

# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** MAC'S 8100 GLASS CLEANER

**Other means of identification**

**SDS number:** RE1000028763

**Recommended restrictions**

**Product use:** Cleaner

**Restrictions on use:** Not known.

**Manufacturer/Importer/Distributor Information**

**Manufacturer**

**Company Name:** NAPA BALKAMP  
**Address:** 1601 Whitaker Rd  
INDIANAPOLIS, IN 46168  
**Telephone:** 317-837-2800  
**Fax:**

**Emergency telephone number:** 1-866-836-8855

## 2. Hazard(s) identification

**Hazard Classification**

**Physical Hazards**

Flammable aerosol Category 1

**Label Elements**

**Hazard Symbol:**



**Signal Word:** Danger

**Hazard Statement:** Extremely flammable aerosol.

**Precautionary Statements**

**Prevention:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use.

**Storage:** Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

**Hazard(s) not otherwise classified (HNOC):** None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Ethanol, 2-butoxy-	111-76-2	1 - <5%
2-Propanol	67-63-0	1 - <5%
Propane	74-98-6	1 - <5%
Butane	106-97-8	1 - <5%
Morpholine	110-91-8	0.1 - <1%

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

### 4. First-aid measures

- Ingestion:** Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
- Inhalation:** Move to fresh air.
- Skin Contact:** Wash skin thoroughly with soap and water. If skin irritation occurs: Get medical advice/attention.
- Eye contact:** Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/attention.

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

- Symptoms:** No data available.
- Hazards:** No data available.

#### Indication of immediate medical attention and special treatment needed

- Treatment:** No data available.

### 5. Fire-fighting measures

- General Fire Hazards:** Use water spray to keep fire-exposed containers cool. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

#### Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media:** Use fire-extinguishing media appropriate for surrounding materials.
- Unsuitable extinguishing media:** Do not use water jet as an extinguisher, as this will spread the fire.

- Specific hazards arising from the chemical:** Vapors may travel considerable distance to a source of ignition and flash back.

#### Special protective equipment and precautions for firefighters

- Special fire fighting procedures:** No data available.
- 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

<b>Personal precautions, protective equipment and emergency procedures:</b>	Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind.
<b>Methods and material for containment and cleaning up:</b>	Stop the flow of material, if this is without risk. Absorb with sand or other inert absorbent.
<b>Notification Procedures:</b>	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk.
<b>Environmental Precautions:</b>	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water sources or sewer. Environmental manager must be informed of all major spillages.

## 7. Handling and storage

<b>Precautions for safe handling:</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use.
<b>Conditions for safe storage, including any incompatibilities:</b>	Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Aerosol Level 1

## 8. Exposure controls/personal protection

### Control Parameters

#### Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Ethanol, 2-butoxy-	TWA	20 ppm	US. ACGIH Threshold Limit Values (2008)
	TWA	25 ppm 120 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	REL	5 ppm 24 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	50 ppm 240 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
2-Propanol	STEL	500 ppm 1,225 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	200 ppm	US. ACGIH Threshold Limit Values (2008)
	PEL	400 ppm 980 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	400 ppm 980 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	REL	400 ppm 980 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	STEL	400 ppm	US. ACGIH Threshold Limit Values (2008)
Propane	STEL	500 ppm 1,225 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	REL	1,000 ppm 1,800 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	1,000 ppm 1,800 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	1,000 ppm 1,800 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Butane	REL	800 ppm 1,900 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	STEL	1,000 ppm	US. ACGIH Threshold Limit Values (03 2018)
	TWA	800 ppm 1,900 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Morpholine	REL	20 ppm 70 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	STEL	30 ppm 105 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	20 ppm	US. ACGIH Threshold Limit Values (2008)
	TWA	20 ppm 70 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	30 ppm 105 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	PEL	20 ppm 70 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Ethanol, 2-methoxy-	TWA	0.1 ppm	US. ACGIH Threshold Limit Values (2008)
	REL	0.1 ppm 0.3 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)

	TWA	25 ppm	80 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	PEL	25 ppm	80 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
1,2-Ethanediamine	TWA	10 ppm		US. ACGIH Threshold Limit Values (2008)
	PEL	10 ppm	25 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	10 ppm	25 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	REL	10 ppm	25 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Morpholine, 4-ethyl-	REL	5 ppm	23 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	5 ppm	23 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	PEL	20 ppm	94 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	5 ppm		US. ACGIH Threshold Limit Values (2008)

### Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
Ethanol, 2-butoxy- (Butoxyacetic acid (BAA), with hydrolysis: Sampling time: End of shift.)	200 mg/g (Creatinine in urine)	ACGIH BEL (03 2013)
2-Propanol (acetone: Sampling time: End of shift at end of work week.)	40 mg/l (Urine)	ACGIH BEL (03 2013)
Ethanol, 2-methoxy- (2-Methoxyacetic acid: Sampling time: End of shift at end of work week.)	1 mg/g (Creatinine in urine)	ACGIH BEL (03 2013)

**Appropriate Engineering Controls** No data available.

### Individual protection measures, such as personal protective equipment

**General information:** Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

**Eye/face protection:** Wear goggles/face shield.

#### Skin Protection

**Hand Protection:** No data available.

**Other:** No data available.

**Respiratory Protection:** In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

**Hygiene measures:** When using do not smoke. Observe good industrial hygiene practices.

## 9. Physical and chemical properties

### Appearance

**Physical state:** liquid

**Form:** Spray Aerosol

**Color:** No data available.

**Odor:** No data available.

**Odor threshold:** No data available.

**pH:** No data available.

**Melting point/freezing point:** No data available.

**Initial boiling point and boiling range:** No data available.

**Flash Point:** -104.44 °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.

<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	4,826.3301 - 6,205.2816 hPa (20 °C) 1,068.6785 - 1,206.5725 hPa (50 °C)
<b>Vapor density:</b>	No data available.
<b>Density:</b>	No data available.
<b>Relative density:</b>	No data available.
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	No data available.
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.

## 10. Stability and reactivity

<b>Reactivity:</b>	No data available.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	No data available.
<b>Conditions to avoid:</b>	Avoid heat or contamination.
<b>Incompatible Materials:</b>	No data available.
<b>Hazardous Decomposition Products:</b>	No data available.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation:</b>	No data available.
<b>Skin Contact:</b>	No data available.
<b>Eye contact:</b>	No data available.
<b>Ingestion:</b>	No data available.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Inhalation:</b>	No data available.
<b>Skin Contact:</b>	No data available.
<b>Eye contact:</b>	No data available.
<b>Ingestion:</b>	No data available.

### Information on toxicological effects

#### Acute toxicity (list all possible routes of exposure)

**Oral**  
**Product:** ATEmix: 60,310.88 mg/kg

**Dermal**  
**Product:** ATEmix: 21,175.09 mg/kg

**Inhalation**  
**Product:** ATEmix: 690.85 mg/l  
ATEmix : 172.71 mg/l

**Repeated dose toxicity**  
**Product:** No data available.

**Specified substance(s):**  
Ethanol, 2-butoxy- NOAEL (Rabbit(Female, Male), Dermal, 90 d): > 150 mg/kg Dermal  
Experimental result, Key study  
NOAEL (Rat(Female), Oral, 90 d): < 82 mg/kg Oral Experimental result, Key  
study  
NOAEL (Rat(Female), Inhalation, 2 yr): < 31 ppm(m) Inhalation  
Experimental result, Key study  
2-Propanol NOAEL (Rat, Inhalation, >= 104 Weeks): 5,000 ppm(m) Inhalation  
Experimental result, Key study  
Propane NOAEL (Rat(Female, Male), Inhalation, >= 28 d): 4,000 ppm(m) Inhalation  
Experimental result, Key study  
LOAEL (Rat(Female, Male), Inhalation, >= 28 d): 12,000 ppm(m) Inhalation  
Experimental result, Key study  
Butane LOAEL (Rat(Female, Male), Inhalation, >= 28 d): 12,000 ppm(m) Inhalation  
Experimental result, Key study  
NOAEL (Rat(Female, Male), Inhalation, >= 28 d): 4,000 ppm(m) Inhalation  
Experimental result, Key study  
Morpholine NOAEL (Rat(Female, Male), Inhalation): 36 ppm(m) Inhalation Experimental  
result, Key study  
LOAEL (Rat(Female), Oral, 56 d): 500 mg/kg Oral Experimental result, Key  
study

**Skin Corrosion/Irritation**  
**Product:** No data available.

**Specified substance(s):**  
Ethanol, 2-butoxy- in vivo (Rabbit): Irritating Experimental result, Key study  
2-Propanol in vivo (Rabbit): Not Classified Experimental result, Key study  
Morpholine in vivo (Rabbit): Corrosive Experimental result, Key study

**Serious Eye Damage/Eye Irritation**  
**Product:** No data available.

**Specified substance(s):**  
Ethanol, 2-butoxy- Rabbit, 24 - 72 hrs: Irritating  
2-Propanol Rabbit, 1 d: Category 2: Causes serious eye irritation

**Respiratory or Skin Sensitization**  
**Product:** No data available.

**Specified substance(s):**  
Ethanol, 2-butoxy- Skin sensitization:, in vivo (Guinea pig): Non sensitising  
2-Propanol Skin sensitization:, in vivo (Guinea pig): Non sensitising  
Morpholine Skin sensitization:, in vivo (Guinea pig): Non sensitising

**Carcinogenicity**

**Product:** No data available.

**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 data available.

**In vivo**

**Product:** No data available.

**Reproductive toxicity**

**Product:** No data available.

**Specific Target Organ Toxicity - Single Exposure**

**Product:** No data available.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** No data available.

**Aspiration Hazard**

**Product:** No data available.

**Other effects:** No data available.

**12. Ecological information**

**Ecotoxicity:**

**Acute hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Specified substance(s):**

Ethanol, 2-butoxy-	LC 50 (Oncorhynchus mykiss, 96 h): 1,474 mg/l Experimental result, Key study
2-Propanol	LC 50 (Pimephales promelas, 96 h): 9,640 mg/l Experimental result, Key study
Propane	LC 50 (Various, 96 h): 147.54 mg/l QSAR QSAR, Key study
Butane	LC 50 (Various, 96 h): 147.54 mg/l QSAR QSAR, Key study
Morpholine	LC 50 (Oncorhynchus mykiss, 96 h): 180 mg/l Experimental result, Key study

#### **Aquatic Invertebrates**

<b>Product:</b>	No data available.
<b>Specified substance(s):</b>	
Ethanol, 2-butoxy-	EC 50 (Daphnia magna, 48 h): 1,550 mg/l Experimental result, Key study
2-Propanol	LC 50 (Daphnia magna, 24 h): > 10,000 mg/l Experimental result, Key study
Butane	LC 50 (Daphnia sp., 48 h): 69.43 mg/l QSAR QSAR, Key study
Morpholine	EC 50 (Daphnia magna, 48 h): 45 mg/l Experimental result, Key study

#### **Chronic hazards to the aquatic environment:**

##### **Fish**

<b>Product:</b>	No data available.
<b>Specified substance(s):</b>	
Ethanol, 2-butoxy-	NOAEL (Danio rerio): > 100 mg/l Experimental result, Key study

##### **Aquatic Invertebrates**

<b>Product:</b>	No data available.
<b>Specified substance(s):</b>	
Ethanol, 2-butoxy-	EC 50 (Daphnia magna): 297 mg/l Experimental result, Key study EC 10 (Daphnia magna): 134 mg/l Experimental result, Key study
Morpholine	EC 50 (Daphnia magna): 12 mg/l Experimental result, Key study NOAEL (Daphnia magna): 5 mg/l Experimental result, Key study

##### **Toxicity to Aquatic Plants**

<b>Product:</b>	No data available.
-----------------	--------------------

#### **Persistence and Degradability**

##### **Biodegradation**

<b>Product:</b>	No data available.
<b>Specified substance(s):</b>	
Ethanol, 2-butoxy-	90.4 % Detected in water. Experimental result, Key study
2-Propanol	53 % (5 d) Detected in water. Experimental result, Key study
Propane	100 % (385.5 h) Detected in water. Experimental result, Key study 50 % (3.19 d) Detected in water. QSAR, Weight of Evidence study
Butane	100 % (385.5 h) Detected in water. Experimental result, Key study
Morpholine	> 90 % (24 h) Sediment Experimental result, Key study 80 - 94 % (24 h) Sediment Experimental result, Key study

##### **BOD/COD Ratio**

<b>Product:</b>	No data available.
-----------------	--------------------

#### **Bioaccumulative potential**

##### **Bioconcentration Factor (BCF)**

<b>Product:</b>	No data available.
<b>Specified substance(s):</b>	
Morpholine	Cyprinus carpio, Bioconcentration Factor (BCF): < 2.8 Aquatic sediment Experimental result, Key study



**Partition Coefficient n-octanol / water (log Kow)**

**Product:** No data available.

**Mobility in soil:** No data available.

**Known or predicted distribution to environmental compartments**

Ethanol, 2-butoxy- No data available.  
2-Propanol No data available.  
Propane No data available.  
Butane No data available.  
Morpholine No data available.

**Other adverse effects:** No data available.

**13. Disposal considerations**

**Disposal instructions:** Wash before disposal. Dispose to controlled facilities.

**Contaminated Packaging:** No data available.

**14. Transport information**

**DOT**

UN Number: UN 1950  
UN Proper Shipping Name: Aerosols, flammable  
Transport Hazard Class(es)  
Class: 2.1  
Label(s): –  
Packing Group: II  
Marine Pollutant: No  
  
Environmental Hazards: No  
Marine Pollutant: No  
  
Special precautions for user: Not regulated.

**IMDG**

UN Number: UN 1950  
UN Proper Shipping Name: Aerosols, flammable  
Transport Hazard Class(es)  
Class: 2  
Label(s): –  
EmS No.:  
Packing Group: –  
  
Environmental Hazards: No  
Marine Pollutant: No  
  
Special precautions for user: Not regulated.

**IATA**

UN Number: UN 1950  
Proper Shipping Name: Aerosols, flammable  
Transport Hazard Class(es):  
Class: 2.1  
Label(s): –  
Packing Group: –  
  
Environmental Hazards: No  
Marine Pollutant: No  
  
Special precautions for user: Not regulated.

**15. Regulatory information**

**US Federal Regulations**

Restrictions on use: Not known.

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

<u>Chemical Identity</u>	<u>Reportable quantity</u>
2-Propanol	lbs. 100
Propane	lbs. 100
Butane	lbs. 100
Morpholine	lbs. 100
1,2-Ethanediamine	lbs. 5000
Morpholine, 4-ethyl-	lbs. 100

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**

Fire Hazard  
Flammable aerosol

**SARA 302 Extremely Hazardous Substance**

<u>Chemical Identity</u>	<u>Reportable quantity</u>	<u>Threshold Planning Quantity</u>
1,2-Ethanediamine	lbs. 5000	lbs. 10000

**SARA 304 Emergency Release Notification**

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Ethanol, 2-butoxy-	
2-Propanol	lbs. 100
Propane	lbs. 100
Butane	lbs. 100
Morpholine	lbs. 100
Ethanol, 2-methoxy-	
1,2-Ethanediamine	lbs. 5000
Morpholine, 4-ethyl-	lbs. 100

**SARA 311/312 Hazardous Chemical**

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
1,2-Ethanediamine	lbs
Ethanol, 2-butoxy-	10000 lbs
2-Propanol	10000 lbs
Propane	10000 lbs
Butane	10000 lbs
Morpholine	10000 lbs
Ethanol, 2-methoxy-	10000 lbs
Morpholine, 4-ethyl-	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>
Ethanol, 2-butoxy-	N230 lbs	N230 lbs.
2-Propanol	lbs	lbs.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**  
**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)**  
**US State Regulations**

**US. California Proposition 65**

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

Ethanol, 2-methoxy-	Developmental toxin. 03 2008
Ethanol, 2-methoxy-	Male reproductive toxin. 03 2008

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

**Chemical Identity**

Ethanol, 2-butoxy-  
2-Propanol  
Propane  
Butane

**US. Massachusetts RTK - Substance List**

**Chemical Identity**

1,2-Ethanediamine

**US. Pennsylvania RTK - Hazardous Substances**

**Chemical Identity**

Ethanol, 2-butoxy-  
2-Propanol  
Propane  
Butane

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

<b>16. Other information, including date of preparation or last revision</b>
--

<b>Issue Date:</b>	10/22/2019
<b>Revision Information:</b>	No data available.
<b>Version #:</b>	1.0
<b>Further Information:</b>	No data available.
<b>Disclaimer:</b>	This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.