

SAFETY DATA SHEET

P60-A BASE PALE GREEN RAL 6021

Section 1. Identification

GHS product identifier : P60-A BASE PALE GREEN RAL 6021
SDS code : 21060500B

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

Identified uses
Professional use Industrial use
Uses advised against
All other uses

Product use : Two component coating for interior use.

Supplier's details

MAPAERO SAS
10, Avenue de la Rijole CS30098
09103 PAMIERS Cedex
France

Emergency telephone number (with hours of operation) : +33 (0)5 34 01 34 01
+33 (0)5 61 60 23 30

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 3
ACUTE TOXICITY (oral) - Category 4
ACUTE TOXICITY (inhalation) - Category 4
SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
RESPIRATORY SENSITIZATION - Category 1
SKIN SENSITIZATION - Category 1
GERM CELL MUTAGENICITY - Category 1
CARCINOGENICITY - Category 1A
TOXIC TO REPRODUCTION - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

GHS label elements

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Section 2. Hazards identification

Hazard pictograms



Signal word

: Danger

Hazard statements

: Flammable liquid and vapor.
 Harmful if swallowed or if inhaled.
 Causes skin irritation.
 May cause an allergic skin reaction.
 Causes serious eye irritation.
 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 May cause respiratory irritation.
 May cause drowsiness or dizziness.
 May cause genetic defects.
 May cause cancer.
 Suspected of damaging fertility or the unborn child.

Precautionary statements

Prevention

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Wear respiratory protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only outdoors or in a well-ventilated area. Avoid breathing 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

: If exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. If experiencing respiratory symptoms: Call a POISON CENTER or doctor. IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or 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 advice or attention.

Storage

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

Disposal

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

Hazards not otherwise classified

: None known.

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Ingredient name	%	CAS number
butan-2-ol	≥25 - ≤50	78-92-2
strontium chromate	≥10 - ≤20	7789-06-2
titanium dioxide	≥10 - ≤25	13463-67-7
Talc , not containing asbestiform fibres	≤10	14807-96-6
Amines, polyethylenepoly-, triethylenetetramine fraction	<3	90640-67-8
Chlorite-group minerals	≤3	1318-59-8

Section 3. Composition/information on ingredients

barium chromate	<1	10294-40-3
carbon black, respirable powder	≤0.3	1333-86-4
Crystalline Silica, respirable part in whole product, <10µm	≤0.3	14808-60-7

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 and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses if easy to do. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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. In the event of any complaints or symptoms, avoid further exposure.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed. Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

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

Section 4. First aid measures

- Inhalation** : Adverse symptoms may include the following:
 respiratory tract irritation
 coughing
 wheezing and breathing difficulties
 asthma
 nausea or vomiting
 headache
 drowsiness/fatigue
 dizziness/vertigo
 unconsciousness
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
 irritation
 redness
 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, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

- Specific hazards arising from the chemical** : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
 carbon dioxide
 carbon monoxide
 nitrogen 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.

Section 5. Fire-fighting measures

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 or asthma, allergies or chronic or recurrent respiratory disease 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 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.
- 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 : 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. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
butan-2-ol	ACGIH TLV (United States, 1/2022). TWA: 303 mg/m ³ 8 hours. TWA: 100 ppm 8 hours. NIOSH REL (United States, 10/2020). STEL: 455 mg/m ³ 15 minutes. STEL: 150 ppm 15 minutes. TWA: 305 mg/m ³ 10 hours. TWA: 100 ppm 10 hours. OSHA PEL (United States, 5/2018). TWA: 450 mg/m ³ 8 hours. TWA: 150 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 305 mg/m ³ 8 hours. TWA: 100 ppm 8 hours.
strontium chromate	ACGIH TLV (United States, 1/2022). Notes: measured as Cr TWA: 0.0005 mg/m ³ , (measured as Cr) 8 hours. OSHA PEL 1989 (United States, 3/1989). [Chromic acid and chromates (as CrO₃)] Notes: as CrO₃ CEIL: 0.1 mg/m ³ , (as CrO ₃) OSHA PEL Z2 (United States, 2/2013). [Chromic acid and chromates] CEIL: 1 mg/10m ³ OSHA PEL (United States, 5/2018). [Chromium (VI) compounds] TWA: 0.005 mg/m ³ , (as Cr) 8 hours. NIOSH REL (United States, 10/2020). [chromic acid and chromates] TWA: 0.0002 mg/m ³ , () 8 hours.
titanium dioxide	OSHA PEL (United States, 5/2018). TWA: 15 mg/m ³ 8 hours. Form: Total dust OSHA PEL 1989 (United States, 3/1989). TWA: 10 mg/m ³ 8 hours. Form: Total dust ACGIH TLV (United States, 1/2022). TWA: 2.5 mg/m ³ 8 hours. Form: respirable fraction, finescale particles None. None. None.
Talc , not containing asbestiform fibres Amines, polyethylenepoly-, triethylenetetramine fraction Chlorite-group minerals barium chromate	ACGIH TLV (United States, 1/2022). [inorganic chromium VI compounds] TWA: 0.0002 mg/m ³ , (measured as Cr) 8 hours. Form: Inhalable fraction

Section 8. Exposure controls/personal protection

carbon black, respirable powder

STEL: 0.0005 mg/m³, (measured as Cr) 15 minutes. Form: Inhalable fraction

OSHA PEL Z2 (United States, 2/2013).
[Chromic acid and chromates]

CEIL: 1 mg/10m³

OSHA PEL (United States, 5/2018).

[Chromium (VI) compounds]

TWA: 0.005 mg/m³, (as Cr) 8 hours.

NIOSH REL (United States, 10/2020).

[chromic acid and chromates]

TWA: 0.0002 mg/m³, () 8 hours.

OSHA PEL 1989 (United States, 3/1989).

[Chromic acid and chromates (as CrO₃)]

Notes: as CrO₃

CEIL: 0.1 mg/m³, (as CrO₃)

ACGIH TLV (United States, 1/2022). Notes:
Substance identified by other sources as a
suspected or confirmed human carcinogen.
1996 Adoption Refers to Appendix A --
Carcinogens.

TWA: 3 mg/m³ 8 hours. Form: Inhalable fraction

NIOSH REL (United States, 10/2020).

Notes: See Appendix A - NIOSH Potential
Occupational Carcinogen See Appendix C -
Supplemental Exposure Limits

TWA: 3.5 mg/m³ 10 hours.

NIOSH REL (United States, 10/2020).

Notes: Carbon black in presence of
polycyclic aromatic hydrocarbons (PAHs)
See Appendix A - NIOSH Potential
Occupational Carcinogen See Appendix C -
Supplemental Exposure Limits

TWA: 0.1 mg of PAHs/cm³ 10 hours.

OSHA PEL (United States, 5/2018).

TWA: 3.5 mg/m³ 8 hours.

OSHA PEL 1989 (United States, 3/1989).

TWA: 3.5 mg/m³ 8 hours.

OSHA PEL Z3 (United States, 6/2016).

TWA: 250 mppcf / (%SiO₂+5) 8 hours. Form:
Respirable

TWA: 10 mg/m³ / (%SiO₂+2) 8 hours. Form:
Respirable

OSHA PEL (United States, 5/2018). [Silica,
crystalline]

TWA: 50 µg/m³ 8 hours. Form: Respirable dust

OSHA PEL 1989 (United States, 3/1989).

Notes: as quartz

TWA: 0.1 mg/m³, (as quartz) 8 hours. Form:
Respirable dust

ACGIH TLV (United States, 1/2022). [Silica,
crystalline] Notes: Respirable fraction; see
Appendix C, paragraph C.

TWA: 0.025 mg/m³ 8 hours. Form:
Respirable fraction

NIOSH REL (United States, 10/2020).

[SILICA, CRYSTALLINE] Notes: See
Appendix A - NIOSH Potential
Occupational Carcinogen

Crystalline Silica, respirable part in whole product, <10µm

Section 8. Exposure controls/personal protection

TWA: 0.05 mg/m³ 10 hours. Form: respirable dust

- 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** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of 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.
- 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- The recommended mask and the minimum required protection factors depend on the specific activity, and are described in the paragraph "Exposure Scenario information" below.
- Exposure Scenario information** : The following Operational Conditions and Risk Management Measures are to be respected:
- During preparation and/or mixing of the product, loading of paint to the application equipment, cleaning and/or maintenance of application equipment:
- Wear chemical resistant gloves with a minimum protection factor of 90%
- During manual spraying of the product:
- Duration of treatment/exposure : maximum 6h/shift

Section 8. Exposure controls/personal protection

- Use of a walk-in spray booth with negative pressure
- A Respiratory Protection Device (RPD) with APF 1000 or higher must be used, the Work Related Protection factor (WPF) has to be verified to exceed 1000 for each worker whichever RPD is used.
- Use Chemical Resistant Gloves (tested to EN374) in combination with intensive management supervision controls and training (efficacy 99%)

During manual stripping of coatings with abrasive techniques (e.g. sanding, deburring) and dust removal (cleaning of sanding/deburring area):

- Duration of treatment/exposure maximum 0.25h/shift
- Integrated LEV, humidity used to reduce dust (efficacy assumed to be 70%)
- A Respiratory Protection Device (RPD) with APF 40 or higher is used

During waste management of stripped paint or sealant:

- Duration of treatment/exposure max 1 hour/shift
- LEV with an efficiency of 78% or higher plus vacuum cleaner (efficiency 80% or higher)
- A Respiratory Protection Device (RPD) with APF 40 or higher is used

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state	: Liquid.
Color	: Green.
Odor	: Characteristic.
Odor threshold	: Not available.
pH	: Not available. [DIN EN 1262]
Melting point/freezing point	: Not available.
Boiling point, initial boiling point, and boiling range	: Not available.
Flash point	: Closed cup: 25°C (77°F) [Pensky-Martens]
Flammability	: Not available.
Lower and upper explosion limit	: Greatest known range: Lower: 1.7% Upper: 9% (butan-2-ol)
Vapor pressure	:

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
butan-2-ol	12.75	1.7	DIN EN 13016-2			
butan-1-ol	<7.5	<1				
aluminium hydroxide	<0.075	<0.01				

Relative vapor density	: Not available.
Density	: 1.534 g/cm ³ [DIN EN ISO 2811-1]
Solubility(ies)	:

Media	Result
cold water	Not soluble [OESO (TG 105)]

Partition coefficient: n-octanol/water	: Not applicable.
Auto-ignition temperature	:

Section 9. Physical and chemical properties and safety characteristics

Ingredient name	°C	°F	Method
8,18-dichloro-5,15-diethyl-5,15-dihydrodiindolo[3,2-b:3',2'-m]triphenodioxazine	250	482	
butan-1-ol	355	671	EU A.15
29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32 copper	356	672.8	EU A.16

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): 359 mm²/s (359 cSt) [DIN EN ISO 3219]
Kinematic (40°C (104°F)): 101 mm²/s (101 cSt) [DIN EN ISO 3219]

Particle characteristics

Median particle size : Not applicable.

Percentage of particles with aerodynamic diameter ≤ 10 µm : 0

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 : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
butan-2-ol	LC50 Inhalation Gas.	Rat	8000 ppm	4 hours
	LC50 Inhalation Vapor	Rat	48500 mg/m ³	4 hours
	LD50 Intraperitoneal	Guinea pig	1067 mg/kg	-
	LD50 Intraperitoneal	Mouse	771 mg/kg	-
	LD50 Intraperitoneal	Rabbit	277 mg/kg	-
	LD50 Intraperitoneal	Rat	1193 mg/kg	-
	LD50 Intravenous	Mouse	764 mg/kg	-
	LD50 Intravenous	Rat	138 mg/kg	-
	LD50 Oral	Rabbit	4893 mg/kg	-
	LD50 Oral	Rabbit	4890 mg/kg	-
	LD50 Oral	Rat	2193 mg/kg	-
	LD50 Oral	Rat	2054 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	0.27 mg/l	4 hours
	LD50 Intratracheal	Rat	16.6 mg/kg	-
strontium chromate	LD50 Oral	Rat	3118 mg/kg	-
	LD50 Oral	Rat	>15400 mg/kg	-
carbon black, respirable	LD50 Oral	Rat	>15400 mg/kg	-

Section 11. Toxicological information

powder				
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Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
butan-2-ol	Eyes - Severe irritant	Rabbit	-	0.1 MI	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
strontium chromate	+	1	Known to be a human carcinogen.
titanium dioxide	-	2B	-
Talc , not containing asbestiform fibres	-	3	-
barium chromate	+	1	Known to be a human carcinogen.
carbon black, respirable powder	-	2B	-
Crystalline Silica, respirable part in whole product, <10µm	-	1	Known to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
butan-2-ol	Category 3	-	Respiratory tract irritation
strontium chromate	Category 3 Category 3	-	Narcotic effects Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
barium chromate	Category 1	-	kidneys, respiratory tract
Crystalline Silica, respirable part in whole product, <10µm	Category 1	inhalation	lungs

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Section 11. Toxicological information

Inhalation	: Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin contact	: Causes skin irritation. May cause an allergic skin reaction.
Ingestion	: Harmful if swallowed. Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing wheezing and breathing difficulties asthma nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness reduced fetal weight increase in fetal deaths skeletal malformations
Skin contact	: Adverse symptoms may include the following: irritation redness 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

Short term exposure

Potential immediate effects	: Not available.
Potential delayed effects	: Not available.

Long term exposure

Potential immediate effects	: Not available.
Potential delayed effects	: Not available.

Potential chronic health effects

Not available.

General	: 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.
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

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Section 11. Toxicological information

N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
butan-2-ol	Acute EC50 4227 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
titanium dioxide	Acute LC50 3670000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 19.3 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute EC50 27.8 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute EC50 35.306 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 3 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 13.4 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 11 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 3.6 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 15.9 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 6.5 mg/l Fresh water	Daphnia - Daphnia pulex - Neonate	48 hours
	Acute LC50 13 mg/l Fresh water	Daphnia - Daphnia pulex - Neonate	48 hours
carbon black, respirable powder	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
	Acute LC50 >1000 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 37.563 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 61.547 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
butan-2-ol	0.61	-	low
Amines, polyethylenepoly-, triethylenetetramine fraction	-2.65	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

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.

Section 14. Transport information

The information provided in section 14 is based on a bulk package shipment via ground transport in North America. All shippers are responsible for ensuring the proper transportation classification and package/container requirements are followed for the relevant mode of transport.

	DOT Classification	IMDG	IATA
UN number	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT
Transport hazard class(es)	3 	3  	3 
Packing group	III	III	III
Environmental hazards	No.	Marine Pollutant(s): strontium chromate	Yes. The environmentally hazardous substance mark is not required.

Additional information

DOT Classification : **Reportable quantity** 47.07 lbs / 21.37 kg [3.6801 gal / 13.931 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

IMDG : **Emergency schedules** F-E, _S-E_
Viscous liquid exception This class 3 viscous liquid that is also environmentally hazardous is not subject to regulation in packagings up to 5 L, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8 according to 2.3.2.5.
IMDG Code Segregation group Not applicable

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.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 5(a)2 final significant new use rules:** No products found.
TSCA 5(e) substance consent order: No products found.
TSCA 8(a) PAIR: butan-2-ol
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
 United States inventory : All components are active or exempted.
 (TSCA 8b):

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : FLAMMABLE LIQUIDS - Category 3
 ACUTE TOXICITY (oral) - Category 4
 ACUTE TOXICITY (inhalation) - Category 4
 SKIN IRRITATION - Category 2
 EYE IRRITATION - Category 2A
 RESPIRATORY SENSITIZATION - Category 1
 SKIN SENSITIZATION - Category 1
 GERM CELL MUTAGENICITY - Category 1
 CARCINOGENICITY - Category 1A
 TOXIC TO REPRODUCTION - Category 2
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Composition/information on ingredients

Name	%	Classification
butan-2-ol	≥25 - ≤50	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
strontium chromate	≥10 - ≤20	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 2 SKIN SENSITIZATION - Category 1 GERM CELL MUTAGENICITY - Category 2 CARCINOGENICITY - Category 1A TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
titanium dioxide Amines, polyethylenepoly-, triethylenetetramine fraction	≥10 - ≤25 <3	CARCINOGENICITY - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1
barium chromate	<1	SKIN SENSITIZATION - Category 1 ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (dermal) - Category 3 ACUTE TOXICITY (inhalation) - Category 2 RESPIRATORY SENSITIZATION - Category 1 SKIN SENSITIZATION - Category 1 GERM CELL MUTAGENICITY - Category 1B CARCINOGENICITY - Category 1A TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

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15/17

Section 15. Regulatory information

carbon black, respirable powder	≤0.3	CARCINOGENICITY - Category 2
Crystalline Silica, respirable part in whole product, <10µm	≤0.3	CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	butan-2-ol	78-92-2	≥25 - ≤50
	strontium chromate	7789-06-2	≥10 - ≤20
	barium chromate	10294-40-3	<1
Supplier notification	butan-2-ol	78-92-2	≥25 - ≤50
	strontium chromate	7789-06-2	≥10 - ≤20
	barium chromate	10294-40-3	<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.

State regulations

Massachusetts	: The following components are listed: SEC-BUTYL ALCOHOL; STRONTIUM CHROMATE; TITANIUM DIOXIDE; TALC
New York	: The following components are listed: Strontium chromate
New Jersey	: The following components are listed: sec-BUTYL ALCOHOL; STRONTIUM CHROMATE; TITANIUM DIOXIDE; TALC (NOT CONTAINING ASBESTOS FIBERS); BARIUM CHROMATE; CARBON BLACK; SILICA, QUARTZ
Pennsylvania	: The following components are listed: 2-BUTANOL; CHROMIC ACID (H ₂ CrO ₄), STRONTIUM SALT (1:1); TITANIUM OXIDE; TALC

California Prop. 65

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

Ingredient name	No significant risk level	Maximum acceptable dosage level	Type of toxicity
strontium chromate	Yes.	Yes.	Cancer, Developmental, Reproductive female, Reproductive male
titanium dioxide	-	-	Cancer
barium chromate	Yes.	Yes.	Cancer, Developmental, Reproductive female, Reproductive male
carbon black, respirable powder	-	-	Cancer
Crystalline Silica, respirable part in whole product, <10µm	-	-	Cancer

Inventory list

Canada : At least one component is not listed.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 3	On basis of test data
ACUTE TOXICITY (oral) - Category 4	Calculation method
ACUTE TOXICITY (inhalation) - Category 4	Calculation method
SKIN IRRITATION - Category 2	Calculation method
EYE IRRITATION - Category 2A	Calculation method
RESPIRATORY SENSITIZATION - Category 1	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
GERM CELL MUTAGENICITY - Category 1	Calculation method
CARCINOGENICITY - Category 1A	Calculation method
TOXIC TO REPRODUCTION - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method

History

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Version	: 6
Unique ID	: A6FD275CC10C1EDEA28AB94A84F7C5CE
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.

Notice to reader

FOR PROFESSIONAL USE ONLY

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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SAFETY DATA SHEET

P60-A HARDENER

Section 1. Identification

GHS product identifier : P60-A HARDENER
SDS code : 21060500D

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

Identified uses
Professional use Industrial use
Uses advised against
All other uses

Product use : Two component coating for interior use.

Supplier's details

MAPAERO SAS
10, Avenue de la Rijole CS30098
09103 PAMIERES Cedex
France

Emergency telephone : +33 (0)5 34 01 34 01
number (with hours of : +33 (0)5 61 60 23 30
operation)

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 3
ACUTE TOXICITY (oral) - Category 4
SKIN CORROSION - Category 1C
SERIOUS EYE DAMAGE - Category 1
SKIN SENSITIZATION - Category 1
GERM CELL MUTAGENICITY - Category 2
TOXIC TO REPRODUCTION - Category 1B

GHS label elements

Hazard pictograms



Signal word

: Danger

Section 2. Hazards identification

Hazard statements : Flammable liquid and vapor.
Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Suspected of causing genetic defects.
May damage fertility or the unborn child.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating or lighting equipment. Take action to prevent static discharges. Ground and bond container and receiving equipment. Keep container tightly closed. Avoid breathing 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 : In case of fire: Use water spray, dry chemical powder or carbon dioxide to extinguish. IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

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.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
bis-[4-(2,3-epoxipropoxy)phenyl]propane	≥25 - ≤50	1675-54-3
nitroethane	≥25 - ≤50	79-24-3
1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with 2-(chloromethyl) oxirane	≥10 - ≤25	30499-70-8

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 and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses if easy to do. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Section 4. First aid measures

- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes severe burns. May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
stomach pains
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.

Section 4. First aid measures

- 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, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** :  Never use water for extinction.

- Specific hazards arising from the chemical** : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds

- 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. Do not breathe 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.

Section 6. Accidental release measures

- 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. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
- 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** : 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. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
bis-[4-(2,3-epoxipropoxy)phenyl]propane nitroethane	None. ACGIH TLV (United States, 1/2022). TWA: 307 mg/m ³ 8 hours. TWA: 100 ppm 8 hours. NIOSH REL (United States, 10/2020). TWA: 310 mg/m ³ 10 hours. TWA: 100 ppm 10 hours. OSHA PEL (United States, 5/2018). TWA: 310 mg/m ³ 8 hours. TWA: 100 ppm 8 hours. OSHA PEL 1989 (United States, 3/1989). TWA: 310 mg/m ³ 8 hours.

Section 8. Exposure controls/personal protection

1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with 2-(chloromethyl)oxirane

TWA: 100 ppm 8 hours.
None.

- 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** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- 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.
- 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Wear a respirator conforming to EN140 with type A/P2 filter or better. Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flatting should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state	: Liquid.
Color	: Colorless.
Odor	: Characteristic.
Odor threshold	: Not available.
pH	:  Not applicable. [DIN EN 1262]
Melting point/freezing point	: Not available.
Boiling point, initial boiling point, and boiling range	: Not available.
Flash point	: Closed cup: 24°C (75.2°F) [Pensky-Martens]
Flammability	: Not available.
Lower and upper explosion limit	: Greatest known range: Lower: 3.4% Upper: 7% (nitroethane)
Vapor pressure	:

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
nitroethane	20.9	2.8				
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	0.0082	0.0011				

Relative vapor density	: Not available.
Density	: 1.118 g/cm ³ [DIN EN ISO 2811-1]
Solubility(ies)	:

Media	Result
cold water	Not soluble [OESO (TG 105)]

Partition coefficient: n-octanol/water	: Not applicable.
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Auto-ignition temperature :

Ingredient name	°C	°F	Method
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	400	752	DIN 51794
nitroethane	414	777.2	

Decomposition temperature	: Not available.
Viscosity	: Kinematic (room temperature): 9 mm ² /s (9 cSt) [DIN EN ISO 3219] Kinematic (40°C (104°F)): 20 mm ² /s (20 cSt) [DIN EN ISO 3219]

Particle characteristics

Median particle size	: Not applicable.
Percentage of particles with aerodynamic diameter ≤ 10 µm	: 0

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	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
bis-[4-(2,3-epoxipropoxy)phenyl]propane	LD50 Dermal	Rabbit	20 g/kg	-
	LD50 Intraperitoneal	Mouse	4 g/kg	-
	LD50 Intraperitoneal	Rat	2200 mg/kg	-
	LD50 Oral	Mouse	15600 mg/kg	-
	LD50 Oral	Rabbit	1980 mg/kg	-
	LD50 Oral	Rat	11300 uL/kg	-
	LD50 Intraperitoneal	Mouse	310 mg/kg	-
	LD50 Oral	Mouse	860 mg/kg	-
	LD50 Oral	Rat	1100 mg/kg	-
nitroethane				

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Eyes - Severe irritant	Rabbit	-	24 hours 2 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
bis-[4-(2,3-epoxipropoxy)phenyl]propane	-	3	-

Reproductive toxicity

Not available.

Teratogenicity

Section 11. Toxicological information

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : No known significant effects or critical hazards.
Skin contact : Causes severe burns. May cause an allergic skin reaction.
Ingestion : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
 pain
 watering
 redness
Inhalation : Adverse symptoms may include the following:
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations
Skin contact : Adverse symptoms may include the following:
 pain or irritation
 redness
 blistering may occur
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations
Ingestion : Adverse symptoms may include the following:
 stomach pains
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Section 11. Toxicological information

Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: Suspected of causing genetic defects.
Reproductive toxicity	: May damage fertility or the unborn child.

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)
Product as-supplied nitroethane	1538.5 500	N/A N/A	N/A N/A	33.8 11	N/A N/A

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
nitroethane	0.18	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc})	: Not available.
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Other adverse effects	: No known significant effects or critical hazards.
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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.
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Section 14. Transport information

The information provided in section 14 is based on a bulk package shipment via ground transport in North America. All shippers are responsible for ensuring the proper transportation classification and package/container requirements are followed for the relevant mode of transport.

	DOT Classification	IMDG	IATA
UN number	UN3469	UN3469	UN3469
UN proper shipping name	PAINT, FLAMMABLE, CORROSIVE	PAINT, FLAMMABLE, CORROSIVE	PAINT, FLAMMABLE, CORROSIVE
Transport hazard class(es)	3 (8)  	3 (8)   	3 (8)  
Packing group	III	III	III
Environmental hazards	No.	Marine Pollutant(s): bis-[4-(2,3-epoxipropoxy)phenyl] propane, 1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with 2-(chloromethyl) oxirane	Yes. The environmentally hazardous substance mark is not required.

Additional information

- IMDG** : **Emergency schedules** F-E, S-C
 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.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

- U.S. Federal regulations** : **TSCA 5(a)2 final significant new use rules:** No products found.
TSCA 5(e) substance consent order: No products found.
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
United States inventory : All components are active or exempted.
(TSCA 8b):

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

- Classification** : FLAMMABLE LIQUIDS - Category 3
ACUTE TOXICITY (oral) - Category 4
SKIN CORROSION - Category 1C
SERIOUS EYE DAMAGE - Category 1
SKIN SENSITIZATION - Category 1
GERM CELL MUTAGENICITY - Category 2
TOXIC TO REPRODUCTION - Category 1B

Section 15. Regulatory information

Composition/information on ingredients

Name	%	Classification
bis-[4-(2,3-epoxipropoxy)phenyl] propane	≥25 - ≤50	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1
nitroethane	≥25 - ≤50	FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 TOXIC TO REPRODUCTION - Category 2
1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with 2-(chloromethyl)oxirane	≥10 - ≤25	SKIN CORROSION - Category 1C SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1B GERM CELL MUTAGENICITY - Category 2 TOXIC TO REPRODUCTION - Category 1B

State regulations

Massachusetts	: The following components are listed: NITROETHANE
New York	: None of the components are listed.
New Jersey	: The following components are listed: NITROETHANE
Pennsylvania	: The following components are listed: ETHANE, NITRO-

California Prop. 65

Inventory list

Canada	: All components are listed or exempted.
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Section 16. Other information

Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1C SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1 GERM CELL MUTAGENICITY - Category 2 TOXIC TO REPRODUCTION - Category 1B	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method

History

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Version	: 6
Unique ID	: A6FD275CC10C1EDEADA4359176CD0149
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.

Date of issue/Date of revision	: 1/17/2024	Version	: 6
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Section 16. Other information

Notice to reader

FOR PROFESSIONAL USE ONLY

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

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