

SAFETY DATA SHEET

According to US Regulation 29 CFR 1910.1200 (HazCom 2012)

1. Identification

Product identifier: Baker PRS-3000™

Other means of identification

Product No.: 6053, 6403, 6413

Recommended restrictions

Recommended use: For Laboratory, Research or Manufacturing Use.

Restrictions on use: Not determined.

Details of the supplier of the safety data sheet

Company Name: Avantor Performance Materials, LLC
Address: 100 Matsonford Rd, Suite 200
Radnor, PA 19087

Telephone: Customer Service: 855-282-6867

Contact Person: Product Information Compliance
E-mail: info@avantormaterials.com

Emergency telephone number:

CHEMTREC: 1-800-424-9300 within US and Canada (24 hrs/day, 7 days/week)

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable liquids Category 4

Health Hazards

Skin Corrosion/Irritation Category 1C

Serious Eye Damage/Eye Irritation Category 1

Toxic to reproduction Category 1B

Specific Target Organ Toxicity -
Single Exposure Category 3¹

Target Organs

1. Respiratory tract irritation.

Unknown toxicity - Health

Acute toxicity, inhalation, vapor 100 %

Label Elements

Hazard Symbol:



Signal Word:	Danger
Hazard Statement:	Combustible liquid. Causes severe skin burns and eye damage. May damage fertility or the unborn child. May cause respiratory irritation.
Precautionary Statements	
Prevention:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust or mists. Wash thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Use only outdoors or in a well-ventilated area.
Response:	IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. If skin irritation occurs: Get medical advice/attention. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Wash contaminated clothing before reuse. In case of fire: Use water spray, foam, dry powder or carbon dioxide for extinction.
Storage:	Store in a well-ventilated place. Keep cool. Store locked up. Keep container tightly closed.
Disposal:	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Hazard(s) not otherwise classified (HNOC):	None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Proprietary Cyclic Amine, TSRN-AV-1001	Proprietary	40 - 60%
Proprietary Organic Oxide, TSRN600435129-5000	Proprietary	20 - 40%
Proprietary Amine, TSRN600435129-5024	Proprietary	2.5 - 10%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

General information:	Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
Ingestion:	Call a physician or poison control center immediately. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Inhalation:	Move to fresh air. Get medical attention if symptoms persist.
Skin Contact:	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
Eye contact:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. In case of irritation from airborne exposure, move to fresh air. Get medical attention.

Most important symptoms/effects, acute and delayed

Symptoms:	May cause skin irritation. Respiratory tract irritation. Causes serious eye damage.
Hazards:	None known.

Indication of immediate medical attention and special treatment needed

Treatment:	Treat symptomatically. Symptoms may be delayed.
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5. Fire-fighting measures

General Fire Hazards:	Combustible liquid and vapor.
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Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Foam, carbon dioxide or dry powder.
Unsuitable extinguishing media:	Avoid water in straight hose stream; will scatter and spread fire.

Specific hazards arising from the chemical:	May burn, but does not ignite readily. Vapor from the solvent may accumulate in container headspace resulting in flammability hazard.
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Special protective equipment and precautions for firefighters

Special fire fighting procedures:	Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Use personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Methods and material for containment and cleaning up:	In case of leakage, eliminate all ignition sources. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.
Notification Procedures:	Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.
Environmental Precautions:	Prevent further leakage or spillage if safe to do so. Do not contaminate water sources or sewer. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use personal protective equipment as required. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.
Conditions for safe storage, including any incompatibilities:	Keep away from food, drink and animal feeding stuffs. Keep container tightly closed in a cool, well-ventilated place. Ground container and transfer equipment to eliminate static electric sparks. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Proprietary Cyclic Amine, TSRN-AV-1001	TWA PEL	1 ppm 4 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (10 2014)
	SKIN_DES	Can be absorbed through the skin.	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (10 2014)
	TWA	10 ppm 40 mg/m3	US. OARS. WEELs Workplace Environmental Exposure Level Guide (2010)
	SKIN_DES	Can be absorbed through the skin.	US. OARS. WEELs Workplace Environmental Exposure Level Guide (2010)
Proprietary Organic Oxide, TSRN600435129-5000	ST ESL	Health 420 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (06 2018)
	AN ESL	Health 42 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (06 2018)
	AN ESL	2 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
Proprietary Amine,	ST ESL	20 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	ST ESL	200 µg/m3	US. Texas. Effects Screening Levels (Texas

TSRN600435129-5024			Commission on Environmental Quality) (12 2010)
	AN ESL	20 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
Proprietary Cyclic Amine, TSRN-AV-1001 (5-Hydroxy-N-methyl-2-pyrrolidone: Sampling time: End of shift.)	100 mg/l (Urine)	ACGIH BEI (03 2013)

Appropriate Engineering Controls No data available.

Individual protection measures, such as personal protective equipment

- General information:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.
- Eye/face protection:** Wear safety glasses with side shields (or goggles) and a face shield.
- Skin Protection**
- Hand Protection:** Chemical resistant gloves
- Other:** Wear appropriate clothing to prevent repeated or prolonged skin contact.
- Respiratory Protection:** In case of inadequate ventilation use suitable respirator.
- Hygiene measures:** Provide eyewash station and safety shower. Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. When using do not smoke. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

9. Physical and chemical properties

Appearance

- Physical state:** Liquid
- Form:** Liquid
- Color:** Pale yellow
- Odor:** Amine-like odor
- Odor threshold:** No data available.
- pH:** No data available.
- Melting point/freezing point:** No data available.
- Initial boiling point and boiling range:** 180 °C
- Flash Point:** 93 °C
- Evaporation rate:** No data available.
- Flammability (solid, gas):** No data available.
- Upper/lower limit on flammability or explosive limits**
- Flammability limit - upper (%):** No data available.

Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	0.03 kPa
Vapor density:	No data available.
Density:	1.07 g/ml (20 °C)
Relative density:	1.07 (20 °C)
Solubility(ies)	
Solubility in water:	Completely soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerization does not occur.
Conditions to avoid:	Heat, sparks, flames. Contact with incompatible materials.
Incompatible Materials:	Strong oxidizing agents. Acids.
Hazardous Decomposition Products:	Oxides of Carbon. Oxides of sulfur. Nitrogen Oxides

11. Toxicological information

Information on likely routes of exposure

Inhalation:	May cause irritation to the respiratory system.
Skin Contact:	Causes severe skin burns.
Eye contact:	Causes serious eye damage.
Ingestion:	May be harmful if swallowed. May cause burns of the gastrointestinal tract if swallowed.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral	
Product:	ATEmix (Rat): 4,380.03 mg/kg
Dermal	
Product:	ATEmix (Rabbit) 15,760 mg/kg
Inhalation	
Product:	No data available.

Specified substance(s):

Proprietary Cyclic Amine, LC 50 (Rat, 4 h): > 5.1 mg/l
TSRN-AV-1001

Proprietary Organic LC 50 (Rat, 4 h): 12,000 mg/m3
Oxide, TSRN600435129-
5000

Proprietary Amine, LC 50 (Rat, 6 h): > 3,460 mg/m3
TSRN600435129-5024

Repeated dose toxicity

Product: No data available.

Skin Corrosion/Irritation

Product: Causes severe skin burns.

Serious Eye Damage/Eye Irritation

Product: Causes serious eye damage.

Respiratory or Skin Sensitization

Product: Not a skin nor a respiratory sensitizer.

Carcinogenicity

Product: This substance has no evidence of carcinogenic properties.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No mutagenic components identified

In vivo

Product: No mutagenic components identified

Reproductive toxicity

Product: May damage fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure

Product: Respiratory tract irritation.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Target Organs

Specific Target Organ Toxicity - Single Exposure: Respiratory tract irritation.

Aspiration Hazard

Product: Not classified

Other effects: None known.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Proprietary Cyclic Amine, LC 50 (Oncorhynchus mykiss, 96 h): > 500 mg/l
TSRN-AV-1001 NOAEL (Oncorhynchus mykiss, 96 h): 500 mg/l

Proprietary Organic LC 50 (Oryzias latipes, 96 h): > 100 mg/l
Oxide, TSRN600435129-5000

Proprietary Amine, LC 50 (Goldfish (Carassius auratus), 96 h): 210 mg/l
TSRN600435129-5024 LC 50 (Fathead minnow (Pimephales promelas), 96 h): 2,390 - 2,650 mg/l
LC 50 (Leuciscus idus, 96 h): 215 - 464 mg/l

Aquatic Invertebrates

Product: No data available.

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: Expected to be readily biodegradable.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

Proprietary Cyclic Amine, Log Kow: -0.54
TSRN-AV-1001

Proprietary Organic Oxide, TSRN600435129-5000

Log Kow: -0.77

Proprietary Amine, TSRN600435129-5024

Log Kow: -0.96 20 °C

Mobility in soil:

The product is water soluble and may spread in water systems.

Other adverse effects:

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

13. Disposal considerations

Disposal instructions:

Discharge, treatment, or disposal may be subject to national, state, or local laws.

Contaminated Packaging:

Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN Number:	UN 2735
UN Proper Shipping Name:	Amines, liquid, corrosive, n.o.s.(contains proprietary Amine)
Transport Hazard Class(es)	
Class:	8
Label(s):	8
Packing Group:	III
Marine Pollutant:	No
Special precautions for user:	Keep away from acids.

IMDG

UN Number:	UN 2735
UN Proper Shipping Name:	AMINES, LIQUID, CORROSIVE, N.O.S.(CONTAINS PROPRIETARY AMINE)
Transport Hazard Class(es)	
Class:	8
Label(s):	8
EmS No.:	F-A, S-B
Packing Group:	III
Marine Pollutant:	No
Special precautions for user:	Keep away from acids.

IATA

UN Number:	UN 2735
Proper Shipping Name:	Amines, liquid, corrosive, n.o.s.(contains proprietary Amine)
Transport Hazard Class(es):	
Class:	8
Label(s):	8
Packing Group:	III
Marine Pollutant:	No
Special precautions for user:	Keep away from acids.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

- Flammable (gases, aerosols, liquids, or solids)
- Skin Corrosion or Irritation
- Serious eye damage or eye irritation
- Reproductive toxicity
- Specific target organ toxicity (single or repeated exposure)

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Proprietary Cyclic Amine, TSRN-AV-1001	10000 lbs.
Proprietary Organic Oxide, TSRN600435129-5000	10000 lbs.
Proprietary Amine, TSRN600435129-5024	10000 lbs.

SARA 313 (TRI Reporting)

<u>Chemical Identity</u>	<u>Reporting threshold for other users</u>	<u>Reporting threshold for manufacturing and processing</u>
Proprietary Cyclic Amine, TSRN-AV-1001	10000 lbs.	25000 lbs.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

- 1-Methyl-2-pyrrolidone Developmental toxin.

US. New Jersey Worker and Community Right-to-Know Act

<u>Chemical Identity</u>
Proprietary Cyclic Amine, TSRN-AV-1001
Proprietary Amine, TSRN600435129-5024

US. Massachusetts RTK - Substance List

Chemical Identity

Proprietary Cyclic Amine, TSRN-AV-1001
Proprietary Organic Oxide, TSRN600435129-5000
Proprietary Amine, TSRN600435129-5024

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Proprietary Cyclic Amine, TSRN-AV-1001
Proprietary Organic Oxide, TSRN600435129-5000
Proprietary Amine, TSRN600435129-5024

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

International regulations

Montreal protocol

Not applicable

Stockholm convention

Not applicable

Rotterdam convention

Not applicable

Kyoto protocol

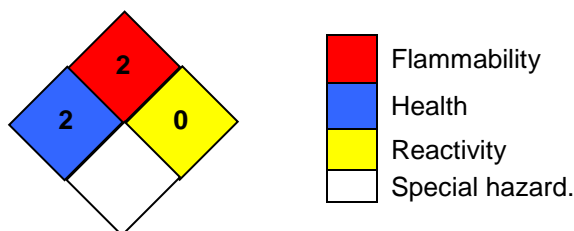
Not applicable

Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Mexico INSQ:	Not in compliance with the inventory.
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory

16. Other information, including date of preparation or last revision

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Issue Date:	07-15-2020
Revision Information:	Not relevant.
Version #:	3.0
Source of information:	Sources of information used in preparing this SDS included one or more of the following: results from in house or supplier toxicology studies, information from the Toxicology Data Network (TOXNET), European Chemical Agency (ECHA) substance dossiers, IARC Monographs, US National Toxicology Program data, the Agency for Toxic Substances and Disease Registry, other manufacturer's SDSs and other sources, as appropriate.
Further Information:	No data available.
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