

0071743 PST

**MSA**MINE SAFETY APPLIANCES COMPANY  
201 NOR RADDOCK AVE., PITTSBURGH, PA 15208SUMMARY DATA SHEET  
Detectors, Reagents and Accessories for M-S-A® Universal Testing Kits

October, 1966

| Gas — Vapors — Dusts —<br>Fumes — Mists | Measurable<br>Range                 | ①<br>Threshold<br>Limit<br>Value | ②<br>Package of<br>Detector<br>Tubes | Reagent<br>Kit | Box of<br>Filter<br>Papers | ③<br>Sample<br>Conditioning<br>Kit | Reagent<br>Accessory<br>Kit | Reagent<br>Pyrolyzer | ④<br>Interferences                                                                                         |
|-----------------------------------------|-------------------------------------|----------------------------------|--------------------------------------|----------------|----------------------------|------------------------------------|-----------------------------|----------------------|------------------------------------------------------------------------------------------------------------|
| Acetaldehyde                            | 25 — 1000 PPM                       | 200 PPM                          | 93963                                |                |                            |                                    |                             |                      | Turpentine, other Aldehydes                                                                                |
| Acetonitrile                            | 10 — 200 PPM                        | 40 PPM                           | 91624                                |                |                            |                                    |                             | 87505                | H <sub>2</sub> S, Halogen, Nitrogen & Hydrocarbon Compounds                                                |
| Acetylene                               | 3 — 600 PPM                         |                                  | 82802                                |                |                            |                                    |                             |                      | Ammonia, H <sub>2</sub> S, CO, Hydrocarbons                                                                |
| Acrylonitrile                           | 5 — 150 PPM                         | 20 PPM                           | 91624                                |                |                            |                                    |                             | 87505                | H <sub>2</sub> S, Halogen, Nitrogen & Hydrocarbon Compounds                                                |
| Ammonia                                 | 10 — 1500 PPM                       | 50 PPM                           | 92115                                |                |                            |                                    |                             |                      | Acid gases                                                                                                 |
| n-Amyl Alcohol                          | 25 — 2000 PPM                       |                                  | 95097                                |                |                            |                                    |                             |                      | Other Alcohols                                                                                             |
| iso-Amyl Alcohol                        | 50 — 1000 PPM                       | 100 PPM                          | 95097                                |                |                            |                                    |                             |                      | Other Alcohols                                                                                             |
| sec-Amyl Alcohol                        | 25 — 2000 PPM                       |                                  | 95097                                |                |                            |                                    |                             |                      | Other Alcohols                                                                                             |
| tert-Amyl Alcohol                       | 25 — 2000 PPM                       |                                  | 95097                                |                |                            |                                    |                             |                      | Other Alcohols                                                                                             |
| Arsine                                  | 0.025 — 1.0 PPM                     | 0.05 PPM                         |                                      | 81101 ①        | 81220 ②                    |                                    |                             | 87031                | Silbire, Phosphine                                                                                         |
| Benzene (Benzol)                        | 5 — 200 PPM                         | 25 PPM                           | 93074                                |                |                            |                                    |                             |                      | Aromatic, Aliphatic Hydrocarbons                                                                           |
|                                         | 5 — 75 PPM                          | 0.1 PPM                          | 82399                                |                |                            |                                    |                             |                      | H <sub>2</sub> S, NH <sub>3</sub> , NO <sub>2</sub> , Ethylene, Halides                                    |
| Bromine                                 | 5 — 200 PPM                         | 0.1 PPM                          | 87042                                |                |                            |                                    |                             |                      | H <sub>2</sub> S, NH <sub>3</sub> , NO <sub>2</sub> , Ethylene, Halides                                    |
| Bromobenzene (Mono)                     | 10 — 800 PPM                        |                                  | 93074                                |                |                            |                                    |                             |                      | Aromatic, Aliphatic Hydrocarbons                                                                           |
| Butadiene (1, 3 butadiene)              | 100 — 4000 PPM                      | 1000 PPM                         | 93962                                |                |                            |                                    |                             |                      |                                                                                                            |
| 2-Butoxy Ethanol (butyl cellosolve)     | 30 — 900 PPM                        | 50 PPM                           | 95097                                |                |                            |                                    |                             |                      | Other Alcohols                                                                                             |
| n-Butyl Alcohol                         | 50 — 4000 PPM                       | 100 PPM                          | 95097                                |                |                            |                                    |                             |                      | Other Alcohols                                                                                             |
| iso-Butyl Alcohol                       | 50 — 4000 PPM                       | 100 PPM                          | 95097                                |                |                            |                                    |                             |                      | Other Alcohols                                                                                             |
| sec-Butyl Alcohol                       | 50 — 4000 PPM                       | 150 PPM                          | 95097                                |                |                            |                                    |                             |                      | Other Alcohols                                                                                             |
| tert-Butyl Alcohol                      | 100 — 1000 PPM                      | 100 PPM                          | 95097                                |                |                            |                                    |                             |                      | Other Alcohols                                                                                             |
| n-Butylamine                            | 2 — 100 PPM                         | 5 PPM                            | 92115                                |                |                            |                                    |                             |                      | Acid gases                                                                                                 |
| Carbon Dioxide                          | 0.01 — 5.0%                         | 0.50%                            | 85976                                |                |                            |                                    |                             |                      |                                                                                                            |
| Carbon Disulfide                        | 5 — 500 PPM                         | 20 PPM                           | 95297                                |                |                            |                                    |                             |                      |                                                                                                            |
| Carbon Monoxide                         | NBS Color Change<br>Length of Stain | 0.01 — 0.1%<br>0.005%            | 47134<br>91229 ①                     |                |                            |                                    | 87028 ②                     |                      | NO <sub>2</sub> , Ethylene<br>Hydrogen                                                                     |
| Carbon Tetrachloride                    | 10 — 200 PPM<br>0.5 — 20 PPM        | 10 PPM<br>1 PPM                  | 88536<br>82399                       |                |                            |                                    |                             | 87505                | Halogens, Halides, Hydrocarbons<br>H <sub>2</sub> S, NH <sub>3</sub> , NO <sub>2</sub> , Ethylene, Halides |
| Chlorine                                | 3 — 100 PPM                         | 1 PPM                            | 87042                                |                |                            |                                    |                             |                      | H <sub>2</sub> S, NH <sub>3</sub> , NO <sub>2</sub> , Ethylene, Halides                                    |
| Chlorine Dioxide                        | 0.05 — 16 PPM                       | 0.1 PPM                          | 82399                                |                |                            |                                    |                             |                      | H <sub>2</sub> S, NH <sub>3</sub> , NO <sub>2</sub> , Ethylene, Halides                                    |
| Chlorobenzene (Mono)                    | 10 — 200 PPM<br>10 — 800 PPM        | 75 PPM<br>75 PPM                 | 85834 ①<br>93074                     |                |                            |                                    |                             |                      | Halogens, Halides<br>Aromatic, Aliphatic Hydrocarbons                                                      |
| Chlorobromomethane                      | 50 — 500 PPM<br>25 — 500 PPM        | 200 PPM<br>200 PPM               | 85833 ①<br>88536                     |                |                            |                                    |                             | 87505                | Halogens, Halides<br>Halogens, Halides, Hydrocarbons                                                       |

RSV0032674

| Gas — Vapors — Dusts —<br>Fumes — Mists      | Measurable<br>Range          | ①<br>Threshold<br>Limit<br>Value | ②<br>Package of<br>Detector<br>Tubes | Reagent<br>Kit | Box of<br>Filter<br>Papers | ⑤<br>Sample<br>Conditioning<br>Kit | Required<br>Accessory<br>Kit | Required<br>Pyrolyzer | ⑥<br>Interferences                                          |
|----------------------------------------------|------------------------------|----------------------------------|--------------------------------------|----------------|----------------------------|------------------------------------|------------------------------|-----------------------|-------------------------------------------------------------|
| 1-Chloro 1, 1-difluoroethane (Genetron 142B) | 100 — 4000 PPM               |                                  | 88536                                |                |                            |                                    |                              | 87505                 | Halogens, Halides, Hydrocarbons                             |
|                                              | 100 — 2500 PPM               |                                  | 92030                                |                |                            |                                    |                              | 87505                 | HNO <sub>3</sub> , Hydrocarbons                             |
| Chlorodifluoromethane (Freon 22)             | 200 — 2000 PPM               |                                  | 88536                                |                |                            |                                    |                              | 87505                 | Halogens, Halides, Hydrocarbons                             |
| Chloroform (trichloromethane)                | 25 — 400 PPM                 | 50 PPM                           | 88536                                |                |                            |                                    |                              | 87505                 | Halogens, Halides, Hydrocarbons                             |
| 1-Chloro-1-nitropropane                      | 2 — 75 PPM                   | 20 PPM                           | 91624                                |                |                            |                                    |                              | 87505                 | H <sub>2</sub> S, Halogen, Nitrogen & Hydrocarbon Compounds |
| Chloropentafluoroethane (Freon 115)          | 200 — 2000 PPM               |                                  | 88536                                |                |                            |                                    |                              | 87505                 | Halogens, Halides, Hydrocarbons                             |
|                                              | 250 — 2500 PPM               |                                  | 88536                                |                |                            |                                    |                              | 87505                 | Halogens, Halides, Hydrocarbons                             |
| Chlorotrifluoromethane (Freon 13)            | 200 — 3500 PPM               |                                  | 92030                                |                |                            |                                    |                              | 87505                 | HNO <sub>3</sub> , Hydrocarbons                             |
| Chromic Acid Mist                            | 0.05 — 1.4 Mg/M <sup>3</sup> | 0.1 Mg/M <sup>3</sup>            |                                      | 79014 ①        | 79010                      |                                    | 87030                        |                       |                                                             |
| Cyclohexanol                                 | 25 — 1000 PPM                | 50 PPM                           | 95097                                |                |                            |                                    |                              |                       | Other Alcohols                                              |
| Cyclohexylamine                              | 2 — 100 PPM                  |                                  | 92115                                |                |                            |                                    |                              |                       | Acid gases                                                  |
| Decaborane                                   | 0.01 — 1.0 PPM               | 0.05 PPM                         |                                      | 82099 ①        | 82388                      |                                    | 87030                        |                       | Hydrazine, UOMH, H <sub>2</sub> S                           |
| Diborane                                     | 0.1 — 3.0 PPM                | 0.1 PPM                          |                                      | 82099 ①        | 82388                      |                                    | 87030                        |                       | Hydrazine, UOMH, H <sub>2</sub> S                           |
| 1, 2-Dibromoethane (ethylene dibromide)      | 10 — 200 PPM                 | 25 PPM                           | 88536                                |                |                            |                                    |                              | 87505                 | Halogens, Halides, Hydrocarbons                             |
|                                              | 5 — 100 PPM                  | 25 PPM                           | 85834 ①                              |                |                            |                                    |                              |                       | Halogens, Halides                                           |
| Dichlorobenzene (ortho)                      | 10 — 200 PPM                 | 50 PPM                           | 85834 ①                              |                |                            |                                    |                              |                       | Halogens, Halides                                           |
| Dichlorodifluoromethane (Freon 12)           | 25 — 3000 PPM                | 1000 PPM                         | 88536                                |                |                            |                                    |                              | 87505                 | Halogens, Halides, Hydrocarbons                             |
| 1, 1-Dichloroethane                          | 25 — 500 PPM                 | 100 PPM                          | 85833 ①                              |                |                            |                                    |                              |                       | Halogens, Halides                                           |
|                                              | 25 — 400 PPM                 | 50 PPM                           | 85834 ①                              |                |                            |                                    |                              |                       | Halogens, Halides                                           |
| 1, 2-Dichloroethane (ethylene dichloride)    | 25 — 450 PPM                 | 50 PPM                           | 92030                                |                |                            |                                    |                              | 87505                 | HNO <sub>3</sub> , Hydrocarbons                             |
|                                              | 10 — 300 PPM                 | 200 PPM                          | 85833 ①                              |                |                            |                                    |                              |                       | Halogens, Halides                                           |
| Dichloroethylene (CIS-1, 2)                  | 100 — 500 PPM                | 200 PPM                          | 88536                                |                |                            |                                    |                              | 87505                 | Halogens, Halides, Hydrocarbons                             |
|                                              | 25 — 400 PPM                 | 200 PPM                          | 85833 ①                              |                |                            |                                    |                              |                       | Halogens, Halides                                           |
| Dichloroethylene (trans-1, 2)                | 25 — 1000 PPM                | 200 PPM                          | 92030                                |                |                            |                                    |                              | 87505                 | HNO <sub>3</sub> , Hydrocarbons                             |
| Dichloroethyl Ether                          | 5 — 75 PPM                   | 15 PPM                           | 85834 ①                              |                |                            |                                    |                              |                       | Halogens, Halides                                           |
| 1, 1-Dichloro-1-nitroethane                  | 2 — 75 PPM                   | 10 PPM                           | 91624                                |                |                            |                                    |                              | 87505                 | H <sub>2</sub> S, Halogen, Nitrogen & Hydrocarbon Compounds |
| Dichlorotetrafluoroethane (Freon 114)        | 200 — 2000 PPM               | 1000 PPM                         | 88536                                |                |                            |                                    |                              | 87505                 | Halogens, Halides, Hydrocarbons                             |
| Diethylamine                                 | 5 — 200 PPM                  | 25 PPM                           | 92115                                |                |                            |                                    |                              |                       | Acid gases                                                  |
| Diethyl Sulfate                              | 5 — 50 PPM                   |                                  | 95300                                |                |                            |                                    |                              |                       |                                                             |
| Dimethyl Acetamide                           | 5 — 80 PPM                   | 10 PPM                           | 91624                                |                |                            |                                    |                              | 87505                 | H <sub>2</sub> S, Halogen, Nitrogen & Hydrocarbon Compounds |
| Dimethylamine                                | 5 — 200 PPM                  | 10 PPM                           | 92115                                |                |                            |                                    |                              |                       | Acid gases                                                  |
| Dimethylformamide                            | 5 — 150 PPM                  | 10 PPM                           | 91624                                |                |                            |                                    |                              | 87505                 | H <sub>2</sub> S, Halogen, Nitrogen & Hydrocarbon Compounds |
| Dimethyl Sulfate                             | 1 — 50 PPM                   | 1 PPM                            | 95300                                |                |                            |                                    |                              |                       |                                                             |
| Dimethyl Sulfoxide                           | 10 — 250 PPM                 |                                  | 95739                                |                |                            |                                    |                              | 87505                 | SO <sub>2</sub> , Organic Sulfur Compounds                  |

RSV0032675

0071745 PST

| Gases — Vapors — Dusts —<br>Fumes — Mists         | Measurable<br>Range          | Threshold<br>Limit<br>Value | Package of<br>Detector<br>Tubes | Reagent<br>Kit | Box of<br>Filter<br>Papers | Sample<br>Conditioning<br>Kit | Required<br>Accessory<br>Kit | Required<br>Pyralizer | Interferences                                               |
|---------------------------------------------------|------------------------------|-----------------------------|---------------------------------|----------------|----------------------------|-------------------------------|------------------------------|-----------------------|-------------------------------------------------------------|
|                                                   |                              |                             |                                 |                |                            |                               |                              |                       |                                                             |
| Di-n-propylamine                                  | 2 — 70 PPM                   |                             | 92115                           |                |                            |                               |                              |                       | Acid gases                                                  |
| 2 Ethoxyethanol (cellosolve)                      | 50 — 1000 PPM                | 200 PPM                     | 95097                           |                |                            |                               |                              |                       | Other Alcohols                                              |
| Ethyl Alcohol (ethanol)                           | 200 — 10000 PPM              | 1000 PPM                    | 95097                           |                |                            |                               |                              |                       | Other Alcohols                                              |
| Ethylamine                                        | 10 — 500 PPM                 | 10 PPM                      | 92115                           |                |                            |                               |                              |                       | Acid gases                                                  |
| Ethyl Bromide                                     | 25 — 400 PPM                 | 200 PPM                     | 85833 (E)                       |                |                            |                               |                              |                       | Halogens, Halides                                           |
| Ethyl Chloride                                    | 100 — 2000 PPM               | 1000 PPM                    | 85833 (E)                       |                |                            |                               |                              |                       | Halogens, Halides                                           |
|                                                   | 100 — 2000 PPM               | 1000 PPM                    | 92030                           |                |                            |                               |                              | 87505                 | HNO <sub>2</sub> , Hydrocarbons                             |
| Ethylene                                          | 0.5 — 100 PPM                |                             | 82802                           |                |                            |                               |                              |                       | NH <sub>3</sub> , H <sub>2</sub> S, CO, Hydrocarbons        |
| Ethylene Imine                                    | 2 — 100 PPM                  | 0.5 PPM                     | 92115                           |                |                            |                               |                              |                       | Acid gases                                                  |
| Fluorotrichloromethane (Freon 11)                 | 250 — 2000 PPM               | 1000 PPM                    | 88536                           |                |                            |                               |                              | 87505                 | Halogens, Halides, Hydrocarbons                             |
|                                                   | 250 — 2000 PPM               | 1000 PPM                    | 92030                           |                |                            |                               |                              | 87505                 | HNO <sub>2</sub> , Hydrocarbons                             |
| Formaldehyde                                      | 1 — 100 PPM                  | 5 PPM                       | 93963                           |                |                            |                               |                              |                       | Turpentine, other Aldehydes                                 |
| Furfuryl Alcohol                                  | 25 — 500 PPM                 | 50 PPM                      | 95097                           |                |                            |                               |                              |                       | Other Alcohols                                              |
| Hydrazine                                         | 0.5 — 20 PPM                 | 1 PPM                       |                                 | 87492 (E)      | 82051                      |                               |                              | 87030                 | H <sub>2</sub> S, Arsine, Phosphine, Stibine                |
| Hydrogen Chloride                                 | 2 — 500 PPM                  | 5 PPM                       | 91636                           |                |                            |                               |                              |                       | HNO <sub>2</sub>                                            |
| Hydrogen Cyanide                                  | 1 — 65 PPM                   | 10 PPM                      | 93262 (E)                       |                |                            |                               |                              |                       | Ammonia, H <sub>2</sub> S                                   |
| Hydrogen Fluoride                                 | 0.5 — 5.0 PPM                | 3 PPM                       |                                 | 81213 (E)      | 82044                      |                               |                              | 87032                 |                                                             |
| Hydrogen Sulfide                                  | 1 — 800 PPM                  | 10 PPM                      | 87414                           |                |                            |                               |                              |                       | SO <sub>2</sub>                                             |
| Isopropylamine                                    | 2 — 100 PPM                  | 5 PPM                       | 92115                           |                |                            |                               |                              |                       | Acid gases                                                  |
| Lead Dust/Fume                                    | 0.05 — 6.3 Mg/M <sup>3</sup> | 0.2 Mg/M <sup>3</sup>       |                                 | 78399 (E)      | 78693                      |                               |                              | 87030                 |                                                             |
| Mercury                                           | 0.05 — 2.0 Mg/M <sup>3</sup> | 0.1 Mg/M <sup>3</sup>       | 83089                           |                |                            |                               |                              |                       |                                                             |
| Methyl Alcohol (Methanol)                         | 100 — 10000 PPM              | 200 PPM                     | 95097                           |                |                            |                               |                              |                       | Other Alcohols                                              |
| Methylamine                                       | 10 — 500 PPM                 | 10 PPM                      | 92115                           |                |                            |                               |                              |                       | Acid gases                                                  |
| Methyl Bromide                                    | 10 — 100 PPM                 | 20 PPM                      | 85834 (E)                       |                |                            |                               |                              |                       | Halogens, Halides                                           |
|                                                   | 10 — 100 PPM                 | 20 PPM                      | 88536                           |                |                            |                               |                              | 87505                 | Halogens, Halides, Hydrocarbons                             |
| Methyl Chloride                                   | 25 — 1000 PPM                | 100 PPM                     | 92030                           |                |                            |                               |                              | 87505                 | HNO <sub>2</sub> , Hydrocarbons                             |
| Methyl Chloroform (1, 1, 1 trichloroethane)       | 100 — 700 PPM                | 350 PPM                     | 88536                           |                |                            |                               |                              | 87505                 | Halogens, Halides, Hydrocarbons                             |
| 2 Methyl Cyclohexanol                             | 25 — 800 PPM                 | 100 PPM                     | 95097                           |                |                            |                               |                              |                       | Other Alcohols                                              |
| Methyl Isobutyl Carbinol<br>(methyl amyl alcohol) | 25 — 1000 PPM                | 25 PPM                      | 95097                           |                |                            |                               |                              |                       | Other Alcohols                                              |
|                                                   | 100 — 1000 PPM               | 500 PPM                     | 88536                           |                |                            |                               |                              | 87505                 | Halogens, Halides, Hydrocarbons                             |
| Methylene Chloride (dichloromethane)              | 100 — 2000 PPM               | 500 PPM                     | 85834 (E)                       |                |                            |                               |                              |                       | Halogens, Halides                                           |
|                                                   | 50 — 2000 PPM                | 500 PPM                     | 92030                           |                |                            |                               |                              | 87505                 | HNO <sub>2</sub> , Hydrocarbons                             |
| Nitroethane                                       | 10 — 300 PPM                 | 100 PPM                     | 91624                           |                |                            |                               |                              | 87505                 | H <sub>2</sub> S, Halogen, Nitrogen & Hydrocarbon Compounds |
| Nitrogen Dioxide                                  | 0.1 — 50 PPM                 | 5 PPM                       | 83099                           |                |                            |                               |                              |                       | H <sub>2</sub> S, Halides                                   |
| Nitromethane                                      | 5 — 300 PPM                  | 100 PPM                     | 91624                           |                |                            |                               |                              | 87505                 | H <sub>2</sub> S, Halogen, Nitrogen & Hydrocarbon Compounds |

Detectors, Reagents and Accessories for M-S-A Universal Testing Kits

RSV0032676

|                                                      |                 |           |           |           |           |  |  |       |                                                             |
|------------------------------------------------------|-----------------|-----------|-----------|-----------|-----------|--|--|-------|-------------------------------------------------------------|
| 1 Nitropropane                                       | 2 — 100 PPM     | 25 PPM    | 91624     |           |           |  |  | 87505 | H <sub>2</sub> S, Halogen, Nitrogen & Hydrocarbon Compounds |
| 2 Nitropropane                                       | 5 — 150 PPM     | 25 PPM    | 91624     |           |           |  |  | 87505 | H <sub>2</sub> S, Halogen, Nitrogen & Hydrocarbon Compounds |
| Ozone                                                | 0.05 — 5.0 PPM  | 0.1 PPM   | 93865     |           |           |  |  |       | NO <sub>2</sub> , SO <sub>2</sub>                           |
| Pentaborane                                          | 0.01 — 1.0 PPM  | 0.005 PPM |           | 82099 (1) | 82388     |  |  | 87030 | Hydrazine, UDMH, H <sub>2</sub> S                           |
| Perchloroethylene (tetrachloroethylene)              | 10 — 400 PPM    | 100 PPM   | 85833 (1) |           |           |  |  |       | Halogens, Halides                                           |
|                                                      | 25 — 400 PPM    | 100 PPM   | 88536     |           |           |  |  | 87505 | Halogens, Halides, Hydrocarbons                             |
| Phosgene (carbonyl chloride)                         | 0.1 — 10 PPM    | 0.1 PPM   | 89890     |           |           |  |  |       |                                                             |
| Phosphine                                            | 0.025 — 1.0 PPM | 0.3 PPM   |           | 81101 (1) | 81220 (1) |  |  | 87031 | Arsine, Stibine                                             |
| n Propyl Alcohol                                     | 100 — 10000 PPM | 200 PPM   | 95097     |           |           |  |  |       | Other Alcohols                                              |
| iso Propyl Alcohol                                   | 100 — 10000 PPM | 400 PPM   | 95097     |           |           |  |  |       | Other Alcohols                                              |
| n Propyl Nitrate                                     | 10 — 100 PPM    | 25 PPM    | 91624     |           |           |  |  | 87505 | H <sub>2</sub> S, Halogen, Nitrogen & Hydrocarbon Compounds |
| Propylene                                            | 1 — 400 PPM     |           | 82802     |           |           |  |  |       | NH <sub>3</sub> , H <sub>2</sub> S, CO, Hydrocarbons        |
| Propylene Dichloride (1, 2 dichloropropane)          | 25 — 250 PPM    | 75 PPM    | 85834 (1) |           |           |  |  |       | Halogens, Halides                                           |
|                                                      | 25 — 500 PPM    | 75 PPM    | 92030     |           |           |  |  | 87505 | HNO <sub>2</sub> , Hydrocarbons                             |
| Propylene Imine                                      | 2 — 300 PPM     | 2 PPM     | 92115     |           |           |  |  |       | Acid gases                                                  |
| Pyridine                                             | 2 — 50 PPM      | 5 PPM     | 91624     |           |           |  |  | 87505 | H <sub>2</sub> S, Halogen, Nitrogen & Hydrocarbon Compounds |
| Stibine                                              | 0.025 — 1.0 PPM | 0.1 PPM   |           | 81101 (1) | 81220 (1) |  |  | 87031 | Arsine, Phosphine                                           |
| Styrene Monomer (phenylethylene)                     | 10 — 900 PPM    | 100 PPM   | 93962     |           |           |  |  |       |                                                             |
| Sulfur Dioxide                                       | 1 — 400 PPM     | 5 PPM     | 92623     |           |           |  |  |       |                                                             |
| 1, 1, 2, 2 Tetrabromoethane                          | 2 — 50 PPM      |           | 85834 (1) |           |           |  |  |       | Halogens, Halides                                           |
| 1, 1, 2, 2 Tetrachloroethane                         | 2 — 50 PPM      | 5 PPM     | 85834 (1) |           |           |  |  |       | Halogens, Halides                                           |
| 1, 1, 3, 3 Tetrachloropropene                        | 5 — 100 PPM     |           | 85834 (1) |           |           |  |  |       | Halogens, Halides                                           |
| Toluene (toluol)                                     | 10 — 800 PPM    | 200 PPM   | 93074     |           |           |  |  |       | Aromatic, Aliphatic Hydrocarbons                            |
| Trichloroethane (beta-1, 1, 2)                       | 25 — 700 PPM    | 10 PPM    | 85834 (1) |           |           |  |  |       | Halogens, Halides                                           |
|                                                      | 50 — 500 PPM    | 10 PPM    | 88536     |           |           |  |  | 87505 | Halogens, Halides, Hydrocarbons                             |
| Trichloroethylene                                    | 25 — 600 PPM    | 100 PPM   | 85833 (1) |           |           |  |  |       | Halogens, Halides                                           |
|                                                      | 25 — 400 PPM    | 100 PPM   | 88536     |           |           |  |  | 87505 | Halogens, Halides, Hydrocarbons                             |
| 1, 2, 3-Trichloropropane                             | 10 — 500 PPM    | 50 PPM    | 85833 (1) |           |           |  |  |       | Halogens, Halides                                           |
| 1, 1, 2-Trichloro 1, 2, 2 Difluoroethane (Freon 113) | 100 — 2000 PPM  | 1000 PPM  | 88536     |           |           |  |  | 87505 | Halogens, Halides, Hydrocarbons                             |
|                                                      | 100 — 4000 PPM  | 1000 PPM  | 92030     |           |           |  |  | 87505 | HNO <sub>2</sub> , Hydrocarbons                             |
| Triethylamine                                        | 2 — 100 PPM     | 25 PPM    | 92115     |           |           |  |  |       | Acid gases                                                  |
| Trifluoromonobromomethane (Freon 13B1)               | 100 — 4000 PPM  | 1000 PPM  | 88536     |           |           |  |  | 87505 | Halogens, Halides, Hydrocarbons                             |
| Trimethylamine                                       | 5 — 250 PPM     |           | 92115     |           |           |  |  |       | Acid gases                                                  |
| Unsymmetrical Dimethyl Hydrazine                     | 0.5 — 10 PPM    | 0.5 PPM   |           | 81977 (1) | 82051     |  |  | 87030 |                                                             |
| Vinyl Chloride (chloroethylene)                      | 100 — 1250 PPM  | 500 PPM   | 85833 (1) |           |           |  |  |       | Halogens, Halides                                           |
|                                                      | 100 — 2000 PPM  | 500 PPM   | 92030     |           |           |  |  | 87505 | HNO <sub>2</sub> , Hydrocarbons                             |
| Vinyl Pyridine                                       | 1 — 100 PPM     |           | 91624     |           |           |  |  | 87505 | H <sub>2</sub> S, Halogen, Nitrogen & Hydrocarbon Compounds |
| Xylene (xylol)                                       | 10 — 800 PPM    | 100 PPM   | 93074     |           |           |  |  |       | Aromatic, Aliphatic Hydrocarbons                            |

SUMMARY DATA SHEET

RSV0032677

**KEY —**

**NOTE** Shelf life of Detector Tubes and Reagent Kits — Minimum of 2 years as packaged

- (A) Threshold Limit Values as established by The American Conference of Governmental Industrial Hygienists — 1966
- (B) Interferences and temperature correction data shown on individual instruction sheets
- (C) Also order #81316 Package of Pre-Filter Discs to remove interfering  $H_2S$  and  $SO_2$  (if present). A pre filter effectively absorbs these gases in concentrations up to 100 parts per million
- (D) Also order #58238 Pinch Clamp (necessary to restrict contents of reactor tube)
- (E) Also order #82389 Vial of Charcoal (required for filling filter retainer of Accessory Kit to protect Sampling Pump from reagent vapors and/or droplets)
- (F) If desired a three inch probe needle is available for testing the interior of mattresses, pillows, upholstery, closed cartons, etc., for traces of HCN. Order #10492 Sampling Needle
- (G) When measuring CO content of flue gases or in presence of  $NO_2$  in concentrations from 7 to 100 ppm — Also order #73139 Gasorbent Refill (sufficient for 10 refills of Sample Conditioning Kit "pre-scrubber")
- (H) If remote sampling is desired also order a sampling line of the desired length
  - #73067 Sampling Line, 10 ft long
  - #73068 Sampling Line, 25 ft long
  - #73069 Sampling Line, 50 ft long
- (I) If only a portion of the detector chemical is stained by test, tubes may be used for second test if, between tests, ends of tube are capped. Order #72768 Pkg of 12 Rubber Caps

0071747 PST

RSV0032678

0071748 PST



MINE SAFETY APPLIANCES COMPANY  
201 NORTH BRADDOCK AVE , PITTSBURGH, PA 15208

A6601 Litho in U.S.A

994098

RSV0032679