

SAFETY DATA SHEET



Conforms to Official Mexican Standard NOM-018-STPS-2015

Date of revision 13 December 2023
Version 1

Date of issue 13 December 2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product name : RAVEN 581 SAFETY YELLOW - B
Product code : 00475480
Other means of identification : Not applicable.
Product type : Liquid.

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

Product use : Industrial applications, Professional applications, Used by spraying.
Use of the substance/mixture : Coating.
Uses advised against : Not applicable.

Manufacturer : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
SETIQ Interior de la República: 800-00-214-00 (México)
SETIQ Ciudad de México: (55) 5559-1588 (México)

Technical Phone Number : 888-977-4762

SECTION 2: Hazards identification

Classification of the substance or mixture : ACUTE TOXICITY (oral) - Category 4
EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity:
2.9% (oral), 10.9% (dermal), 97.9% (inhalation)

GHS label elements

Hazard pictograms :



Signal word : Warning

SECTION 2: Hazards identification

Hazard statements	: H302 - Harmful if swallowed. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H373 - May cause damage to organs through prolonged or repeated exposure.
Precautionary statements	
Prevention	: P280 - Wear protective gloves. Wear eye or face protection. P260 - Do not breathe vapor. P270 - Do not eat, drink or smoke when using this product. P264 - Wash thoroughly after handling. P272 - Contaminated work clothing should not be allowed out of the workplace.
Response	: P301 + P312, P330 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water. P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
Storage	: Not applicable.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : Emits toxic fumes when heated.

See toxicological information (Section 11)

SECTION 3: Composition/information on ingredients

Substance/mixture	: Mixture
Product name	: RAVEN 581 SAFETY YELLOW - B
Other means of identification	: Not applicable.

Ingredient name	%	CAS number
Propane-1,2-diol, propoxylated (MW<2000)	≥20 - ≤50	25322-69-4
Oxirane, 2-methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1)	≥20 - ≤50	9082-00-2
diethylmethylbenzenediamine	≥5.0 - ≤10	68479-98-1
1,3-Benzenediamine, 4-methyl-2,6-bis(methylthio)-	≥1.0 - ≤5.0	102093-68-5
Oxazolidine, 3-butyl-2-(1-ethylpentyl)-	≥1.0 - ≤4.4	165101-57-5
1,3-Benzenediamine, 2-methyl-4,6-bis(methylthio)-	≥0.10 - ≤2.7	104983-85-9

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

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** : No known significant effects or critical hazards.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : Harmful if swallowed.

Over-exposure signs/symptoms

See toxicological information (Section 11)

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. 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.

SECTION 5: Firefighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

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

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. 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. 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. 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. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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 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. 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
Propane-1,2-diol, propoxylated (MW<2000)	None.
Oxirane, 2-methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1)	None.
diethylmethylbenzenediamine	None.
1,3-Benzenediamine, 4-methyl-2,6-bis(methylthio)-	None.
Oxazolidine, 3-butyl-2-(1-ethylpentyl)-	None.
1,3-Benzenediamine, 2-methyl-4,6-bis(methylthio)-	None.

Key to abbreviations

C = Ceiling Limit

IPEL = Internal Permissible Exposure Limit

STEL = Short term exposure limit

TLV = Threshold Limit Value

TWA = Time Weighted Average

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : 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 : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

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

SECTION 8: Exposure controls/personal protection

	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.
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 propertiesAppearance

Physical state	: Liquid.				
Color	: Various				
Odor	: Ammoniacal.				
Odor threshold	: Not available.				
Molecular weight	: Not applicable.				
pH	: Not available.				
Melting point	: Not available.				
Boiling point	: >37.78°C (>100°F)				
Flash point	: Closed cup: 100°C (212°F)				
Auto-ignition temperature	: Not available.				
Decomposition temperature	: Not available.				
Flammability	: Not available.				
Lower and upper explosive (flammable) limits	: Not available.				
Evaporation rate	: Not available.				
Vapor pressure	: Not available.				
Vapor density	: Not available.				
Relative density	: 1.02				
Density (lbs / gal)	: 8.51				
Solubility(ies)	: <table border="1" data-bbox="475 1534 1481 1639"> <thead> <tr> <th>Media</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>cold water</td> <td>Soluble</td> </tr> </tbody> </table>	Media	Result	cold water	Soluble
Media	Result				
cold water	Soluble				
Solubility in water	: Not available.				
Partition coefficient: n-octanol/water	: Not applicable.				
Viscosity	: Kinematic (40°C (104°F)): >21 mm ² /s (>21 cSt)				
Volatility	: 10% (v/v), 9.674% (w/w)				
% Solid. (w/w)	: 90.326				

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** : Depending on conditions, decomposition products may include the following materials:
carbon oxides nitrogen oxides sulfur oxides

SECTION 11: Toxicological information**Information on toxicological effects****Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Propane-1,2-diol, propoxylated (MW<2000)	LD50 Dermal	Rabbit	>10000 mg/kg	-
Oxirane, 2-methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1)	LD50 Oral	Rat	1000 mg/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
diethylmethylbenzenediamine	LD50 Oral	Rat	>10 g/kg	-
	LD50 Oral	Rat	472 mg/kg	-
Oxazolidine, 3-butyl-2-(1-ethylpentyl)-	LD50 Oral	Rat	>2000 mg/kg	-

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

Irritation/Corrosion**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**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.

Reproductive toxicity

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

SECTION 11: Toxicological information**Teratogenicity**

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

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
diethylmethylbenzenediamine	Category 2	-	-

Aspiration hazard

Not available.

Information on the likely routes of exposure**Potential acute health effects**

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : 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** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- 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. 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** : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.

SECTION 11: Toxicological information

Reproductive toxicity : No known significant effects or critical hazards.

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)
RAVEN 581 SAFETY YELLOW - B	676.3	10860.0	N/A	N/A	N/A
Propane-1,2-diol, propoxylated (MW<2000)	1000	N/A	N/A	N/A	N/A
Oxirane, 2-methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1)	500	N/A	N/A	N/A	N/A
diethylmethylbenzenediamine	472	1100	N/A	N/A	N/A
1,3-Benzenediamine, 4-methyl-2,6-bis(methylthio)-	500	N/A	N/A	N/A	N/A
Oxazolidine, 3-butyl-2-(1-ethylpentyl)-	2500	N/A	N/A	N/A	N/A
1,3-Benzenediamine, 2-methyl-4,6-bis(methylthio)-	500	N/A	N/A	N/A	N/A

SECTION 12: Ecological information**Toxicity**

Product/ingredient name	Result	Species	Exposure
Propane-1,2-diol, propoxylated (MW<2000)	Acute LC50 >100 mg/l	Fish	96 hours
diethylmethylbenzenediamine	Acute EC50 0.5 mg/l Fresh water	Daphnia	48 hours
Oxazolidine, 3-butyl-2-(1-ethylpentyl)-	EC50 3.2 mg/l	Daphnia	48 hours
	LC50 20 mg/l	Fish	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
diethylmethylbenzenediamine	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Propane-1,2-diol, propoxylated (MW<2000)	-0.68 to 0.01	-	Low
diethylmethylbenzenediamine	14.7	-	High

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. 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

SECTION 14: Transport information

	Mexico Classification	IMDG	IATA
UN number	UN3082	UN3082	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (diethylmethylbenzenediamine, 1,3-Benzenediamine, 4-methyl-2,6-bis (methylthio)-)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (diethylmethylbenzenediamine, 1,3-Benzenediamine, 4-methyl-2,6-bis (methylthio)-)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (diethylmethylbenzenediamine, 1,3-Benzenediamine, 4-methyl-2,6-bis (methylthio)-)
Transport hazard class(es)	9	9	9
Packing group	III	III	III
Environmental hazards	Yes.	Yes.	Yes.
Marine pollutant substances	Not applicable.	(diethylmethylbenzenediamine)	Not applicable.

Additional information

- Mexico** : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
- IMDG** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, 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.
- IATA** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

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 14: Transport information

Transport in bulk according to IMO instruments : Not applicable.

SECTION 15: Regulatory information

Mexico

Classification

Flammability : 1 Health : 3 Reactivity : 0

International regulations

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

SECTION 16: Other information

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

Health : 3 Flammability : 1 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. 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.

Date of previous issue : No previous validation

Organization that prepared the SDS : 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.

Notice to reader

The information, which is based on the current knowledge of the chemical substance or mixture and applies to appropriate safety precautions for the product, is deemed correct but is not exhaustive and will be used only as a guide.

Disclaimer

SECTION 16: Other information

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.