

SAFETY DATA SHEET

Safety Data Sheet according to regulation (EC) No 1907/2006 & 1272/2008 and amendments

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

Product Identifier: Reform Pava 46 - Base
Product Description: Epoxy resin water soluble

RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Intended/Recommended Use: Binder

DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company: Pava Resine SRL.
For Product and all Non-Emergency Information call info@pavaresine.it

Local Contact Information: Pava Resine SRL, Via Dolomiti 6/1, 35018 San Martino di Lupari (PD)
+39 0495953085

2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Classification according to Regulation (EC) No 1272/2008 and amendments
Not Classified

LABEL ELEMENTS**Hazard Statements**

EUH205 - Contains epoxy constituents. May produce an allergic reaction.

Precautionary Statements

Precautionary statements on the label will be reduced as indicated in Regulation (EC) No 1272/2008, Article 28.

Not applicable

OTHER HAZARDS

Not applicable

RESULTS OF PBT AND vPvB ASSESSMENT

Not determined

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance, Mixture or Article? Mixture

Component / CAS No.	%	EC-No	REACH Registration Number	REACH SVHC	Classification according to Regulation (EC) No 1272/2008 (CLP)	M-Factor
Isopropanol 67-63-0	2-3	200-661-7	01-2119457558-25	-	Flam. Liq. 2 (H225) STOT SE 3 (H336) Eye Irrit. 2 (H319)	-

See Section 16 for full text of H phrases.

4. FIRST AID MEASURES**DESCRIPTION OF FIRST AID MEASURES****Eye Contact:**

Rinse immediately with plenty of water for at least 15 minutes. Obtain medical advice if there are persistent symptoms.

Skin Contact:

Remove contaminated clothing and shoes without delay. Wash immediately with plenty of water. Do not reuse contaminated clothing without laundering. Get medical attention if pain or irritation persists after washing or if signs and symptoms of overexposure appear.

Ingestion:

If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Inhalation:

Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

None known

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDS

Not applicable

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Suitable Extinguishing Media:

Use water spray or fog, carbon dioxide or dry chemical.

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Keep containers cool by spraying with water if exposed to fire.

ADVICE FOR FIREFIGHTERS

Protective Equipment:

Firefighters, and others exposed, wear self-contained breathing apparatus. Wear full firefighting protective clothing. See MSDS Section 8 (Exposure Controls/Personal Protection).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Where exposure level is not known, wear approved, positive pressure, self-contained respirator. Where exposure level is known, wear approved respirator suitable for level of exposure. In addition to the protective clothing/equipment in Section 8 (Exposure Controls/Personal Protection), wear impermeable boots.

Environmental Precautions:

None known

Methods and material for containment and cleaning up:

Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush spill area with water.

References to other sections:

See Sections 8 and 13 for additional information.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Precautions: Keep away from heat, sparks and open flame. - No smoking. Wear protective gloves and eye/face protection. Wash hands thoroughly after handling.

Special Handling Statements: Provide good ventilation of working area (local exhaust ventilation if necessary). During processing and handling of the product, comply with the indicative occupational exposure limit values.

Conditions for safe storage, including any incompatibilities:

Store in a cool, dry, well ventilated place and keep container tightly closed. Keep away from sources of ignition - refrain from smoking. Protect from heat and direct sunlight. Take precautionary measures against electrostatic loading - earthing necessary during loading operations. Observe the general rules of industrial fire protection. Sensitive to frost.

Storage Temperature: Store at 5 - 25 °C

Reason: Quality.

Storage Class (TRGS 510): 10

Specific end use(s):

Refer to Section 1 or Exposure Scenario if applicable.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL PARAMETERS

67-63-0 Isopropanol

United Kingdom: WEL (Workplace Exposure Limits)	400 ppm (TWA) 999 mg/m ³ (TWA) 500 ppm (STEL) 1250 mg/m ³ (STEL)
Europe ILV (Indicative Limit Values):	Not established
Other Value:	Not established

Derived No Effect Level (DNEL):

Isopropanol (67-63-0)

Use	Route	DNEL	Units	Effects Type
Worker	Inhalation	500	mg/m ³	Long term, systemic
Worker	Dermal	888	mg/kg/day	Long term, systemic
Consumer	Inhalation	89	mg/m ³	Long term, systemic
Consumer	Dermal	319	mg/kg	Long term, systemic
Consumer	Oral	26	mg/kg/day	Long term, systemic

Predicted No Effect Concentration (PNEC):

Isopropanol (67-63-0)

Compartment	PNEC	Units
Fresh water	140.9	mg/L
Marine water	140.9	mg/L
Intermittent water release	140.9	mg/L
Sediment (fresh water)	552	mg/kg
Sediment (marine water)	552	mg/kg
Soil	28	mg/kg
Sewage treatment plant	2251	mg/L
Secondary Poisoning	160	mg/kg

EXPOSURE CONTROLS

Engineering Measures:

Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure.

Respiratory Protection:

For operations where inhalation exposure can occur use an approved respirator. Recommendations are listed below. Other protective respiratory equipment may be used based on user's own risk assessment.

Recommended:

Full Face Mask with organic vapor cartridge, Type A filter (BP >65°C)

Eye protection:

Wear eye/face protection such as chemical splash proof goggles or face shield.

Skin Protection:

Avoid skin contact.

Wear impermeable gloves and suitable protective clothing.

Since this product is absorbed through the skin, care must be taken to prevent skin contact and contamination of clothing.

Hand protection:

Wear protective gloves. Recommendations are listed below. Other protective materials may be used based on user's own risk assessment. Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred. Replace gloves immediately when torn or any change in appearance (dimension, color, flexibility etc.) is noticed.

Gloves for repeated or prolonged exposure - non exhaustive list:

Nitrile rubber (NBR), thickness: > 0.38 mm, break through time: > 480 min

Gloves for short term exposure/splash protection - non exhaustive list:

Nitrile rubber (NBR), thickness: 0.12 mm, break through time: up to 120 min

The chemical resistance depends on the type of product and amount of product on the glove. Therefore gloves need to be changed when in contact with chemicals.

Not suitable gloves - non exhaustive list:

Natural rubber (NRL), thickness: 0.12 mm

Due to many conditions (e.g. temperature, abrasion) the practical usage of a chemical protective glove in practice may be much shorter than the permeation time determined through testing. Use PE gloves as under gloves for difficult situations like for instance: high exposure, unknown composition or unknown properties of the chemicals.

Additional Advice:

Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water. It is recommended that a shower be taken after completion of workshift especially if significant contact has occurred. Work clothing should then be laundered prior to reuse. Street clothing should be stored separately from work clothing and protective equipment. Work clothing and shoes should not be taken home.

9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Colour:	white
Appearance:	liquid
Odor:	mild
Odor Threshold:	See Section 8 for exposure limits.
pH:	Not available
Melting Point:	Not applicable
Boiling Point:	60 - 100 °C
Flash point:	> 65 °C DIN EN ISO 1523
Evaporation Rate:	Not available
Flammable Limits (% By Vol):	Not available
Vapor Pressure:	< 25 hPa @ 20 °C
Vapour density:	Not available
Specific Gravity/Density:	~ 1.09 g/cm ³ DIN EN ISO 2811-2 @ 20 °C

Solubility In Water:	Soluble
Partition coefficient (n-octanol/water):	Not available
Autoignition temperature:	Not available
Decomposition Temperature:	Not available
Viscosity (Kinematic):	Not available
Viscosity (Dynamic):	450 - 1100 mPa.s @ 23 °C DIN EN ISO 3219

OTHER INFORMATION

Fat Solubility (Solvent-Oil):	Not available
Percent Volatile (% by wt.):	42 - 46 mostly water
Solids Content:	54 - 58 % DIN EN ISO 3251
Saturation In Air (% By Vol.):	Not available
Acid Number (mg KOH/g):	Not available
Hydroxyl Value (mg KOH/g):	Not available
Volatile Organic Content (1999/13/EC):	< 3 %

10. STABILITY AND REACTIVITY

Reactivity:	No information available
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CHEMICAL STABILITY

Stability:	Stable
Conditions To Avoid:	Avoid high heat.

POSSIBILITY OF HAZARDOUS REACTIONS

Polymerization:	Will not occur
Conditions To Avoid:	None known

Incompatible materials:	Reactions with alkalis, amines and strong acids
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Hazardous Decomposition Products:	Carbon dioxide Carbon monoxide (CO)
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11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Likely Routes of Exposure: Skin, Eyes, Oral.

Acute toxicity - oral: Not classified - Based on available data and/or professional judgment, the classification criteria are not met.

Acute toxicity - dermal: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Acute toxicity - inhalation: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Skin corrosion / irritation: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Serious eye damage / eye irritation: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Respiratory sensitization: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Skin sensitization: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Carcinogenicity: Not Classified. - Based on available data and/or professional judgment, the classification criteria are not met.

Germ cell mutagenicity: Not Classified. - Based on available data and/or professional judgment, the classification criteria are not met.

Reproductive toxicity: Not Classified. - Based on available data and/or professional judgment, the classification criteria are not met.

Specific target organ toxicity (STOT) - single exposure: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Specific target organ toxicity (STOT) - repeated exposure: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

Aspiration hazard: Not Classified - Based on available data and/or professional judgment, the classification criteria are not met.

PRODUCT TOXICITY INFORMATION

ACUTE TOXICITY DATA

oral	rat	Acute LD50 14 day	> 2000 mg/kg By analogy with a product of similar composition.
dermal	rabbit	Acute LD50	No data
inhalation	rat	Acute LC50 4 hr	No data

LOCAL EFFECTS ON SKIN AND EYE

Acute Irritation	dermal	rabbit	Not irritating By analogy with a product of similar composition.
Acute Irritation	eye	rabbit	Not irritating By analogy with a product of similar composition.

ALLERGIC SENSITIZATION

Sensitization	Skin	guinea pig	Not sensitizing
Sensitization	respiratory	No data	

SUBACUTE/SUBCHRONIC TOXICITY

rat	90-Day Repeated Dose Oral (Dietary) Toxicity in the Rat (OCED TG 408) 90 day	4000 mg/kg Actual NOEL	
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GENOTOXICITY

Assays for Gene Mutations

Ames Salmonella Assay	No data
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HAZARDOUS INGREDIENT TOXICITY DATA

Isopropanol has acute oral (rat) and dermal (rabbit) LD50 values of 5.0 g/kg and 12.8 g/kg, respectively. The 4-hour inhalation LC50 (rat) for isopropanol is >16,000 ppm (40.86 mg/L). Acute overexposure to isopropanol vapor may cause mild irritation of the eyes and respiratory tract. Chronic overexposure to isopropanol vapors may cause central nervous system depression, headaches, dizziness, nausea, and staggered gait. Liquid isopropanol may cause moderate to severe eye irritation. In laboratory animals studies, isopropanol has produced fetotoxic effects at levels that were maternally toxic and developmental effects at levels that were maternally non-toxic, and inhalation exposures that produced reduced fetal weight at non-maternally toxic levels. Literature reports chronic exposure has caused kidney problems and testicular effects in laboratory animals.

12. ECOLOGICAL INFORMATION

TOXICITY, PERSISTENCE AND DEGRADABILITY, BIOACCUMULATIVE POTENTIAL, MOBILITY IN SOIL, OTHER ADVERSE EFFECTS

All ecological information provided was conducted on a structurally similar product.
This material is not classified as dangerous for the environment.
This material is not readily biodegradable.

ALGAE TEST RESULTS

Test: Growth Inhibition (OECD 201)

Duration: 72

Species: Pseudokirchneriella subcapitata

> 18.4 mg/l ErC50

Highest concentration tested based on TWA exposure concentrations

> 18.4 mg/l EbC50

Highest concentration tested based on TWA exposure concentrations

DEGRADATION

Test: Closed Bottle (OECD 301D)

Duration: 28

Procedure: Ready biodegradability

0 %

This material is not readily biodegradable.

RESULTS OF PBT AND vPvB ASSESSMENT

Not determined

HAZARDOUS INGREDIENT TOXICITY DATA

Component / CAS No.	Toxicity to Algae	Toxicity to Fish	Toxicity to Water Flea
Isopropanol 67-63-0	EC50 > 1000 mg/L - Desmodesmus subspicatus (96h) EC50 > 1000 mg/L - Desmodesmus subspicatus (72h)	LC50 = 9640 mg/L - Pimephales promelas (96h) LC50 = 11130 mg/L - Pimephales promelas (96h) LC50 > 1400000 µg/L - Lepomis macrochirus (96h)	EC50 = 13299 mg/L - Daphnia magna (48h)

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

The company encourages the recycle and reuse of products and packaging, where possible and permitted.

Product disposal

When recycle or reuse is not possible, the company recommends that our products, especially when classified as hazardous, be disposed of by thermal treatment or incineration at approved facilities. All local and national regulations should be followed. For disposal within the European Community, waste codes according to Directive 2008/98/EC should be assigned by the user based on the application for which the product was used.

Packaging disposal

Handle contaminated packages in the same way as the product itself. Disposal of emptied and cleaned packaging must be made in accordance with applicable local and national regulations.

Disposal-relevant information

Do not release directly or indirectly to surface water, ground water, soil or public sewage system.

14. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

ADR/RID/ADN

Dangerous Goods? Not applicable/Not regulated

IMO

Dangerous Goods? Not applicable/Not regulated

ICAO / IATA

Dangerous Goods? Not applicable/Not regulated

15. REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS / LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

Ozone Depleting Substances (Regulation (EC) No 1005/2009): Not applicable

Persistent Organic Pollutants (Regulation (EC) No 850/2004): Not applicable

Prior Informed Consent (Regulation (EC) No 689/2008): Not applicable

Substances subject to Authorization (Annex XIV of Regulation (EC) No 1907/2006): Not applicable

Substances subject to Restrictions for certain applications(Annex XVII of Regulation(EC)No 1907/2006):

Yes

Refer to Annex XVII of REACH for details of the restricted applications.

Isopropanol (2-3 %)

This substance is a flammable restricted for aerosols under item 40.

Water Endangering Class (Germany): 1 according to VwVwS, 17.05.1999

Inventory Information

European Economic Area (including EU): When purchased from an Allnex legal entity based in the EEA (EU or Norway), this product is compliant with the registration of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt, pre-registered and/or registered.

United States (USA): All components of this product are included on the TSCA Chemical Inventory or are not required to be listed on the TSCA Chemical Inventory.

Canada: One or more components of this product are NOT included on the Canadian Domestic Substances List (DSL).

Australia: One or more components of this product have NOT yet been included in the Australian Inventory of Chemical Substances (AICS) or assessed by NICNAS.

China: All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

Japan: All components of this product are included on the Japanese (ENCS and ISHL) inventories or are not required to be listed on the Japanese inventories.

Korea: One or more components of this product are NOT included on the Korean (ECL) inventory. The company has obtained the required notification approvals from Ministry of Environment (MOE) as per the "Act on the Registration and Evaluation of Chemical Substances of Korea (K-REACH)" for the component(s) not listed in the Korean Inventory (ECL). The product can be imported/manufactured in Korea ONLY under specific conditions.

Philippines: One or more polymeric components of this product are NOT included on the Philippine (PICCS) inventory. The unlisted polymer(s) can meet the criteria of polymer exemption. Allnex is willing to support importers in Philippines who need to obtain an official polymer exemption from Environmental Management Bureau (EMB) before importation.

Taiwan: All components of this product are included in the Taiwan chemical substance inventory or are not required to be listed on the Taiwan chemical substance inventory (TCSI).

Switzerland: All components of this product are exempt from the new substance notification requirements for Switzerland (SR 813.11 art. 24-26).

CHEMICAL SAFETY ASSESSMENT

No Chemical Safety Assessment has been carried out.

16. OTHER INFORMATION

Reasons for Issue: Revised Section 8

Date Prepared: 10-Mar-2016

Date of last significant revision: 10-Mar-2016

Classification methods include one or more of the following: use of specific product data, read-across data, modeling, professional judgment or a component based evaluation.

Component - Hazard Statements

Isopropanol

H225 - Highly flammable liquid and vapour.

H319 - Causes serious eye irritation.

H336 - May cause drowsiness or dizziness.

Interlocutor

PAVA Resine laboratory.

Interlocutor: Pava Resine laboratory Tel. +39 049/5953085 mail: info@pavaresine.it

Note for reader

Information in this safety data sheet have been considered valid by Pava Resine at the moment of preparation or they have been prepared basing on sources considered to be reliable, but user has to investigate and understand other sources of information, follow all laws and procedures about safe handling and use of the product and to define suitability of the product for the expected use. All Pava Resine products are subjected to sell terms and conditions of Pava Resine. PAVA RESINE DO NOT ISSUE ANY WARRANTIES, EXPLICIT OR IMPLICIT, CONCERNING THE PRODUCT OR ITS MERCHANTABILITY OR SUITABILITY FOR ANY PURPOSE OR CONCERNING ACCURACY OF ANY INFORMATION PROVIDED BY PAVA RESINE, except that product consists with specifications. None information in this document represents a sell offer of products. User has to ensure that his activities respect all national and local norms. Since using product conditions cannot be regulated by producer, user has to define conditions that are necessary to use this product safely.