

1 Identification

- **Product identifier**
- **Trade name:** Dual Cure 178 Semi Gloss Blues
- **Article number:** 178AXXX
- **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.



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
titanium dioxide
Solvent naphtha (petroleum), light arom.

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Quartz (SiO₂)· **Hazard statements**

Flammable liquid and vapor.

May cause an allergic skin reaction.

May cause genetic defects.

May cause cancer.

· **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.

Avoid breathing 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).

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)**

Health = 1

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.**3 Composition/information on ingredients**· **Chemical characterization: Mixtures**· **Description:** Hazardous substances listed below.· **Dangerous components:**

7727-43-7	barium sulphate, natural	>10-≤25%
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628-63-7	pentyl acetate	>10-≤25%
136210-30-5	tetraethyl-N,N'-(methylenedicyclohexane-4,1-diyl)bis-DL-aspartate	>10-≤25%
13463-67-7	titanium dioxide	>2.5-≤10%
624-41-9	2-methylbutyl acetat	>2.5-≤10%
108-65-6	2-methoxy-1-methylethyl acetate	>2.5-≤10%
1333-86-4	Carbon black	0.1-≤2.5%
14808-60-7	Quartz (SiO ₂)	0.1-≤2.5%
64742-95-6	Solvent naphtha (petroleum), light arom.	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:**
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.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

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.

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See Section 13 for disposal information.

Protective Action Criteria for Chemicals**PAC-1:**

7727-43-7	barium sulphate, natural	15 mg/m ³
628-63-7	pentyl acetate	100 ppm
13463-67-7	titanium dioxide	30 mg/m ³
7779-90-0	trizinc bis(orthophosphate)	12 mg/m ³
108-65-6	2-methoxy-1-methylethyl acetate	50 ppm
1314-13-2	zinc oxide	10 mg/m ³
1344-28-1	aluminium oxide	15 mg/m ³
1333-86-4	Carbon black	9 mg/m ³
14808-60-7	Quartz (SiO ₂)	0.075 mg/m ³
7631-86-9	silicon dioxide, chemically prepared	18 mg/m ³
110-43-0	Methyl n-amyl ketone	150 ppm
1314-23-4	zirconium dioxide	14 mg/m ³
546-93-0	Magnesite	45 mg/m ³
123-86-4	n-butyl acetate	5 ppm

PAC-2:

7727-43-7	barium sulphate, natural	170 mg/m ³
628-63-7	pentyl acetate	670 ppm
13463-67-7	titanium dioxide	330 mg/m ³
7779-90-0	trizinc bis(orthophosphate)	36 mg/m ³
108-65-6	2-methoxy-1-methylethyl acetate	1,000 ppm
1314-13-2	zinc oxide	15 mg/m ³
1344-28-1	aluminium oxide	170 mg/m ³
1333-86-4	Carbon black	99 mg/m ³
14808-60-7	Quartz (SiO ₂)	33 mg/m ³
7631-86-9	silicon dioxide, chemically prepared	740 mg/m ³
110-43-0	Methyl n-amyl ketone	670 ppm
1314-23-4	zirconium dioxide	110 mg/m ³
546-93-0	Magnesite	260 mg/m ³
123-86-4	n-butyl acetate	200 ppm

PAC-3:

7727-43-7	barium sulphate, natural	990 mg/m ³
628-63-7	pentyl acetate	4000* ppm
13463-67-7	titanium dioxide	2,000 mg/m ³
7779-90-0	trizinc bis(orthophosphate)	220 mg/m ³
108-65-6	2-methoxy-1-methylethyl acetate	5000* ppm
1314-13-2	zinc oxide	2,500 mg/m ³
1344-28-1	aluminium oxide	990 mg/m ³
1333-86-4	Carbon black	590 mg/m ³
14808-60-7	Quartz (SiO ₂)	200 mg/m ³
7631-86-9	silicon dioxide, chemically prepared	4,500 mg/m ³
110-43-0	Methyl n-amyl ketone	4000* ppm
1314-23-4	zirconium dioxide	680 mg/m ³

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546-93-0	Magnesite	(Contd. of page 4) 1,600 mg/m ³
123-86-4	n-butyl acetate	3000* ppm

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.

7727-43-7 barium sulphate, natural

PEL	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV	Long-term value: 5* mg/m ³ *inhalable fraction; E

628-63-7 pentyl acetate

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

624-41-9 2-methylbutyl acetate

TLV	Short-term value: 532 mg/m ³ , 100 ppm Long-term value: 266 mg/m ³ , 50 ppm
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108-65-6 2-methoxy-1-methylethyl acetate

WEEL	Long-term value: 50 ppm
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1333-86-4 Carbon black

PEL	Long-term value: 3.5 mg/m ³
REL	Long-term value: 3.5* mg/m ³ *0.1 in presence of PAHs; See Pocket Guide Apps.A+C
TLV	Long-term value: 3* mg/m ³ *inhalable fraction

14808-60-7 Quartz (SiO₂)

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

- **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.
- **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

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9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Color:	Blue
Odor:	Solvent-like
Odor threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	138 °C (280.4 °F)

· Flash point: 23 °C (73.4 °F)

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 375 °C (707 °F)

· Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:

Lower:	1 Vol %
Upper:	7.5 Vol %

· Vapor pressure at 20 °C (68 °F): 5.3 hPa (4 mm Hg)

· Density at 20 °C (68 °F): 1.64 g/cm³ (13.69 lbs/gal)

· Relative density: Not determined.

· Vapor density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with

Water: Miscible

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

· Solvent content:

Organic solvents:	23.4 %
VOC content:	23.43 %
	384.3 g/l / 3.21 lb/gal

Solids content: 76.6 % (by weight)

· Other information: No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

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- **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:**

- **LD/LC50 values that are relevant for classification:**

7779-90-0 trizinc bis(orthophosphate)		
Oral	LD50	>5,000 mg/kg (rat)
1314-13-2 zinc oxide		
Oral	LD50	>5,000 mg/kg (rat)
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)		
14807-96-6	Talc (Mg3H2(SiO3)4)	3
13463-67-7	titanium dioxide	2B
1333-86-4	Carbon black	2B
14808-60-7	Quartz (SiO2)	1
7631-86-9	silicon dioxide, chemically prepared	3

- **NTP (National Toxicology Program)**

14808-60-7	Quartz (SiO2)	K
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- **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.

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- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for 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.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **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, IMDG, IATA	UN1263
· UN proper shipping name	
· DOT	Paint
· IMDG	PAINT (trizinc bis(orthophosphate), zinc oxide), MARINE POLLUTANT
· IATA	PAINT
· Transport hazard class(es)	
· DOT	
	
· Class	3 Flammable liquids
· Label	3
· IMDG	
	 
· Class	3 Flammable liquids

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· Label	3
· IATA	
	
· Class	3 Flammable liquids
· Label	3
· Packing group	
· DOT, IMDG, IATA	III
· Environmental hazards:	
· Marine pollutant:	Symbol (fish and tree)
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	30
· 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
· 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 1263 PAINT, 3, III, ENVIRONMENTALLY HAZARDOUS

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
7779-90-0	trizinc bis(orthophosphate)
1314-13-2	zinc oxide
1344-28-1	aluminium oxide

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

All ingredients are listed.

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· **Proposition 65**· **Chemicals known to cause cancer:**

13463-67-7	titanium dioxide
1333-86-4	Carbon black
14808-60-7	Quartz (SiO ₂)

· **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.

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

7727-43-7	barium sulphate, natural	D, CBD(inh), NL(oral)
7779-90-0	trizinc bis(orthophosphate)	D, I, II
1314-13-2	zinc oxide	D, I, II

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

14807-96-6	Talc (Mg ₃ H ₂ (SiO ₃) ₄)	A4
13463-67-7	titanium dioxide	A4
1344-28-1	aluminium oxide	A4
1333-86-4	Carbon black	A4
14808-60-7	Quartz (SiO ₂)	A2
1314-23-4	zirconium dioxide	A4

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

13463-67-7	titanium dioxide
1333-86-4	Carbon black
14808-60-7	Quartz (SiO ₂)

· **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

titanium dioxide

Solvent naphtha (petroleum), light arom.

Quartz (SiO₂)· **Hazard statements**

Flammable liquid and vapor.

May cause an allergic skin reaction.

May cause genetic defects.

May cause cancer.

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· 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.
Avoid breathing 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).
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.

· 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 08/22/2025 / -****· 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
Flam. Liq. 3: Flammable liquids – Category 3

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Skin Sens. 1: Skin sensitisation – Category 1
Muta. 1B: Germ cell mutagenicity – Category 1B
Carc. 1A: Carcinogenicity – Category 1A

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