

## 1 Identification

- **Product identifier**
- **Trade name:** Dual Cure 180 Silvers & Aluminums
- **Article number:** 180SXXX
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Baril Coatings USA, LLC  
401 Growth Parkway  
Angola, IN 46703
- **Information department:** Product safety department
- **Emergency telephone number:** During normal opening times: +1 (260) 665-8431

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.



GHS08 Health hazard

Muta. 1B H340 May cause genetic defects.

Carc. 1A H350 May cause cancer.

STOT RE 2 H373 May cause damage to the hearing organs through prolonged or repeated exposure.



GHS07

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

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
tetraethyl-N,N'-(methylenedicyclohexane-4, 1-diyl)bis-DL-aspartate

(Contd. on page 2)

US

**Trade name: Dual Cure 180 Silvers & Aluminums**

(Contd. of page 1)

Naphtha (petroleum), hydrotreated heavy ethylbenzene  
bis(4-(1,2-bis(ethoxycarbonyl)ethy-lamino)-3-methylcyclohexyl)methane  
Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate

- **Hazard statements**

Flammable liquid and vapor.  
May cause an allergic skin reaction.  
May cause genetic defects.  
May cause cancer.  
May cause damage to the hearing organs through prolonged or repeated exposure.

- **Precautionary statements**

If medical advice is needed, have product container or label at hand.  
Keep out of reach of children.  
Read label before use.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Keep container tightly closed.  
Ground/bond container and receiving equipment.  
Use explosion-proof electrical/ventilating/lighting/equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Contaminated work clothing must not be allowed out of the workplace.  
Wear protective gloves/protective clothing/eye protection/face protection.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
If exposed or concerned: Get medical advice/attention.  
Specific treatment (see on this label).  
Get medical advice/attention if you feel unwell.  
If skin irritation or rash occurs: Get medical advice/attention.  
Wash contaminated clothing before reuse.  
In case of fire: Use for extinction: CO2, powder or water spray.  
Store in a well-ventilated place. Keep cool.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

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



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



- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

US

(Contd. on page 3)

Trade name: Dual Cure 180 Silvers &amp; Aluminums

(Contd. of page 2)

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Hazardous substances listed below.

- **Dangerous components:**

136210-30-5	tetraethyl-N,N'-(methylenedicyclohexane-4,1-diyl)bis-DL-aspartate	>25-≤50%
136210-32-7	bis(4-(1,2-bis(ethoxycarbonyl)ethy-lamino)-3-methylcyclohexyl)methane	>10-≤25%
108-65-6	2-methoxy-1-methylethyl acetate	>10-≤25%
7727-43-7	barium sulphate, natural	>2.5-≤10%
7429-90-5	aluminium powder (pyrophoric)	>2.5-≤10%
141-78-6	ethyl acetate	≤2.5%
1330-20-7	xylene	≤2.5%
623-91-6	diethyl fumarate	≤2.5%
64742-48-9	Naphtha (petroleum), hydrotreated heavy	0.1-≤2.5%
100-41-4	ethylbenzene	0.1-≤2.5%
628-63-7	pentyl acetate	≤2.5%
64742-95-6	Solvent naphtha (petroleum), light arom.	0.1-≤2.5%
64-17-5	ethanol	0.1-≤2.5%
41556-26-7	Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	0.1-<1%
14808-60-7	Quartz (SiO <sub>2</sub> )	0.1-≤2.5%

### 4 First-aid measures

- **Description of first aid measures**
- **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.
- **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.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, 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.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

US

(Contd. on page 4)

Trade name: Dual Cure 180 Silvers &amp; Aluminums

(Contd. of page 3)

**6 Accidental release measures**

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

Wear protective equipment. Keep unprotected persons away.

- **Environmental precautions:**

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

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.

Do not flush with water or aqueous cleansing agents

- **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:**

108-65-6	2-methoxy-1-methylethyl acetate	50 ppm
7727-43-7	barium sulphate, natural	15 mg/m <sup>3</sup>
141-78-6	ethyl acetate	1,200 ppm
1330-20-7	xylene	130 ppm
64742-48-9	Naphtha (petroleum), hydrotreated heavy	350 mg/m <sup>3</sup>
100-41-4	ethylbenzene	33 ppm
628-63-7	pentyl acetate	100 ppm
64-17-5	ethanol	1,800 ppm
95-63-6	1,2,4-trimethylbenzene	140 ppm
67-56-1	methanol	530 ppm
14808-60-7	Quartz (SiO <sub>2</sub> )	0.075 mg/m <sup>3</sup>

- **PAC-2:**

108-65-6	2-methoxy-1-methylethyl acetate	1,000 ppm
7727-43-7	barium sulphate, natural	170 mg/m <sup>3</sup>
141-78-6	ethyl acetate	1,700 ppm
1330-20-7	xylene	920* ppm
64742-48-9	Naphtha (petroleum), hydrotreated heavy	1,800 mg/m <sup>3</sup>
100-41-4	ethylbenzene	1100* ppm
628-63-7	pentyl acetate	670 ppm
64-17-5	ethanol	3300* ppm
95-63-6	1,2,4-trimethylbenzene	360 ppm
67-56-1	methanol	2,100 ppm
14808-60-7	Quartz (SiO <sub>2</sub> )	33 mg/m <sup>3</sup>

- **PAC-3:**

108-65-6	2-methoxy-1-methylethyl acetate	5000* ppm
7727-43-7	barium sulphate, natural	990 mg/m <sup>3</sup>
141-78-6	ethyl acetate	10000** ppm
1330-20-7	xylene	2500* ppm

(Contd. on page 5)

**Trade name: Dual Cure 180 Silvers & Aluminums**

(Contd. of page 4)

64742-48-9	Naphtha (petroleum), hydrotreated heavy	40,000 mg/m <sup>3</sup>
100-41-4	ethylbenzene	1800* ppm
628-63-7	pentyl acetate	4000* ppm
64-17-5	ethanol	15000* ppm
95-63-6	1,2,4-trimethylbenzene	480 ppm
67-56-1	methanol	7200* ppm
14808-60-7	Quartz (SiO <sub>2</sub> )	200 mg/m <sup>3</sup>

**7 Handling and storage**

- **Handling:**
- **Precautions for safe handling**  
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.

**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.

<b>108-65-6 2-methoxy-1-methylethyl acetate</b>	
WEEL	Long-term value: 50 ppm
<b>7727-43-7 barium sulphate, natural</b>	
PEL	Long-term value: 15* 5** mg/m <sup>3</sup> *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m <sup>3</sup> *total dust **respirable fraction
TLV	Long-term value: 5* mg/m <sup>3</sup> *inhalable fraction; E
<b>141-78-6 ethyl acetate</b>	
PEL	Long-term value: 1400 mg/m <sup>3</sup> , 400 ppm
REL	Long-term value: 1400 mg/m <sup>3</sup> , 400 ppm
TLV	Long-term value: 1440 mg/m <sup>3</sup> , 400 ppm

(Contd. on page 6)

**Trade name: Dual Cure 180 Silvers & Aluminums**

(Contd. of page 5)

**1330-20-7 xylene**

PEL	Long-term value: 435 mg/m <sup>3</sup> , 100 ppm
REL	Short-term value: 655 mg/m <sup>3</sup> , 150 ppm Long-term value: 435 mg/m <sup>3</sup> , 100 ppm
TLV	Short-term value: 651 mg/m <sup>3</sup> , 150 ppm Long-term value: 434 mg/m <sup>3</sup> , 100 ppm BEI

**100-41-4 ethylbenzene**

PEL	Long-term value: 435 mg/m <sup>3</sup> , 100 ppm
REL	Short-term value: 545 mg/m <sup>3</sup> , 125 ppm Long-term value: 435 mg/m <sup>3</sup> , 100 ppm
TLV	Long-term value: 87 mg/m <sup>3</sup> , 20 ppm BEI

**628-63-7 pentyl acetate**

PEL	Long-term value: 525 mg/m <sup>3</sup> , 100 ppm
REL	Long-term value: 525 mg/m <sup>3</sup> , 100 ppm
TLV	Short-term value: 532 mg/m <sup>3</sup> , 100 ppm Long-term value: 266 mg/m <sup>3</sup> , 50 ppm

**64-17-5 ethanol**

PEL	Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm
REL	Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm
TLV	Short-term value: 1880 mg/m <sup>3</sup> , 1000 ppm

**14808-60-7 Quartz (SiO<sub>2</sub>)**

PEL	Long-term value: 0.05* mg/m <sup>3</sup> *resp. dust; 30mg/m <sup>3</sup> /%SiO <sub>2</sub> +2
REL	Long-term value: 0.05* mg/m <sup>3</sup> *respirable dust; See Pocket Guide App. A
TLV	Long-term value: 0.025* mg/m <sup>3</sup> *as respirable fraction

**Ingredients with biological limit values:****1330-20-7 xylene**

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

(Contd. on page 7)

US

**Trade name: Dual Cure 180 Silvers & Aluminums**

(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.
- **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:**



Protective gloves

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

- **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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

**9 Physical and chemical properties**· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· <b>Form:</b>	Liquid
· <b>Color:</b>	Silver-colored
· <b>Odor:</b>	Solvent-like
· <b>Odor threshold:</b>	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· <b>Melting point/Melting range:</b>	Undetermined.
· <b>Boiling point/Boiling range:</b>	146.4 °C (295.5 °F)

· **Flash point:** 44 °C (111.2 °F)

· **Flammability (solid, gaseous):** Not applicable.

(Contd. on page 8)

**Trade name: Dual Cure 180 Silvers & Aluminums**

(Contd. of page 7)

· <b>Ignition temperature:</b>	315 °C (599 °F)
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· <b>Explosion limits:</b>	
<b>Lower:</b>	1.5 Vol %
<b>Upper:</b>	10.8 Vol %
· <b>Vapor pressure at 20 °C (68 °F):</b>	3.4 hPa (2.6 mm Hg)
· <b>Density at 20 °C (68 °F):</b>	1.16 g/cm <sup>3</sup> (9.68 lbs/gal)
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Miscible
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	21.1 %
<b>VOC content:</b>	21.08 %
	244.5 g/l / 2.04 lb/gal
<b>Solids content:</b>	79.0 %
· <b>Other infomation:</b>	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.

**11 Toxicological information**

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

· <b>LD/LC50 values that are relevant for classification:</b>		
<b>64742-48-9 Naphtha (petroleum), hydrotreated heavy</b>		
Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>3,000 mg/kg (rab)

(Contd. on page 9)

US

**Trade name: Dual Cure 180 Silvers & Aluminums**

(Contd. of page 8)

**64742-95-6 Solvent naphtha (petroleum), light arom.**

Oral	LD50	>6,800 mg/kg (rat)
Dermal	LD50	>3,400 mg/kg (rab)
Inhalative	LC50/4 h	>10.2 mg/l (rat)

· **Primary irritant effect:**

- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

Carcinogenic.

The product can cause inheritable damage.

· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer)**

1330-20-7	xylene	3
100-41-4	ethylbenzene	2B
64-17-5	ethanol	1
14808-60-7	Quartz (SiO <sub>2</sub> )	1

· **NTP (National Toxicology Program)**

14808-60-7	Quartz (SiO <sub>2</sub> )	K
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· **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.

· **Ecotoxicological effects:**

· **Remark:** Harmful to fish

· **Additional ecological information:**· **General notes:**

Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Harmful to aquatic organisms

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

US

(Contd. on page 10)



Trade name: Dual Cure 180 Silvers &amp; Aluminums

(Contd. of page 9)

**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**

- |   |   |
|---|---|
| · <b>UN-Number</b>  | UN1263  |
| · <b>DOT, IMDG, IATA</b>  |   |
| · <b>UN proper shipping name</b>  | Paint   |
| · <b>DOT</b>  | PAINT   |
| · <b>IMDG, IATA</b>   |   |
| · <b>Transport hazard class(es)</b>   |   |
| · <b>DOT</b>  |   |
|   |   |
| · <b>Class</b>  | 3 Flammable liquids   |
| · <b>Label</b>  | 3   |
| · <b>IMDG, IATA</b>   |   |
|  |   |
| · <b>Class</b>  | 3 Flammable liquids   |
| · <b>Label</b>  | 3   |
| · <b>Packing group</b>  | III   |
| · <b>DOT, IMDG, IATA</b>  |   |
| · <b>Environmental hazards:</b>   | Not applicable.   |
| · <b>Special precautions for user</b>   | Warning: Flammable liquids  |
| · <b>Danger code (Kemler):</b>  | 30  |
| · <b>EMS Number:</b>  | F-E, S-E  |
| · <b>Stowage Category</b>   | A   |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>    | Not applicable.   |
| · <b>Transport/Additional information:</b>  |   |
| · <b>DOT</b>  |   |
| · <b>Quantity limitations</b>   | On passenger aircraft/rail: 60 L<br>On cargo aircraft only: 220 L |

(Contd. on page 11)

US

Trade name: Dual Cure 180 Silvers &amp; Aluminums

(Contd. of page 10)

· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 1263 PAINT, 3, III

## 15 Regulatory information

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

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

None of the ingredients is listed.

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

7727-43-7	barium sulphate, natural
7429-90-5	aluminium powder (pyrophoric)
1330-20-7	xylene
100-41-4	ethylbenzene
95-63-6	1,2,4-trimethylbenzene
67-56-1	methanol

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

All ingredients are listed.

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

623-91-6	diethyl fumarate
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### · Proposition 65

#### · Chemicals known to cause cancer:

100-41-4	ethylbenzene
14808-60-7	Quartz (SiO <sub>2</sub> )

#### · 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:

64-17-5	ethanol
67-56-1	methanol

### · Carcinogenic categories

#### · EPA (Environmental Protection Agency)

7727-43-7	barium sulphate, natural	D, CBD(inh), NL(oral)
1330-20-7	xylene	I
100-41-4	ethylbenzene	D
95-63-6	1,2,4-trimethylbenzene	II

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

7429-90-5	aluminium powder (pyrophoric)	A4
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(Contd. on page 12)

**Trade name: Dual Cure 180 Silvers & Aluminums**

(Contd. of page 11)

1330-20-7	xylene	A4
100-41-4	ethylbenzene	A3
64-17-5	ethanol	A3
14808-60-7	Quartz (SiO <sub>2</sub> )	A2

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**14808-60-7 Quartz (SiO<sub>2</sub>)· **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:**

tetraethyl-N,N'-(methylenedicyclohexane-4,1-diyl)bis-DL-aspartate

Naphtha (petroleum), hydrotreated heavy

ethylbenzene

bis(4-(1,2-bis(ethoxycarbonyl)ethy-lamino)-3-methylcyclohexyl)methane

Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate

· **Hazard statements**

Flammable liquid and vapor.

May cause an allergic skin reaction.

May cause genetic defects.

May cause cancer.

May cause damage to the hearing organs through prolonged or repeated exposure.

· **Precautionary statements**

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

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

Contaminated work clothing must not be allowed out of the workplace.

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

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Get medical advice/attention if you feel unwell.

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

Wash contaminated clothing before reuse.

In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 13)

**Trade name: Dual Cure 180 Silvers & Aluminums**

(Contd. of page 12)

- **National regulations:**
- **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:** *Mr. Williams*
- **Date of preparation / last revision** *09/18/2025 / -*
- **Abbreviations and acronyms:**  
*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*  
*Skin Sens. 1: Skin sensitisation – Category 1*  
*Muta. 1B: Germ cell mutagenicity – Category 1B*  
*Carc. 1A: Carcinogenicity – Category 1A*  
*STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2*