

## 02GN084 Chrome-Free Epoxy Polyamide Primer

### Product description

02GN084 is a chemically cured, chrome-free, two-component epoxy polyamide primer.

- Corrosion inhibiting
- Chemical and solvent resistant
- Resistant to immersion in hydraulic fluids, lubricating oils, phosphate ester based hydraulic fluids and distilled water

### Components



#### Mix ratio (by volume):

- 02GN084 (base component) 3 parts
- 02GN084CAT (catalyst component) 1 part

*Note: If additional thinning is required use MIL-T-81772 Type II approved thinner where VOC regulations permit. See Instructions for Use section for more details.*

Available in touch up kits. For more details see [Instructions For Use](#) Section.

### Specifications



02GN084 primer is qualified to:

- 5PTMRA01
- MCS 9053
- MIL-PRF-23377 Type I Class N

*Note: PPG Aerospace recommends you check the most recent specification QPLs for updated information.*

#### Product Compatibility:

02GN084 primer is compatible with the following topcoat specifications:

- MIL-PRF-85285
- MMS-420

### Surface preparation and pretreatments



02GN084 can be applied over clean, dry, intact aluminum and composite surfaces. Aluminum surfaces shall be treated with materials conforming to MIL-DTL-5541 or equivalent.

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## Instructions for use



### Mixing instructions:

Stir or shake the base component to ensure any pigment, which may have settled on the bottom of the can, has been fully incorporated into the base. Do not stir or shake the base component longer than 5 minutes unless sediment is observed. Then shake for another 5 minutes. Slowly add one volume of catalyst to three volumes base component. Mix by hand stirring, paint shaker or mechanical mixing to ensure the base/catalyst mixture is completely homogeneous. Do not shake or mechanically mix material for longer than 10 minutes. Constant agitation of the material during spray application is recommended.

If additional thinning is required, use IS-237 or other MIL-T-81172 Type II approved thinner. Note that addition of MIL-T-81172 will increase the mixed VOC, therefore consult regional VOC regulations and restrictions.

### 02GN084 is available in 2-ounce and 4-ounce touch up kits:

All touch-up kit configurations consist of an inner cup, which contains the 02GN084CAT catalyst located inside an outer cup (bottle) that contains the 02GN084 base component.

To mix, remove lid, pour contents of inner cup (catalyst) into outer cup (base). Replace lid and shake well by hand, approximately 2 minutes. Material is now ready to apply.

*Note: It is important to condition the paint for 24 hours prior to mixing by placing all materials in the shop or hangar, with ambient temperatures between 13° and 35°C (55° to 95°F). The minimum temperature of the paint components should be 13°C (55°F) prior to mixing.*



### Induction time:

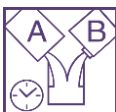
Not required



### Viscosity (can kits): (23°C/73°F)

- #2 EZ Zahn cup 20 ± 2 seconds
- #4 Ford cup 40 seconds maximum

*Note: Viscosities quoted are the typical values obtained when using specified mix ratio.*



### Pot life:

4 hours @ 21 - 25°C (70 - 77°F)

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## Application guidelines

### Recommended application conditions:

Temperature	15 - 30°C (59 - 86°F)
Relative Humidity	20 - 70%

### Spray application:

Ground the aircraft and the application equipment before priming. Stir the primer slowly during the application. The suggested film thickness is 15 to 22.5 microns (0.6 to 0.9 mils). This can be accomplished by one medium coat with 50% overlap.

### Touch-Up-Kit application:

After mixing the touch up kit, use brush or roller to apply.

*These application guidelines represent PPG's best advice in standard conditions. Some parameters will be influenced by environmental conditions, equipment settings, and other variables.*

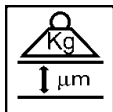


### Theoretical coverage:

19 square meters/liter at 25 microns dry film (778 square feet/gallon at 1 mil dry film)  
Recommended dry film thickness; 15 to 22.5 microns (0.6 to 0.9 mils)

### Touch up kit theoretical coverage at 25 microns (1 mil) dry film:

2 oz. TUK: 12.15 square feet  
4 oz. TUK: 24.3 square feet



### Dry film density:

1.57 grams/cubic centimeter (13.10 pounds/gallon)

### Dry film weight:

39.8 grams/square meter at 25 microns dry film (0.00815 pounds/square feet at 1 mil dry film)



### Equipment:

02GN084 primer is compatible with all current forms spray equipment.

Equipment type	Tip size	Pot pressure	Atomization pressure at the cap
Electrostatic air spray gun	1.2 mm or 1.5 mm	10 to 20 psi (0.69 to 1.4 bar)	45 to 60 psi (3.1 to 4.1 bar)
Electrostatic air assisted airless spray gun	#611 or #613 (Graco Nomenclature)	700 to 1200 psi (48 to 82 bar)	40 to 60 psi (2.8 to 4.1 bar)

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High Volume Low Pressure Spray Gun (HVLP)	1.0 mm to 1.4 mm	10 to 20 psi (0.69 to 1.4 bar)	10 psi maximum (0.69 bar)
Conventional air spray gun	1.2 mm to 1.8 mm	10 to 20 psi (0.69 to 1.4 bar)	45 to 60 psi (3.1 to 4.1 bar)

### Equipment cleaning:

Use IS-237 Epoxy Reducer (MIL-T-81772B Type II) to remove any liquid or residual primer from equipment. Once material has cured, use an approved chemical paint removal system to strip primer from parts and equipment

### Physical properties (product)



**Color:** Light Aqua Green



**Gloss:** Not Applicable



<b>Dry times</b>	<b>22 - 28°C (71 - 84°F)</b>
Tack Free	5 hours maximum
Topcoat window	5 - 24 hours
Dry hard	8 hours maximum
Full cure	14 days maximum

*Note: Dry times above were established at room (ambient) temperatures, 75° ± 5°F and 50% ± 10% relative humidity at approximately 0.6-1.0 mils of dry film build. After 8 hours cure, solvent wipe the entire primed surface. After 24 hours of cure, scuff sand the entire primed surface followed by solvent wiping prior to top coating. [Ref: T.O. 1-1-8 Section 6.12.2.5, JAN 12, 2010]. Note: Higher temperatures will reduce the recoat time while lower temperatures will increase the recoat times.*

Forced Dry Schedule: For dry to stack conditions only. Allow a minimum of 15 minutes flash off time at ambient temperatures prior to exposing painted parts to high temperatures. Complete testing should be done prior to use. Below are suggested starting points. Other variables may affect these cure schedules.

Temperature	Time
120°F	45 minutes
140°F	30 minutes
160°F	20 minutes
180°F	15 minutes

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*Note: Ambient temperatures are defined as 70° ± 10°F and 50% ± 10% relative humidity.*

## VOC

### VOC:

Mixed, ready to use VOC (EPA method 24)	338 grams/liter
Base Component	405 grams/liter
Catalyst Component	190 grams/liter



### Flash point closed cup:

Base Component	8°C (46°F)
Catalyst Component	8°C (46°F)

### Shelf Life:

**Can kits:** 12 months from date of manufacture

**Touch up kits:** 6 months from date of packaging

*Note: Shelf life is provided for original, unopened containers*

*Note: The application and performance property values above are typical for the material, but not intended for use in specifications or for acceptance inspection criteria because of variations in testing methods, conditions and configurations.*

## Storage Recommendations



Inspect the condition of the container to ensure compliance. The material should be stored at temperatures between 21°C to 32°C (70°F to 90°F) to ensure shelf life.

*Note: When procuring to a qualified material specification, follow those storage instructions.*

## Health Precautions

This product is safe to use and apply when recommended precautions are followed. Before using this product, read and understand the Safety Data Sheet (SDS), which provides information on health, physical and environmental hazards, handling precautions and first aid recommendations. An SDS is available on request. Avoid overexposure. Obtain medical care in case of extreme overexposure.

**For industrial use only. Keep away from children.**

**Additional information can be found at: [www.ppgaerospace.com](http://www.ppgaerospace.com)**

**For sales and ordering information call the local PPG office at the numbers listed below:**

# 02GN084 Chrome-Free Epoxy Polyamide Primer

## Asia Pacific

### ASC – Australia

Tel 61 (3) 9335 1557  
Fax 61 (3) 9335 3490

### ASC – Japan

Tel 81 561 35 5200  
Fax 81 561 35 5201

### ASC – South East Asia

Tel 65 6861 1119  
Fax 65 6861 6162

### ASC – Suzhou

Tel (86-512) 6661 5858  
Fax (86-512) 6661 6868

### ASC – Tianjin

Tel (86-022) 2482 8625  
Fax (86-022) 2482 8600

## Americas

1 (818) 362-6711 or 1-800-AEROMIX

## Europe and Middle East

### ASC – Central Europe

Tel 49 (40) 742 193 10  
Fax 49 (40) 742 139 69

### ASC – Middle East & India

Tel (971) 4 883 9666  
Fax (971) 4 883 9665

### ASC – North Europe

Tel 44 (0) 1388 770222  
Fax 44 (0) 1388 770288

### ASC – South Europe

Tel 33 (0) 235 53 43 71  
Fax 33 (0) 235 53 54 44

All recommendations, statements, and technical data contained herein are based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. User shall rely on his own information and tests to determine suitability of the product for the intended use and assumes all risks and liability resulting from his use of the product. Seller's and manufacturer's sole responsibility shall be to replace that portion of the product of this manufacturer which proves to be defective. Neither seller nor manufacturer shall be liable to the buyer or any third person for any injury, loss, or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements other than those contained in a written agreement signed by an officer of the manufacturer shall not be binding upon the manufacturer or seller.

PRC-DeSoto International, Inc.  
12780 San Fernando Road  
Sylmar, CA 91342  
[www.ppgaerospace.com](http://www.ppgaerospace.com)

Issue Date: 3/19  
Lit: 4152



# SAFETY DATA SHEET



Date of issue/Date of revision 27 February 2020

Version 13

## Section 1. Identification

**Product name** : 02GN070B BASE COMPONENT  
**Product code** : 02GN070B BASE COMPONENT  
**Other means of identification** : Not available.  
**Product type** : Liquid.

### Relevant identified uses of the substance or mixture and uses advised against

**Product use** : Industrial applications.  
**Use of the substance/mixture** : Coating.  
**Uses advised against** : Not applicable.

**Manufacturer** : PPG Aerospace PRC-DeSoto  
12780 San Fernando Road  
Sylmar, CA 91342  
Phone: 818 362 6711

**Emergency telephone number** : (412) 434-4515 (U.S.)  
(514) 645-1320 (Canada)  
01-800-00-21-400 (Mexico)

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 2  
ACUTE TOXICITY (oral) - Category 4  
ACUTE TOXICITY (inhalation) - Category 4  
SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2A  
SKIN SENSITIZATION - Category 1  
GERM CELL MUTAGENICITY - Category 1  
CARCINOGENICITY - Category 1A  
TOXIC TO REPRODUCTION (Fertility) - Category 1B  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (lungs, respiratory tract) - Category 1  
Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 15.9% (Oral), 44.8% (Dermal), 17.7% (Inhalation)

## Section 2. Hazards identification

### GHS label elements

**Hazard pictograms****Signal word**

: Danger

**Hazard statements**

: Highly flammable liquid and vapor.  
Harmful if swallowed or if inhaled.  
Causes serious eye irritation.  
Causes skin irritation.  
May cause an allergic skin reaction.  
May cause genetic defects.  
May cause cancer.  
May damage fertility.  
Suspected of damaging the unborn child.  
May cause respiratory irritation.  
Causes damage to organs through prolonged or repeated exposure. (lungs, respiratory tract)

### Precautionary statements

**Prevention**

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

**Response**

: Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

**Storage**

: Store locked up. Store in a well-ventilated place. Keep cool.

**Disposal**

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Supplemental label elements**

: Sanding and grinding dusts may be harmful if inhaled. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. NTP, IARC and OSHA have classified chromium (+6) compounds as carcinogenic. Avoid contact with skin and clothing. Wash thoroughly after handling. Emits toxic fumes when heated.

**Hazards not otherwise classified**

: Prolonged or repeated contact may dry skin and cause irritation.



## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture  
**Product name** : 02GN070B BASE COMPONENT

Ingredient name	%	CAS number
4-chloro- $\alpha,\alpha,\alpha$ -trifluorotoluene	$\geq 20 - \leq 50$	98-56-6
strontium chromate	$\geq 10 - \leq 20$	7789-06-2
pentan-2-one	$\geq 5.0 - \leq 10$	107-87-9
butan-2-ol	$\geq 5.0 - \leq 9.6$	78-92-2
benzyl alcohol	$\geq 0.10 - \leq 2.6$	100-51-6
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	$\geq 1.0 - \leq 3.5$	25068-38-6
proprietary pigments blend-3BB	$\geq 1.0 - \leq 5.0$	Not available.
4-methylpentan-2-one	$\leq 1.3$	108-10-1
2-piperazin-1-ylethylamine	$\leq 2.0$	140-31-8
bisphenol A	$< 1.0$	80-05-7
4-nonylphenol, branched	$< 1.0$	84852-15-3
barium chromate	$< 1.0$	10294-40-3

SUB codes represent substances without registered CAS Numbers.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

### Description of necessary first aid measures

- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

#### Over-exposure signs/symptoms

## Section 4. First aid measures

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
dryness  
cracking  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.
- Specific hazards arising from the chemical** : Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

## Section 5. Fire-fighting measures

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon oxides  
nitrogen oxides  
halogenated compounds  
carbonyl halides  
metal oxide/oxides
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Special precautions** : Ingestion of product or cured coating may be harmful. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Vapors are heavier than air and may spread along floors. If this material is part of a multiple component system, read the Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Do not store above the following temperature: 35°C (95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
4-chloro- $\alpha,\alpha,\alpha$ -trifluorotoluene	<b>IPEL (PPG).</b> TWA: 25 ppm
strontium chromate	<b>ACGIH TLV (United States, 3/2019).</b> TWA: 0.0005 mg/m <sup>3</sup> , (measured as Cr) 8 hours. <b>OSHA PEL Z2 (United States, 2/2013).</b> CEIL: 1 mg/10m <sup>3</sup> <b>OSHA PEL (United States, 5/2018).</b> TWA: 0.005 mg/m <sup>3</sup> , (as Cr) 8 hours.
pentan-2-one	<b>OSHA PEL (United States, 5/2018).</b>

## Section 8. Exposure controls/personal protection

butan-2-ol	TWA: 700 mg/m <sup>3</sup> 8 hours. TWA: 200 ppm 8 hours. <b>ACGIH TLV (United States, 3/2019).</b> STEL: 150 ppm 15 minutes. <b>ACGIH TLV (United States, 3/2019).</b> TWA: 303 mg/m <sup>3</sup> 8 hours. TWA: 100 ppm 8 hours. <b>OSHA PEL (United States, 5/2018).</b> TWA: 450 mg/m <sup>3</sup> 8 hours. TWA: 150 ppm 8 hours.
benzyl alcohol	<b>IPEL (PPG).</b> TWA: 10 ppm STEL: 50 ppm
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin proprietary pigments blend-3BB	None. <b>ACGIH TLV (United States).</b> TWA: 1 mg/m <sup>3</sup> , (copper) Form: Dusts and mists
4-methylpentan-2-one	<b>ACGIH TLV (United States, 3/2019).</b> STEL: 75 ppm 15 minutes. TWA: 20 ppm 8 hours. <b>OSHA PEL (United States, 5/2018).</b> TWA: 410 mg/m <sup>3</sup> 8 hours. TWA: 100 ppm 8 hours.
2-piperazin-1-ylethylamine bisphenol A	None. <b>IPEL (PPG).</b> STEL: 5 mg/m <sup>3</sup>
4-nonylphenol, branched barium chromate	None. <b>ACGIH TLV (United States, 3/2019).</b> TWA: 0.0002 mg/m <sup>3</sup> , (measured as Cr) 8 hours. Form: Inhalable fraction STEL: 0.0005 mg/m <sup>3</sup> , (measured as Cr) 15 minutes. Form: Inhalable fraction <b>OSHA PEL (United States, 5/2018).</b> TWA: 0.005 mg/m <sup>3</sup> , (as Cr) 8 hours. <b>OSHA PEL Z2 (United States, 2/2013).</b> CEIL: 1 mg/10m <sup>3</sup> <b>OSHA PEL (United States).</b> TWA: 5 mg/m <sup>3</sup>

### Key to abbreviations

A	= Acceptable Maximum Peak	S	= Potential skin absorption
ACGIH	= American Conference of Governmental Industrial Hygienists.	SR	= Respiratory sensitization
C	= Ceiling Limit	SS	= Skin sensitization
F	= Fume	STEL	= Short term Exposure limit values
IPEL	= Internal Permissible Exposure Limit	TD	= Total dust
OSHA	= Occupational Safety and Health Administration.	TLV	= Threshold Limit Value
R	= Respirable	TWA	= Time Weighted Average
Z	= OSHA 29 CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances		

Consult local authorities for acceptable exposure limits.

## Section 8. Exposure controls/personal protection

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Gloves** : butyl rubber
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

## Section 9. Physical and chemical properties

### Appearance

Physical state	: Liquid.
Color	: Green.
Odor	: Not available.
Odor threshold	: Not available.
pH	: Not available.
Melting point	: Not available.
Boiling point	: >37.78°C (>100°F)
Flash point	: Closed cup: 7.78°C (46°F)
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Evaporation rate	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: 1.24
Density ( lbs / gal )	: 10.35
Solubility	: Insoluble in the following materials: cold water.
Partition coefficient: n-octanol/water	: Not available.
Viscosity	: Kinematic (40°C (104°F)): >0.21 cm <sup>2</sup> /s (>21 cSt)
VOC	: 391 g/l
% Solid. (w/w)	: 47.59

## Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: When exposed to high temperatures may produce hazardous decomposition products. Refer to protective measures listed in sections 7 and 8.
Incompatible materials	: Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.
Hazardous decomposition products	: Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
4-chloro- $\alpha,\alpha,\alpha$ -trifluorotoluene	LC50 Inhalation Vapor	Rat	33080 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	>2.7 g/kg	-
	LD50 Oral	Rat	13 g/kg	-
strontium chromate	LC50 Inhalation Dusts and mists	Rat	0.27 mg/l	4 hours
	LD50 Oral	Rat	3118 mg/kg	-
pentan-2-one	LC50 Inhalation Vapor	Rat	25.5 mg/l	4 hours
	LD50 Dermal	Rabbit	6500 mg/kg	-
	LD50 Oral	Rat	1600 mg/kg	-
butan-2-ol	LC50 Inhalation Vapor	Rat	48500 mg/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	2054 mg/kg	-
benzyl alcohol	LC50 Inhalation Dusts and mists	Rat	>4178 mg/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	2000 mg/kg	-
	LD50 Oral	Rat	1.23 g/kg	-
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	LD50 Dermal	Rabbit	>2 g/kg	-
	LD50 Oral	Rat	11.4 g/kg	-
4-methylpentan-2-one	LC50 Inhalation Vapor	Rat	12.3 mg/l	4 hours
	LD50 Oral	Rat	2.08 g/kg	-
2-piperazin-1-ylethylamine	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours
	LD50 Dermal	Rabbit	866 mg/kg	-
	LD50 Oral	Rat	2140 mg/kg	-
bisphenol A	LD50 Dermal	Rabbit	3600 mg/kg	-
	LD50 Oral	Rat	3.25 g/kg	-
4-nonylphenol, branched	LD50 Dermal	Rabbit	2.14 g/kg	-
	LD50 Oral	Rat	1300 mg/kg	-

**Conclusion/Summary** : There are no data available on the mixture itself.

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	Skin - Moderate irritant	Rabbit	-	-	-
	Eyes - Moderate irritant	Rabbit	-	-	-
4-nonylphenol, branched	Skin - Erythema/Eschar	Rabbit	4	-	-

#### Conclusion/Summary

**Skin** : There are no data available on the mixture itself.

**Eyes** : There are no data available on the mixture itself.

**Respiratory** : There are no data available on the mixture itself.

#### Sensitization

Product/ingredient name	Route of exposure	Species	Result
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	skin	Mouse	Sensitizing
	skin	Guinea pig	Sensitizing

#### Conclusion/Summary



## Section 11. Toxicological information

**Skin** : There are no data available on the mixture itself.

**Respiratory** : There are no data available on the mixture itself.

### Mutagenicity

**Conclusion/Summary** : There are no data available on the mixture itself.

### Carcinogenicity

**Conclusion/Summary** : There are no data available on the mixture itself.

### Classification

Product/ingredient name	OSHA	IARC	NTP
strontium chromate	+	1	Known to be a human carcinogen.
proprietary pigments blend-3BB	-	2B	-
4-methylpentan-2-one	-	2B	-
barium chromate	+	1	Known to be a human carcinogen.

Carcinogen Classification code:

IARC: 1, 2A, 2B, 3, 4

NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen

OSHA: +

Not listed/not regulated: -

### Reproductive toxicity

**Conclusion/Summary** : There are no data available on the mixture itself.

### Teratogenicity

**Conclusion/Summary** : There are no data available on the mixture itself.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
4-chloro- $\alpha,\alpha,\alpha$ -trifluorotoluene	Category 3	Not applicable.	Respiratory tract irritation
strontium chromate	Category 3	Not applicable.	Respiratory tract irritation
pentan-2-one	Category 3	Not applicable.	Narcotic effects
	Category 3	Not applicable.	Respiratory tract irritation
butan-2-ol	Category 3	Not applicable.	Narcotic effects
	Category 3	Not applicable.	Respiratory tract irritation
4-methylpentan-2-one	Category 3	Not applicable.	Respiratory tract irritation
bisphenol A	Category 3	Not applicable.	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

## Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
proprietary pigments blend-3BB 2-piperazin-1-ylethylamine barium chromate	Category 2 Category 1 Category 1	Inhalation Inhalation Not determined	lungs respiratory tract kidneys and respiratory tract

**Target organs** : Contains material which causes damage to the following organs: blood, kidneys, liver, heart, brain, upper respiratory tract, central nervous system (CNS).  
Contains material which may cause damage to the following organs: lungs, cardiovascular system, immune system, skin, eye, lens or cornea.

### Aspiration hazard

Not available.

### Information on the likely routes of exposure

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
dryness  
cracking  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Delayed and immediate effects and also chronic effects from short and long term exposure

## Section 11. Toxicological information

**Conclusion/Summary** : There are no data available on the mixture itself. Can form nitrosamines in the presence of certain organic materials and if heated. Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. If splashed in the eyes, the liquid may cause irritation and reversible damage. Ingestion may cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

### Short term exposure

**Potential immediate effects** : There are no data available on the mixture itself.

**Potential delayed effects** : There are no data available on the mixture itself.

### Long term exposure

**Potential immediate effects** : There are no data available on the mixture itself.

**Potential delayed effects** : There are no data available on the mixture itself.

### Potential chronic health effects

**General** : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : May cause genetic defects.

**Teratogenicity** : Suspected of damaging the unborn child.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : May damage fertility.

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
02GN070B BASE COMPONENT	1666.4	3749.4	N/A	892.9	1.2
4-chloro- $\alpha,\alpha,\alpha$ -trifluorotoluene	13000	2500	N/A	33.08	N/A
strontium chromate	500	N/A	N/A	N/A	0.27
pentan-2-one	1600	6500	N/A	25.5	N/A
butan-2-ol	2054	N/A	N/A	48.5	N/A
benzyl alcohol	1230	2000	N/A	N/A	1.5
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	11400	2500	N/A	N/A	N/A
4-methylpentan-2-one	2080	N/A	N/A	12.3	1.5
2-piperazin-1-ylethylamine	2140	866	N/A	N/A	N/A

**Section 11. Toxicological information**

bisphenol A	3250	3600	N/A	N/A	N/A
4-nonylphenol, branched	1300	2140	N/A	N/A	N/A
barium chromate	500	300	N/A	11	N/A

**Section 12. Ecological information****Toxicity**

Product/ingredient name	Result	Species	Exposure
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	Chronic NOEC 0.3 mg/l	Daphnia	21 days
2-piperazin-1-ylethylamine	Acute EC50 58 mg/l	Daphnia	48 hours
bisphenol A	Chronic EC10 3.47 mg/l Marine water	Algae - Cochlodinium polykrikoides - Exponential growth phase	72 hours
	Chronic NOEC 0.86 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
4-nonylphenol, branched	Acute LC50 0.221 mg/l	Fish	96 hours

**Persistence and degradability**

Product/ingredient name	Test	Result	Dose	Inoculum
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	OECD 301F	5 % - 28 days	-	-
2-piperazin-1-ylethylamine	OECD 301F	0 % - Not readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
benzyl alcohol	-	-	Readily
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	-	-	Not readily
2-piperazin-1-ylethylamine	-	-	Not readily

**Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
pentan-2-one	0.91	-	low
butan-2-ol	0.61	-	low
benzyl alcohol	1.1	-	low
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	3	31	low
4-methylpentan-2-one	1.31	-	low
bisphenol A	3.32	43.65	low
4-nonylphenol, branched	-	251.19	low

**Mobility in soil**

Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

## 14. Transport information

	DOT	IMDG	IATA
<b>UN number</b>	UN1263	UN1263	UN1263
<b>UN proper shipping name</b>	PAINT	PAINT	PAINT
<b>Transport hazard class (es)</b>	3	3	3
<b>Packing group</b>	II	II	II
<b>Environmental hazards</b>	No.	Yes.	Yes. The environmentally hazardous substance mark is not required.
<b>Marine pollutant substances</b>	Not applicable.	(strontium chromate, reaction product: bisphenol-A-(epichlorhydrin); epoxy resin )	Not applicable.
<b>Product RQ (lbs)</b>	54.546	Not applicable.	Not applicable.
<b>RQ substances</b>	(strontium chromate)	Not applicable.	Not applicable.

### Additional information

- DOT** : Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.
- IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## 14. Transport information

## Section 15. Regulatory information

### United States

**United States inventory (TSCA 8b)** : All components are listed or exempted.

**United States - TSCA 12(b) - Chemical export notification:**

strontium chromate

4-chloro- $\alpha,\alpha,\alpha$ -trifluorotoluene

Annual notification

One time notification

**United States - TSCA 5(a)2 - Final significant new use rules:**

4-chloro- $\alpha,\alpha,\alpha$ -trifluorotoluene

4-nonylphenol, branched

Listed

40 CFR 799.5089

Listed

76 FR 59186, Oct  
1, 2014

### SARA 302/304

**SARA 304 RQ** : Not applicable.

### Composition/information on ingredients

No products were found.

### SARA 311/312

#### Classification

: FLAMMABLE LIQUIDS - Category 2  
ACUTE TOXICITY (oral) - Category 4  
ACUTE TOXICITY (inhalation) - Category 4  
SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2A  
SKIN SENSITIZATION - Category 1  
GERM CELL MUTAGENICITY - Category 1  
CARCINOGENICITY - Category 1A  
TOXIC TO REPRODUCTION (Fertility) - Category 1B  
TOXIC TO REPRODUCTION (Unborn child) - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (lungs, respiratory tract) - Category 1  
HNOC - Defatting irritant

### Composition/information on ingredients

Name	%	Classification
4-chloro- $\alpha,\alpha,\alpha$ -trifluorotoluene	$\geq 20 - \leq 50$	FLAMMABLE LIQUIDS - Category 3 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
strontium chromate	$\geq 10 - \leq 20$	HNOC - Defatting irritant ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 2 SKIN SENSITIZATION - Category 1B GERM CELL MUTAGENICITY - Category 2 CARCINOGENICITY - Category 1B TOXIC TO REPRODUCTION (Fertility) - Category 2 TOXIC TO REPRODUCTION (Unborn child) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)

## Section 15. Regulatory information

pentan-2-one	$\geq 5.0 - \leq 10$	(Respiratory tract irritation) - Category 3 FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 HNOC - Defatting irritant
butan-2-ol	$\geq 5.0 - \leq 9.6$	FLAMMABLE LIQUIDS - Category 3 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 HNOC - Defatting irritant
benzyl alcohol	$\geq 0.10 - \leq 2.6$	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin	$\geq 1.0 - \leq 3.5$	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1B
proprietary pigments blend-3BB	$\geq 1.0 - \leq 5.0$	COMBUSTIBLE DUSTS CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (lungs) (inhalation) - Category 2
4-methylpentan-2-one	$\leq 1.3$	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 HNOC - Defatting irritant
2-piperazin-1-ylethylamine	$\leq 2.0$	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (dermal) - Category 3 SKIN CORROSION - Category 1 SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1B TOXIC TO REPRODUCTION (Fertility) (oral) - Category 2 TOXIC TO REPRODUCTION (Unborn child) (oral) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) (inhalation) - Category 1
bisphenol A	$< 1.0$	COMBUSTIBLE DUSTS SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1B TOXIC TO REPRODUCTION (Fertility) - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
4-nonylphenol, branched	$< 1.0$	ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1 SERIOUS EYE DAMAGE - Category 1 TOXIC TO REPRODUCTION (Fertility) - Category 2

**Section 15. Regulatory information**


barium chromate	<1.0	TOXIC TO REPRODUCTION (Unborn child) - Category 2 HNO3 - Corrosive to digestive tract ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 4 RESPIRATORY SENSITIZATION - Category 1B SKIN SENSITIZATION - Category 1B GERM CELL MUTAGENICITY - Category 1B CARCINOGENICITY - Category 1A TOXIC TO REPRODUCTION (Fertility) - Category 2 TOXIC TO REPRODUCTION (Unborn child) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (kidneys, respiratory tract) - Category 1 HNO3 - Avoid contact with organic materials.
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**SARA 313**

<b>Supplier notification</b>	<b>Chemical name</b>	<b>CAS number</b>	<b>Concentration</b>
	strontium chromate	7789-06-2	10 - 30
	butan-2-ol	78-92-2	5 - 10
	4-methylpentan-2-one	108-10-1	0.5 - 1.5
	barium chromate	10294-40-3	0.1 - 1

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

**California Prop. 65**

 **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

**Section 16. Other information****Hazardous Material Information System (U.S.A.)**

**Health :** 4 \* **Flammability :** 3 **Physical hazards :** 0

(\* ) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on MSDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

**National Fire Protection Association (U.S.A.)**

**Health :** 4 **Flammability :** 3 **Instability :** 0

**Date of previous issue :** 1/14/2020

**Organization that prepared the MSDS :** EHS

**Key to abbreviations**

: ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container  
 IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973



## Section 16. Other information

as modified by the Protocol of 1978. ("Marpol" = marine pollution)

N/A = Not available

SGG = Segregation Group

UN = United Nations

✔ Indicates information that has changed from previously issued version.

### Disclaimer

*The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.*

# SAFETY DATA SHEET



Date of issue/Date of revision 14 October 2019

Version 7

## Section 1. Identification

**Product name** : 02GN070BCAT CURING SOLUTION  
**Product code** : 02GN070BCAT CURING SOLUTION  
**Other means of identification** : Not available.  
**Product type** : Liquid.

### Relevant identified uses of the substance or mixture and uses advised against

**Product use** : Industrial applications.  
**Use of the substance/mixture** : Catalyst.  
**Uses advised against** : Not applicable.

**Manufacturer** : PPG Aerospace PRC-DeSoto  
12780 San Fernando Road  
Sylmar, CA 91342  
Phone: 818 362 6711

**Emergency telephone number** : (412) 434-4515 (U.S.)  
(514) 645-1320 (Canada)  
01-800-00-21-400 (Mexico)

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 2  
ACUTE TOXICITY (inhalation) - Category 4  
SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2A  
SKIN SENSITIZATION - Category 1  
CARCINOGENICITY - Category 2  
Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 6.9% (Oral), 8.1% (Dermal), 80.6% (Inhalation)

### GHS label elements

**Hazard pictograms** :



**Signal word** : Danger

## Section 2. Hazards identification

**Hazard statements** : Highly flammable liquid and vapor.  
Harmful if inhaled.  
Causes serious eye irritation.  
Causes skin irritation.  
May cause an allergic skin reaction.  
Suspected of causing cancer.

### Precautionary statements

**Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

**Response** : IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

**Storage** : Store locked up. Store in a well-ventilated place. Keep cool.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Supplemental label elements** : Trimethoxysilanes are capable of forming methanol if hydrolyzed or ingested. If swallowed, methanol may be harmful or fatal or cause blindness. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing. Wash thoroughly after handling. Emits toxic fumes when heated.

**Hazards not otherwise classified** : Prolonged or repeated contact may dry skin and cause irritation.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

**Product name** : 02GN070BCAT CURING SOLUTION

Ingredient name	%	CAS number
Epoxy resin (MW ≤ 700)	≥50 - ≤75	25068-38-6
pentan-2-one	≥10 - ≤13	107-87-9
heptan-2-one	≥1.0 - ≤6.6	110-43-0
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	≥1.0 - ≤4.9	25068-38-6
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	≥0.10 - ≤2.6	2530-83-8
4-methylpentan-2-one	≤1.5	108-10-1

SUB codes represent substances without registered CAS Numbers.

## Section 3. Composition/information on ingredients

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

### Description of necessary first aid measures

- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled.
- Skin contact** : Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
dryness  
cracking
- Ingestion** : No specific data.

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

## Section 4. First aid measures

- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon oxides  
halogenated compounds  
metal oxide/oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

## Section 6. Accidental release measures

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Special precautions** : Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Vapors are heavier than air and may spread along floors. If this material is part of a multiple component system, read the Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

## Section 7. Handling and storage

**Conditions for safe storage, including any incompatibilities** : Do not store above the following temperature: 50°C (122°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Epoxy resin (MW ≤ 700)	None.
pentan-2-one	<b>OSHA PEL (United States, 5/2018).</b> TWA: 700 mg/m <sup>3</sup> 8 hours. TWA: 200 ppm 8 hours.
heptan-2-one	<b>ACGIH TLV (United States, 3/2018).</b> STEL: 150 ppm 15 minutes. <b>ACGIH TLV (United States, 3/2018).</b> TWA: 233 mg/m <sup>3</sup> 8 hours. TWA: 50 ppm 8 hours.
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin [3-(2,3-epoxypropoxy)propyl]trimethoxysilane	<b>OSHA PEL (United States, 5/2018).</b> TWA: 465 mg/m <sup>3</sup> 8 hours. TWA: 100 ppm 8 hours.
4-methylpentan-2-one	None. None. <b>ACGIH TLV (United States, 3/2018).</b> STEL: 75 ppm 15 minutes. TWA: 20 ppm 8 hours. <b>OSHA PEL (United States, 5/2018).</b> TWA: 410 mg/m <sup>3</sup> 8 hours. TWA: 100 ppm 8 hours.

#### Key to abbreviations

A	= Acceptable Maximum Peak	S	= Potential skin absorption
ACGIH	= American Conference of Governmental Industrial Hygienists.	SR	= Respiratory sensitization
C	= Ceiling Limit	SS	= Skin sensitization
F	= Fume	STEL	= Short term Exposure limit values
IPEL	= Internal Permissible Exposure Limit	TD	= Total dust
OSHA	= Occupational Safety and Health Administration.	TLV	= Threshold Limit Value
R	= Respirable	TWA	= Time Weighted Average
Z	= OSHA 29 CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances		

### Consult local authorities for acceptable exposure limits.

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

## Section 8. Exposure controls/personal protection

- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Gloves** : butyl rubber
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.



## Section 9. Physical and chemical properties

<b>Boiling point</b>	: >37.78°C (>100°F)
<b>Flash point</b>	: Closed cup: 7.78°C (46°F)
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Flammability (solid, gas)</b>	: Not available.
<b>Lower and upper explosive (flammable) limits</b>	: Not available.
<b>Evaporation rate</b>	: Not available.
<b>Vapor pressure</b>	: Not available.
<b>Vapor density</b>	: Not available.
<b>Relative density</b>	: 1.08
<b>Density ( lbs / gal )</b>	: 9.01
<b>Solubility</b>	: Insoluble in the following materials: cold water.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Viscosity</b>	: Kinematic (40°C (104°F)): >0.21 cm <sup>2</sup> /s (>21 cSt)
<b>VOC</b>	: 190 g/l
<b>% Solid. (w/w)</b>	: 81.31

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: When exposed to high temperatures may produce hazardous decomposition products. Refer to protective measures listed in sections 7 and 8.
<b>Incompatible materials</b>	: Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.
<b>Hazardous decomposition products</b>	: Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

## Section 11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
Epoxy resin (MW ≤ 700)	LD50 Dermal	Rabbit	>2 g/kg	-
	LD50 Oral	Rat	>2 g/kg	-
pentan-2-one	LC50 Inhalation Vapor	Rat	25.5 mg/l	4 hours
	LD50 Dermal	Rabbit	6500 mg/kg	-
heptan-2-one	LD50 Oral	Rat	1600 mg/kg	-
	LC50 Inhalation Vapor	Rat	16.7 mg/l	4 hours
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	LD50 Dermal	Rabbit	10.206 g/kg	-
	LD50 Oral	Rat	1.6 g/kg	-
	LD50 Dermal	Rabbit	>2 g/kg	-
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	LD50 Oral	Rat	11.4 g/kg	-
	LC50 Inhalation Dusts and mists	Rat	>5300 mg/m <sup>3</sup>	4 hours
4-methylpentan-2-one	LD50 Dermal	Rabbit	4.3 g/kg	-
	LD50 Oral	Rat	7.01 g/kg	-
	LC50 Inhalation Vapor	Rat	12.3 mg/l	4 hours
	LD50 Oral	Rat	2.08 g/kg	-

**Conclusion/Summary** : There are no data available on the mixture itself.

**Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
Epoxy resin (MW ≤ 700)	Skin - Mild irritant	Rabbit	-	-	-
	Eyes - Mild irritant	Rabbit	-	-	-
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	Skin - Moderate irritant	Rabbit	-	-	-
	Eyes - Moderate irritant	Rabbit	-	-	-

**Conclusion/Summary**

**Skin** : There are no data available on the mixture itself.

**Eyes** : There are no data available on the mixture itself.

**Respiratory** : There are no data available on the mixture itself.

**Sensitization**

Product/ingredient name	Route of exposure	Species	Result
Epoxy resin (MW ≤ 700) reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	skin	Mouse	Sensitizing
	skin	Mouse	Sensitizing

**Conclusion/Summary**

**Skin** : There are no data available on the mixture itself.

**Respiratory** : There are no data available on the mixture itself.

**Mutagenicity**

**Conclusion/Summary** : There are no data available on the mixture itself.

**Carcinogenicity**

**Conclusion/Summary** : There are no data available on the mixture itself.

**Classification**

## Section 11. Toxicological information

Product/ingredient name	OSHA	IARC	NTP
4-methylpentan-2-one	-	2B	-

Carcinogen Classification code:

IARC: 1, 2A, 2B, 3, 4

NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen

OSHA: +

Not listed/not regulated: -

### Reproductive toxicity

**Conclusion/Summary** : There are no data available on the mixture itself.

### Teratogenicity

**Conclusion/Summary** : There are no data available on the mixture itself.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
pentan-2-one	Category 3 Category 3	Not applicable. Not applicable.	Narcotic effects Respiratory tract irritation
heptan-2-one 4-methylpentan-2-one	Category 3 Category 3	Not applicable. Not applicable.	Narcotic effects Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Not available.

### Target organs

: Contains material which causes damage to the following organs: brain, skin.  
Contains material which may cause damage to the following organs: kidneys, lungs, liver, peripheral nervous system, upper respiratory tract, central nervous system (CNS), eye, lens or cornea.

### Aspiration hazard

Not available.

### Information on the likely routes of exposure

#### Potential acute health effects

**Eye contact** : Causes serious eye irritation.

**Inhalation** : Harmful if inhaled.

**Skin contact** : Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.

**Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

**Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

**Inhalation** : No specific data.

## Section 11. Toxicological information

**Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
dryness  
cracking

**Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

**Conclusion/Summary** : There are no data available on the mixture itself. Trimethoxysilanes are capable of forming methanol if hydrolyzed or ingested. If swallowed, methanol may be harmful or fatal or cause blindness. Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. If splashed in the eyes, the liquid may cause irritation and reversible damage. Ingestion may cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

### Short term exposure

**Potential immediate effects** : There are no data available on the mixture itself.

**Potential delayed effects** : There are no data available on the mixture itself.

### Long term exposure

**Potential immediate effects** : There are no data available on the mixture itself.

**Potential delayed effects** : There are no data available on the mixture itself.

### Potential chronic health effects

**General** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

## Section 11. Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
02GN070BCAT CURING SOLUTION	2549.5	3347.7	N/A	45.5	4.4
Epoxy resin (MW ≤ 700)	2500	2500	N/A	N/A	N/A
pentan-2-one	1600	6500	N/A	25.5	N/A
heptan-2-one	1600	10206	N/A	16.7	1.5
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	11400	2500	N/A	N/A	N/A
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	7010	4300	N/A	N/A	N/A
4-methylpentan-2-one	2080	N/A	N/A	12.3	1.5

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
Epoxy resin (MW ≤ 700)	Acute LC50 1.8 mg/l Chronic NOEC 0.3 mg/l	Daphnia Daphnia	48 hours 21 days
heptan-2-one	Acute LC50 131 mg/l	Fish	96 hours
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	Chronic NOEC 0.3 mg/l	Daphnia	21 days

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Epoxy resin (MW ≤ 700)	OECD 301F	5 % - 28 days	-	-
heptan-2-one	OECD 310	69 % - Readily - 28 days	-	-
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	OECD 301F	5 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Epoxy resin (MW ≤ 700)	-	-	Not readily
heptan-2-one	-	-	Readily
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	-	-	Not readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Epoxy resin (MW ≤ 700)	3	31	low
pentan-2-one	0.91	-	low
heptan-2-one	1.98	-	low
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	3	31	low
4-methylpentan-2-one	1.31	-	low

## Section 12. Ecological information

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

## 14. Transport information

	DOT	IMDG	IATA
UN number	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3
Packing group	II	II	II
Environmental hazards	No.	Yes.	Yes. The environmentally hazardous substance mark is not required.
Marine pollutant substances	Not applicable.	☑ Epoxy resin (MW ≤ 700), reaction product: bisphenol-A-(epichlorhydrin); epoxy resin )	Not applicable.

### Additional information

**DOT** : None identified.

**IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

**IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.

## 14. Transport information

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## Section 15. Regulatory information

### United States

**United States inventory (TSCA 8b)** : All components are listed or exempted.

#### SARA 302/304

**SARA 304 RQ** : Not applicable.

#### Composition/information on ingredients

No products were found.

#### SARA 311/312

**Classification** : FLAMMABLE LIQUIDS - Category 2  
ACUTE TOXICITY (inhalation) - Category 4  
SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2A  
SKIN SENSITIZATION - Category 1  
CARCINOGENICITY - Category 2  
HNOC - Defatting irritant

#### Composition/information on ingredients

Name	%	Classification
Epoxy resin (MW ≤ 700)	≥50 - ≤75	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A
pentan-2-one	≥10 - ≤13	SKIN SENSITIZATION - Category 1B FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (oral) - Category 4 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 HNOC - Defatting irritant
heptan-2-one	≥1.0 - ≤6.6	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 HNOC - Defatting irritant
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin	≥1.0 - ≤4.9	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1B
[3-(2,3-epoxypropoxy)propyl] trimethoxysilane	≥0.10 - ≤2.6	SERIOUS EYE DAMAGE - Category 1
4-methylpentan-2-one	≤1.5	FLAMMABLE LIQUIDS - Category 2 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A

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## Section 15. Regulatory information

CARCINOGENICITY - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)  
(Respiratory tract irritation) - Category 3  
HNOC - Defatting irritant

### SARA 313

	<u>Chemical name</u>	<u>CAS number</u>	<u>Concentration</u>
Supplier notification	: 4-methylpentan-2-one	108-10-1	0.5 - 1.5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### California Prop. 65

 **WARNING:** Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

Health : 2 \* Flammability : 3 Physical hazards : 0

(\* ) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on MSDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

### National Fire Protection Association (U.S.A.)

Health : 2 Flammability : 3 Instability : 0

Date of previous issue : 4/12/2019

Organization that prepared the MSDS : EHS

### Key to abbreviations

: ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
N/A = Not available  
SGG = Segregation Group  
UN = United Nations

 Indicates information that has changed from previously issued version.

### Disclaimer

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