protective device.

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6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **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.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
28182-81-2	HDI Prepolymer	7.8 mg/m³
123-86-4	n-butyl acetate	5 ppm
1330-20-7	xylene	130 ppm
100-41-4	ethylbenzene	33 ppm
822-06-0	hexamethylene-di-isocyanate	0.018 ppm

· **PAC-2:**		
28182-81-2	HDI Prepolymer	86 mg/m³
123-86-4	n-butyl acetate	200 ppm
1330-20-7	xylene	920* ppm
100-41-4	ethylbenzene	1100* ppm
822-06-0	hexamethylene-di-isocyanate	0.2 ppm

· **PAC-3:**		
28182-81-2	HDI Prepolymer	510 mg/m³
123-86-4	n-butyl acetate	3000* ppm
1330-20-7	xylene	2500* ppm
100-41-4	ethylbenzene	1800* ppm

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52004 2K Chip Guard Activator

(Contd. of page 4)

822-06-0	hexamethylene-di-isocyanate	3 ppm

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7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
No special measures required.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
· **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Keep receptacle tightly sealed.
· **Specific end use(s)** No further relevant information available.

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8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

123-86-4 n-butyl acetate	
PEL	Long-term value: 710 mg/m³, 150 ppm
REL	Short-term value: 950 mg/m³, 200 ppm Long-term value: 710 mg/m³, 150 ppm
TLV	Short-term value: 712 mg/m³, 150 ppm Long-term value: 238 mg/m³, 50 ppm
1330-20-7 xylene	
PEL	Long-term value: 435 mg/m³, 100 ppm
REL	Short-term value: 655 mg/m³, 150 ppm Long-term value: 435 mg/m³, 100 ppm
TLV	Short-term value: 651 mg/m³, 150 ppm Long-term value: 434 mg/m³, 100 ppm BEI
100-41-4 ethylbenzene	
PEL	Long-term value: 435 mg/m³, 100 ppm

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52004 2K Chip Guard Activator

(Contd. of page 5)

REL	Short-term value: 545 mg/m³, 125 ppm Long-term value: 435 mg/m³, 100 ppm
TLV	Long-term value: 87 mg/m³, 20 ppm BEI

822-06-0 hexamethylene-di-isocyanate

REL	Long-term value: 0.035 mg/m³, 0.005 ppm Ceiling limit value: 0.14* mg/m³, 0.02* ppm *10-min
TLV	Long-term value: 0.034 mg/m³, 0.005 ppm BEI

· **Ingredients with biological limit values:**

1330-20-7 xylene

BEI	1.5 g/g creatinine Medium: urine Time: end of shift Parameter: Methylhippuric acids

100-41-4 ethylbenzene

BEI	0.7 g/g creatinine Medium: urine Time: end of shift at end of workweek Parameter: Sum of mandelic acid and phenylglyoxylic acid (nonspecific, semi-quantitative) - Medium: end-exhaled air Time: not critical Parameter: Ethyl benzene (semi-quantitative)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
· **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· **Protection of hands:**
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Protective gloves

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

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52004 2K Chip Guard Activator

(Contd. of page 6)

· **Material of gloves**
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.
· **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:**

Tightly sealed goggles

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Liquid
Color:	According to product specification
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	124-128 °C
· **Flash point:**	27 °C
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	370 °C
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	In use, may form flammable/explosive vapour-air mixture.
· **Explosion limits:**	
Lower:	1.1 Vol %
Upper:	7.5 Vol %
· **Vapor pressure at 20 °C:**	10.7 hPa
· **Density at 20 °C:**	1.06129 g/cm³
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52004 2K Chip Guard Activator

(Contd. of page 7)

· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	24.5 %
VOC content:	24.50 % 260.0 g/l / 2.17 lb/gal
Solids content:	75.4 %
· **Other information**	No further relevant information available.

*
10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

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11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
28182-81-2 HDI Prepolymer		
Oral	LD50	1,000 mg/kg (rat)
Dermal	LD50	5,000 mg/kg (rabbit)
Inhalative	LC50/4 h	137-1,150 mg/l (rat)
1330-20-7 xylene		
Oral	LD50	4,300 mg/kg (rat)
Dermal	LD50	2,000 mg/kg (rabbit)
822-06-0 hexamethylene-di-isocyanate		
Oral	LD50	738 mg/kg (rat)
Dermal	LD50	593 mg/kg (rat)

· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** Irritating effect.
· **Sensitization:**
Sensitization possible through inhalation.
Sensitization possible through skin contact.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52004 2K Chip Guard Activator

(Contd. of page 8)

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
1330-20-7	xylene	3
100-41-4	ethylbenzene	2B

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

*
12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

*
14 Transport information

· **UN-Number**	
· **DOT, ADR, IMDG, IATA**	UN1866
· **UN proper shipping name**	
· **DOT**	Resin solution
· **ADR**	1866 Resin solution
· **IMDG, IATA**	RESIN SOLUTION

(Contd. on page 10)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52004 2K Chip Guard Activator

(Contd. of page 9)

· **Transport hazard class(es)**

· **DOT**

· **Class**	3 Flammable liquids
· **Label**	3

· **ADR, IMDG, IATA**

· **Class**	3 Flammable liquids
· **Label**	3
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	III
· **Environmental hazards:**	
· **Marine pollutant:**	Yes
· **Special precautions for user**	Warning: Flammable liquids
· **EMS Number:**	F-E,S-E
· **Stowage Category**	A
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **DOT**	
· **Quantity limitations**	On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L
· **ADR**	
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **UN "Model Regulation":**	UN 1866 RESIN SOLUTION, 3, III

(Contd. on page 11)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52004 2K Chip Guard Activator

(Contd. of page 10)

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15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredient is listed.

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

1330-20-7	xylene
100-41-4	ethylbenzene
822-06-0	hexamethylene-di-isocyanate

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

100-41-4	ethylbenzene

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

1330-20-7	xylene	I
100-41-4	ethylbenzene	D

· **TLV (Threshold Limit Value established by ACGIH)**

1330-20-7	xylene	A4
100-41-4	ethylbenzene	A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

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

GHS02 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
HDI Prepolymer
ethylbenzene
n-butyl acetate
hexamethylene-di-isocyanate

(Contd. on page 12)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52004 2K Chip Guard Activator

(Contd. of page 11)

· **Hazard statements**
H226 Flammable liquid and vapor.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H371 May cause damage to organs.
H373 May cause damage to the hearing organs through prolonged or repeated exposure.

· **Precautionary statements**

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing must not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	[In case of inadequate ventilation] wear respiratory protection.
P301+P312	If swallowed: Call a poison center/doctor if you feel unwell.
P330	Rinse mouth.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304+P341	If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P362+P364	Take off contaminated clothing and wash it before reuse.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P321	Specific treatment (see on this label).
P337+P313	If eye irritation persists: Get medical advice/attention.
P342+P311	If experiencing respiratory symptoms: Call a poison center/doctor.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use for extinction: CO2, powder or water spray.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

(Contd. on page 13)

Safety Data Sheet
acc. to OSHA HCS

Trade name: 52004 2K Chip Guard Activator

(Contd. of page 12)

· **Department issuing SDS:** Environment protection department.
· **Contact:** Rita Joiner (rjoiner@semproducts.com)
· **Date of preparation / last revision** 10/08/2018 / -
· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 2: Carcinogenicity – Category 2
STOT SE 2: Specific target organ toxicity (single exposure) – Category 2
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
· ***** Data compared to the previous version altered.**